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COPING STRATEGIES AND ITS INFLUENCE ON THE REDUCTION OF PSYCHOLOGICAL EFFECTS EXPERIENCED BY NURSES IN HANDLING COVID-19 CASES

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ABSTRACT:

In facing the COVID-19 pandemic, Indonesian nurses have to work under pressure and non-stop because of the imbalance of the ratio between nurses and patients. It affects their psychological health and results in a lot of nurses feeling stressed while doing their job. This study aims to find out about the effect of coping strategies – emotion-focused coping, problem-focused coping, and escape-avoidance coping – in reducing the psychological effects experienced by Indonesian nurses in handling COVID-19 cases. A total of 110 nurses who work in special referral hospitals and treating COVID-19 patients participated in this study. Using multiple regression analysis, the study found that there is reduction in COVID-19’s psychological effect when they employ coping strategies, with the highest result being problem-focused coping supported by the presence of such medical aids as PPE (personal protective equipment), and ventilators which enable them to focus on the job better and feel assured of their own safety. This study not only finds that nurses find a way to reduce their stress but also recommend that a solution for the reduction of COVID-19 effects is for government to ensure their safety by providing and distributing personal protective equipment (PPE) evenly and thoroughly to ensure safety and reduce nurses’ stress. This study contributes to understanding how Indonesian medical personnel cope with the COVID-19 effects by employing coping strategies, and adds novel empirical contribution to scant research on Indonesian medical personnel and COVID-19 effects in an Indonesian context.

Keywords: Coping Strategy, Stress, Nurses, Psychological Effect, Covid-19

Introduction

At the beginning of 2020, the world was facing the spread of a new virus namely COVID-19 and declare by WHO on February 11, 2020 (Buana, 2020). According to WHO data as of October 8, 2020, in Indonesia, the death rate reached 11,472 and positive cases reached 315,714 people infected. Because of the increasing number of positive cases of Covid-19 in Indonesia continues to grow the Indonesian government declared that from 29 February 2020 to 29 May 2020 social distancing movement (Koesmawardhani, 2020).

The Indonesian Doctors Association (IDI) noted that as of September 13, 2020, 115
doctors and nurses had died due to Covid-19. Based on IDI records, the risk that causes the doctor's death cases is always repeated. IDI suspects that the causes include the lack of PPE, lack of patient screening in health facilities, the fatigue of medical personnel due to the growing number of COVID-19 patients, long working hours, and psychological pressure this because of the ratio of doctors and nurses to the population in Indonesia currently reaches 1:2,500. That means one doctor can handle 2,500 patients (BBC News Indonesia, 2020). There is still an imbalance in the number of medical personnel in handling the coronavirus (COVID-19) in Indonesia.

Based on the case above there are two problems that the researcher has identified in this study. These problems are 1) Indonesian nurses have experienced the psychological effects of handling and responding to COVID-19 cases; 2) It is not known what coping strategies Indonesian nurses are applying to manage their stress. From that, the researcher realizes the high role of nurses in the world of health. So, it is important to research coping strategies and its influence on the reduction of psychological effects experienced by nurses in handling and facing COVID-19 cases, so that researchers conduct a study on coping strategies for work stress in nurses.

**Literature Review**

**Psychological Effects of Stress on Nurses**

Stress that occurs to nurses if not handled properly can lead to physical illness, psychological and can affect the performance of nurses in service to patients. From the nurses’ perspective, this condition can directly or indirectly affect the views of patients and families towards the hospital which can harm the hospital itself (Syafkorianna, 2017).

**Coping Strategies of Nurses**

To deal with the stress experienced is required to concentrate more on solving various problems (Maryam, 2017). Thus, it is necessary to develop an adequate adaptation strategy called the coping strategy (Östlund, 2014). According to (Lazarus & Folkman, 1984) differentiate coping strategies into two, namely emotion-focused coping which is done by managing emotional responses that arise when faced with circumstances that cause stress and problem-focused coping is done by taking steps to face the problem directly.

**Emotion-Focused Coping**

Emotion-focused coping is making efforts that aim to modify the function of emotions without making efforts to change stressors directly (Tuasikal & Retnowati, 2018). Coping behavior that is emotionally centered tends to be done if the individual feels unable to change the pressing situation and can only accept the situation because the resources possessed are unable to cope with the situation (Lazarus & Folkman, 1984), and these factors include emotion-focused strategies:

1. Positive reappraisal is to react by creating positive meaning that aims to develop oneself including involving oneself in religious matters. For example, someone who does positive reappraisal will always think positively and take the wisdom of everything that happens and never blame others and be grateful for what they still have.
2. Accepting responsibility (emphasis on responsibility) is reacting by raising
awareness of the role of self in the problems faced and trying to put things as they should. For example, someone who accepts responsibility will accept everything that is happening right now as the name should be and be able to adjust to the conditions being experienced.

3. Self-controlling (self-control) that is reacting by doing regulation both in feelings and actions. For example, someone who does this coping for problem-solving will always think before doing something and avoid doing something in a hurry.

4. Distancing (keeping a distance) so as not to be shackled by problems. For example, someone who does this coping in problem-solving can be seen from his attitude that does not care about the problem being faced and even tries to forget it as if nothing has happened.

Several factors influence emotion-focused coping. According to Prasetya (2018), the factors that can affect a person's emotional focused coping are age, sex, and mental health of an individual.

H1: Emotion-focused coping strategy reduces the psychological effects that Indonesian nurses experienced in handling and responding to COVID-19 cases

**Problem-Focused Coping**

Problem-focused coping is an action directed at solving the problem (Lazarus, Folkman, & Schetter, 1986). Individuals will tend to use this behavior if they judge the problem they are facing can still be controlled and can be solved. Problem-centered coping behavior tends to be done if the individual feels that something constructive can be done about the situation or he believes that the resources owned can change the situation (Maryam, 2017). The coping strategies focused on the problem are:

- Actively deal with problems, the process of using strategies to try to get rid of stressors. This strategy involves initiating direct action, increasing effort, and dealing with problems in wise ways.
- Planning is thinking about how to deal with stressors. Make a strategy that will be done, also think about how to reduce problems and how to overcome problems.
- Reducing competition activities, namely individuals reducing involvement in activities that cause competition as a way to be more focused on the problems they face.
- Control is waiting for the right opportunity to act, refrain, and not act rashly.
- Seek social support for instrumental reasons, namely seeking advice, assistance, or information

H2: Problem-Focused coping strategy reduces the psychological effects that Indonesian nurses experienced in handling and responding to COVID-19 cases.

**Escape-Avoidance Coping**

A study by Long & Haney (1988) has shown that avoidance coping strategy is not the healthiest rather than approach coping because of the harmful activities like consumption of sedative, smoking, and other activities. Escape-avoidance is avoiding the problem at hand. For example, someone who does this coping for problem-solving can be seen from his attitude that is always avoiding and even often involves himself in negative actions such as sleeping too long, taking drugs, and not wanting to socialize with others (Lazarus & Folkman,
Escape-avoidance coping is characterized by wishful thinking (such as hoping that the situation will pass quickly or somehow it will end) run away or can be said to avoid the stressful situation is experiencing (Nater, 2017). Escape-avoidance coping according to Vingerhoets (2013) is a release both mentally and physically from situations that are considered threatening. Escape-avoidance coping does not cause individuals to be too depressed with the stressful situation they are experiencing. The use of these strategies can have a positive impact and can also have a negative impact depending on the demands that have to be dealt with stress (Kovacs, 2007). This coping is maladaptive coping which is marked as an effort to reduce the stressor aims at eliminating the overcoming problems that caused stress, and changing the perceptions in ways to refresh or neutralize the mind against the stressors (Tull, 2020).

H3: Escape-Avoidance Coping has a significant effect of the psychological effect that nurses had experienced in facing and handling COVID-19 cases.

Theoretical Framework

From the theoretical framework presented below, Emotion-Focused Coping (X1) is an independent variable, Problem-Focused Coping (X2), and Escape-Avoidance Coping (X3), and reduction in psychological stress facing and handling COVID-19 cases (Y) as a dependent variable.

INDEPENDENT VARIABLES

Figure 1 Theoretical Framework.

Sampling and Data Collection

The respondents of this study were 110 nurses handling COVID-19 cases and
characteristics like age, gender (men/women), working in COVID-19 special referral hospital, and nurse handling and facing COVID-19 case.

Data for this research was collected using a survey questionnaire, administered using Google Form and in the form of a paper questionnaire with some criteria to ensure that the respondent is a nurse handling and facing COVID-19 case in a special referral hospital, also age, gender, and origin. In this study, the researcher used the Likert scale. The instrument used to measure the variables of this study was using a Likert scale of five (5) points (Suwandhi, Imansyah, & Dasril, 2019). Because of the COVID-19 situation, it is hard to find the respondents. The researcher had to make a permission letter from Kementerian Kesehatan (Kemenkes) RI to get permission to do the questionnaire filling session to the nurse in a special referral hospital. Need a long time to get an approval letter from the disposition department to the reference.

Data Analysis

To obtain relevant results from the data that has been collected by the researcher, the researcher processed the data using the SPSS 22nd version and Microsoft Excel 2019. The classical assumption test aims to determine the condition of the data used in the study. The normality test is to determine whether, in the regression model, confounding or residual variables have a normal distribution (Ghozali, 2011). Multicollinearity test to test whether the regression model found a correlation between independent variables. A good regression model should not correlate with the independent variables (Ghozali, 2011). The heteroscedastic situation will cause the estimated regression coefficients to be inefficient and the estimation results may be less or more than they should be (Gunawan & Sunardi, 2016). For testing the presence or absence of heteroscedasticity, the rank-Spearman test is used. If the significant correlation result is <0.05 (5%), the regression equation contains heteroscedasticity (the variants of the residual are not homogeneous) (Priyatno, 2012)

Multiple Regression Analysis is used by researchers, if the researcher intends to predict how the state (rise and fall) of the dependent variable (criterion), if two or more independent variables as predictor factors are manipulated (increase and decrease) (Sugiyono, 2013). The researcher analyzed multicollinearity using the tolerance value and variance inflation factor (VIF) (Arquisola, Shella, & Hutabarat, 2018). For hypothesis testing, the researcher used T-Test and F-test. The T-test is a parameter test (correlation test) with using the t-statistical test proves whether there is influence between each independent variable (X) and the dependent variable (Y) (Sugiyono, 2013). F-test is done by testing the parameter β (correlation test) using the F-statistic test. To test the effect of the independent variables together (simultaneously) on the dependent variable, the F test is used (Ghozali, 2011). Coefficient determination is used by the researcher to determine the percentage of the simultaneous influence of independent variables on the dependent variable to see how much influence the independent variable. (Ghozali, 2011).

The hypothesis can be accepted if:
T-test:
- Hₐ accepted if t-count > t-table, value < 0.050. It means the independent variable has a significant effect on the dependent variable.
F-Test:
This research is dominated by 86 female nurses from 110 respondents. Comparing with (Arquisola & Muanar, 2019) stated that when compared to men, women limit their careers because they believe that they do not have the ability and skills to do a business/job. But, when in COVID-19 situation female nurses remain at the frontline of handling COVID-19 patients with all the risks that may occur. From the T-Test Result in Table 1, the purpose of this test is to determine the effect of individual independent variables in explaining variations in the dependent variable. To provide an interpretation of the t-test can be explained in Table 4 are the coefficient value of the X1 variable is 0.247. The significance value of the X1 variable is 0.007 which is smaller than α = 0.05. Then the variable X1 has a positive and significant effect on Y. Next is the coefficient value of the X2 variable is 0.389. The significance value of the X2 variable is 0.000 which is smaller than α = 0.05. Then the variable X2 has a positive and significant effect on Y. For the last is the coefficient value of the X3 variable is 0.206. The significance value of the X3 variable is 0.000 which is smaller than α = 0.05. Then the variable X3 has a positive and significant effect on Y.

Table 1. T-Test Result

<table>
<thead>
<tr>
<th>Mode</th>
<th>Coefficientsa</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
<th>Collinearity Statistics</th>
<th>Toleranc e</th>
<th>VVIP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td>.238</td>
<td>.812</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>X1</td>
<td>.247</td>
<td>.090</td>
<td>.233</td>
<td>2.733</td>
<td>.007</td>
<td>.881</td>
<td>1.136</td>
</tr>
<tr>
<td></td>
<td>X2</td>
<td>.389</td>
<td>.088</td>
<td>.376</td>
<td>4.433</td>
<td>.000</td>
<td>.887</td>
<td>1.127</td>
</tr>
<tr>
<td></td>
<td>X3</td>
<td>.206</td>
<td>.056</td>
<td>.307</td>
<td>3.684</td>
<td>.000</td>
<td>.919</td>
<td>1.088</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Y

Source: IBM SPSS 22 T-Test Output

Seeing from the table 2, the results obtained in this study using 95% confidence, df 1 (number of variables- 1) = 3, and df 2 (n-k-1) = 106, the results obtained for the F table are 2,690 with a significance value of 0.000. So that the value of F count> F table (16,908> 2,690) or p<α value (0.00 <0.05), then Ho is rejected, meaning that together the independent variables have a significant effect on psychological effect (Y).

Table 2. F-Test Result

ANOVA
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### Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>263.576</td>
<td>3</td>
<td>87.859</td>
<td>16.90</td>
<td>.000</td>
</tr>
<tr>
<td>Residual</td>
<td>550.797</td>
<td>106</td>
<td>5.196</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>814.373</td>
<td>109</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**a.** Dependent Variable: Y  
**b.** Predictors: (Constant), X3, X2, X1

*Source: IBM SPSS 22 F-Test Output*

The table showed that the value of the coefficient of determination (Adjusted R Square) of 0.324 which shows that 32.4% PE can be explained by the independent variable, the rest (100% - 32.4% = 67.6%) is explained by other factors outside the variables that are not included in this research.

### Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.569</td>
<td>.32</td>
<td>.305</td>
<td>2.2795</td>
</tr>
</tbody>
</table>

**a.** Predictors: (Constant), X3, X2, X1  
**b.** Dependent Variable: Y  
*Source: IBM SPSS 22 R² Output*

### The Effect of Emotion-Focused Coping towards Reducing the Psychological Effect

The first hypothesis that stated, “Emotion-focused coping strategy reduces the psychological effects that Indonesian nurses experienced in handling and responding to COVID-19 cases”. After the researcher did the several analyses resulting in the value of significance 0.007 it means that the hypothesis above is accepted and it can be used to reduce the psychological effect that Indonesian nurses had experienced in facing and handling COVID-19 cases. Besides that, the researcher found the value of coefficient regression is 0.247 which means a positive meaning that emotion-focused coping is used, will be accompanied by a reduction of the psychological effect that nurses had experienced in facing and handling COVID-19 cases. The highest average answer is 4.46 from 110 respondents agree that when they feel have a mindset that they must fulfil responsibility for doing their job and if something happened, they try not to blame the others to reduce their stress. Comparing with previous research (Maryam, 2017) still have a similarity that emotion-focused coping is approval reducing stress.

### The Effect of Problem-Focused Coping towards Reducing the Psychological Effect

Discussing the second hypothesis that stated, “Problem-Focused coping strategy reduces the psychological effects that Indonesian nurses experienced in handling and
responding to COVID-19 cases”. After the researcher did the several analyses resulting in the value of significance 0.000 it means that the hypothesis above is accepted and it can be used to reduce the psychological effect that Indonesian nurses had experienced in facing and handling COVID-19 cases. Besides that, the researcher found the value of coefficient regression is 0.389 which means a positive meaning that problem-focused coping is used, will be accompanied by a reduction of the psychological effect that nurses had experienced in facing and handling COVID-19 cases. The highest average answer is 4.7 from 110 respondents agree that they coped because they obtain the resources that they need to perform their job for example medical equipment. Unfortunately, IDI stated that 115 doctors and nurses passed away. The causes include the lack of PPE, lack of patient screening in health facilities, the fatigue of medical personnel due to the growing number of COVID-19 patients, long working hours, and psychological pressure because of the ratio of doctors and nurses to the population in Indonesia currently reaches 1: 2,500. That means one doctor can handle 2,500 patients (BBC News Indonesia, 2020). There is still an imbalance in the number of medical personnel in handling the coronavirus (COVID-19) in Indonesia. Even though the most important thing for them is the availability of PPE as personal protective equipment and also reduces the risk of contracting COVID-19. This clearly made them panic and also become stressed because of the lack of PPE provided.

The Effect of Escape-Avoidance towards Reducing the Psychological Effect

For the third hypothesis stated that “Escape-Avoidance Coping has a significant effect on the psychological effect that nurses had experienced in facing and handling COVID-19 cases”. The result of significance is 0.000 it shows that the third hypothesis is accepted, and it can be used as a reduction of the psychological effect that Indonesian nurses had experienced in facing COVID-19 cases. After that, the researcher found the value of coefficient regression is 0.2 result in positive meaning that escape-avoidance coping is used, will be accompanied by a reduction of the psychological effect. The highest average answer of escape-avoidance is 2.75 from 110 respondent answers. It stated before by Long & Haney (1988) that escape-avoidance coping is the unhealthiest. But on the other hand, 110 respondents coped by avoiding crowds when they stressed out. They believe that their stress is reduced when they far away from the crowded place.

The Effect of EFC, PFC, and EAC towards Psychological Effect

The last hypothesis stated that “Emotion-Focused Coping, Problem-Focused Coping, and Escape- Avoidance Coping has a significant effect on the psychological effect that nurses had experienced in facing and handling COVID-19 cases”. From the F-test, the result of significance is 0.000 it shows that the third hypothesis is accepted, and it can be used as a reduction of the psychological effect that Indonesian nurses had experienced in facing COVID-19 cases and meaning that together the independent variables have a significant effect on psychological effect (Y).

Conclusion and Implications

Based on the result of this research, COVID-19 cases have a psychological effect on Indonesian nurses in handling their COVID-19 patients. Because of the job pressure, lack of PPE, lack of patient screening in health facilities, the fatigue of medical personnel due to
the growing number of COVID-19 patients, long working hours, and psychological pressure this because of the imbalance ratio of doctors and nurses. Strategy coping reduce their stress, but the most important is not all the medical personnel get PPE. Government or institutions would be very helpful to reduce the nurses’ stress with the distribution of PPE as a whole without any gaps. This can help Indonesia to stop the COVID-19 outbreak seeing that starting from February to October, the outbreak doesn’t stop in Indonesia. It’s because one of the factors is the gap between many patients and medical personnel who treat them.

Future research should explore more about COVID-19 cases in medical personnel in Indonesia from an HR perspective where the research is still scant because of the recent pandemic in 2020. Also, updating the statistical tool or software for quantitative research with a larger number of respondents. Future research can be also used for qualitative research to explore how its importance, effect, and influence of the pandemic that Indonesian nurses faced. In an HR perspective, this is challenged to disseminate how important medical personnel mental health during the outbreak to the people who still do not believe in the COVID-19 pandemic. Also, change the people’s mindset to the frontline of COVID-19 cases so they will not underestimate their job as medical personnel.

The topic of the psychological effects felt by nurses in Indonesia is very new and there has not been much research on the latest pandemic that occurred in early 2020. This research is one of the entry points to study the extent to which ways to reduce stress while working in the Covid-19 case are at the forefront of having the highest risk of transmission, especially regarding whether coping strategies can be used as a strategy to reduce stress for nurses in Indonesia. The results showed that coping strategies have an effect and can reduce the psychological effects felt by Indonesian nurses. This research provides an empirical contribution to the lack of knowledge and insight about work stress in the COVID-19 situation that has just occurred. Through this research, it is hoped that this research can raise awareness in disciplining health protocols that the government has made in reducing cases of contracting the COVID-19 virus.

References:


IASC. (2020). Catatan tentang aspek kesehatan jiwa dan psikososial wabah COVID-19 Versi 1.0. This copy is version 1.0 of this document (Feb 2020) which will be updated regularly during the COVID-19 outbreak, p. 6.


Prasetya, I. Y. (2018). GAMBARAN STRATEGI KOPING STRES BERFOKUS EMOSI (EMOTIONAL FOCUSED COPING) PADA REMAJA DENGAN ORANGTUA YANG BERCERAI.


*Sisir Ilmiah Mahasiswa Kesehatan Masyarakat*, 1-11.


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