Knowledge and Attitude About COVID-19 Affected The Mental Health of Nurses

Wa Ode Rakhmawati¹
Narmawan²*
Muh. Syahwan³

¹,² Nursing Undergraduate Program of STIKes Karya Kesehatan Institute of Health Science, Kendari, Indonesia
³ Vocational nursing study Program of STIKes Karya Kesehatan Institute of Health Science, Kendari, Indonesia

ABSTRACT
Nurses are at the forefront of taking care, prevention, and providing support and education almost at the same time without considering their psychological state in treating patients with Covid-19 for 24 hours. Most health workers have experienced and will experience some physical and psychological difficulties that are beyond their capacity. The importance of the knowledge and attitudes of nurses to provide professional nursing services during a pandemic has an impact on the ability of nurses to control the symptoms of mental health disorders. This study aimed to determine the relationship between knowledge and attitudes about Covid-19 and mental health of nurses. This research had a correlational design with a cross-sectional study approach. The study population was 109 nurses and 53 of them were taken by proportional random sampling technique. The correlation test was made using a Spearman rank test. This study suggested a moderate relationship between knowledge about Covid-19 and mental health of workers (p-value) = 0.001 <= 0.05, correlation coefficient=0.443 and a weak relationship between attitudes about Covid-19 and mental health (p-value) = 0.018 < = 0.05 correlation coefficient value=0.294). There is a relationship between knowledge and attitudes about Covid-19 with the mental health of nurses. It is suggested, particularly to the local Hospital of South east Sulawesi, to make a policy to improve the mental health status of nurses.

KEYWORDS
Knowledge; Attitude; Mental Health of Nurse

Introduction
Corona virus disease (Covid-19) was first reported in Wuhan City, China at the end of 2019, which spreadquickly and created a new pandemic (D. Handayani et al., 2020). Data from the World Health Organization (WHO) as of May 5, 2021 published that it has been confirmed As many as 153, 954, 491 cases of Covid-19 in the world (WHO, 2021). Mean while, in Indonesia until May 6, 2021, it was recorded that as many as 1,697,305 were positively infected with Covid-19 (Covid-19 Handling Task Force, 2021). In Southeast Sulawesi Province as of June 15, 2021, there were 10,612 confirmed cases of Covid-19 (South east Sulawesi Province Covid1-9 Task Force, 2021).

The significant increase of Covid-19 cases during this pandemic caused mental and psychosocial health problems, especially health workers as the front line (Pinggian et al., 2021). A study in China involving participants who were hospital nurses who were directly involved in providing treatment and care for Covid-19 patients at a hospital in Wuhan had experienced symptoms of depression by 50.4%, anxiety 44.6%, sleep disturbances 34.0%, and distress 71.5% (Lai et al., 2020). A meta-analysis study by Yuniswara (2021) showed that conditions such as anxiety, anger, fear, sadness and happiness, optimism and distress as well as german version were a picture of mental health in nurses in caring for Covid-19 patients (Yuniswara, 2021).

Today, both globally and nationally, the Covid-19 disease is still increasing and force nurses to make tough decisions and are willing to work under full pressure (Greenberg et al., 2020). Nurses must treat Covid-19 patients, take treatment and prevention measures, and provides upportand education, almost at the same time with out considering their psychological and mental health state (Pasaribu, 2021).

The importance of nurses’ knowledge and attitudes in providing services to patients during a pandemic affects the ability of nurses to control symptoms of mental health disorders. By increasing the knowledge, attitudes, and skills of nurses in providing care for Covid-19 patients will have a positive effect to nurses to overcome their mental health disorders (Utama & Dianty, 2020).

The initial study at the Southeast Sulawesi Provincial Mental Health Hospital showed 118 nurses were in the mental health hospital. An internal survey by the Mental Health Division of the Southeast Sulawesi Provincial Mental Health Hospital on in patient nurses in 2020 found that a round 34% experienced symptoms of anxiety, burnout, worry, insomnia, distress, and anger. The results of interviews with 5 nurses who were hospitalized, 4 nurses said that during this pandemic they worried, afraid, and alert so they continued to use masks and hand sanitizers both in the hospital environment and outside the hospital. They say what if it gets infected and transmits it to close relatives and causes death as incases that have happened before. While 1 other person said he felt normal, just not as free as...
before because there must be distance and no contact. Further interviews about their knowledge and attitude regarding Covid-19, it was found that 5 people said that covid-19 was a category of coronavirus that attacks the respiratory tract and can make people suffocate and even die, and as many as 4 people showed a positive attitude by trying to comply with health protocols and 1 people how are signed attitude if infected and leave everything to God (South east Sulawesi Provincial Mental Hospital, 2021).

Based on the background above that most health workers have experienced some physical and psychological difficulties beyond their means. The importance of the knowledge and attitudes of nurses in providing professional nursing services during a pandemic has an impact on the ability of nurses to control symptoms of mental health disorders. Therefore this study aims to determine the relationship between knowledge and attitudes about Covid-19 with the mental health of nurses.

Method

This study used a quantitative correlation design with a cross-sectional study approach.

Participants

The study population, namely all nurses at the Mental Health Hospital of Southeast Sulawesi Province, as many as 109 nurses with a sample of 53 people obtained by proportional random sampling. Independent variables were knowledge and attitudes about Covid-19. Mean while, the dependent variable was the mental health of the nurses.

Instruments

The research instrument was a questionnaire. For knowledge and attitude variables, a standardized questionnaire has been used, which was previously used in Wahed et al., (2020), study entitled Assessment of Knowledge, Attitudes, and Perception of Health Care Workers Regarding COVID-19, A Cross-Sectional Study from Egypt and the validity test has been carried out with the internal consistency of the questionnaire for both variables showing the value of r count > r table, while for the reliability value of knowledge it shows the cronoabach alpha value = 0.750 and the attitude shows the cronoabach alpha value = 0.712. Furthermore, for mental health variables, the Self-Reporting Questionnaire (SRQ) was developed by WHO as an instrument used to screen mental disorders including depression, anxiety related to mental disorders and symptomatic disorders (InfoNTD, 2020). This instrument has previously been tested for validity and reliability with a reliability value = 0.78, and the validity test based on AUC statistics shows a value of 0.877 for male respondents and 0.871 for female respondents (Netsereab et al., 2018).

Data analysis

In this study, statistic al tests were computerized and analyzed with a Spearman rank test. The results of the statistical test are then based on: if the $p$-value < 0.05 or $p < 0.05$ then the alternative hypothesis (Ha) is accepted. In contrast, if the $p$-value > 0.05 or $p > 0.05$ then the alternative hypothesis (Ha) is rejected. Determination of the correlation value is based on the correlation coefficient under the following criteria: r=0.00-0.199 (very weak), 0.20-0.399 (weak), 0.40-0.599 (moderate), 0.60-0.799 (strong) and 0.80-1.000 (very strong).

Results

Characteristics of Respondents

<table>
<thead>
<tr>
<th>Characteristics of respondents</th>
<th>Frequency (f)</th>
<th>Percentage</th>
<th>Median</th>
<th>Min-Max</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26-30</td>
<td>16</td>
<td>30,2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>31-35</td>
<td>14</td>
<td>26,4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>36-40</td>
<td>12</td>
<td>22,6</td>
<td>35,00</td>
<td>26-52</td>
</tr>
<tr>
<td>41-45</td>
<td>6</td>
<td>11,3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>46-50</td>
<td>5</td>
<td>9,4</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>28</td>
<td>52,8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Women</td>
<td>25</td>
<td>47,2</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D3</td>
<td>22</td>
<td>41,5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S1</td>
<td>17</td>
<td>32,1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S1 + Ners</td>
<td>14</td>
<td>26,4</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Working Time</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-3</td>
<td>25</td>
<td>47,2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6-10</td>
<td>12</td>
<td>22,6</td>
<td>6,00</td>
<td>1-27</td>
</tr>
<tr>
<td>11-15</td>
<td>6</td>
<td>11,3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt;16</td>
<td>10</td>
<td>18,9</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 1 shows that majority of the respondents were 26-30 years old, as many as 16 people (30.2%) with the median of 35 years old and the lowest and highest were respectively 26 years and 52 years old. Most respondents were men (52.8%), the highest education level was D3 Nursing, as many as 22 respondents (41.5%), and had been working for 1-5 years, namely 25 people (47.2%) with a median tenure of 6 years, the lowest length of service is 1 year and the longest tenure is 27 years.

**Univariate analysis**

<table>
<thead>
<tr>
<th>Research Variables</th>
<th>Median</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
<td>21</td>
<td>16</td>
<td>24</td>
</tr>
<tr>
<td>Attitudes</td>
<td>36</td>
<td>22</td>
<td>40</td>
</tr>
<tr>
<td>Mental Health</td>
<td>3</td>
<td>0</td>
<td>6</td>
</tr>
</tbody>
</table>

Table 2 shows that the median value of the respondent’s knowledge was 21 indicating high knowledge, with the lowest score was 16 and the highest score was 24. Regarding the attitude variable, the median value was 36 with the lowest score was 22 which indicates that the respondent has a positive attitude and the highest score was 40. Meanwhile, the mental health variable showed the median value of 3 with the lowest and the highest scores respectively 0 and 6.

**Bivariate analysis**

<table>
<thead>
<tr>
<th>Research Variables</th>
<th>Mental Health</th>
</tr>
</thead>
</table>
| Knowledge          | \( r = 0.443 \)  
| \( p \) Value = 0.001  
| \( n = 53 \) |

Table 3 shows that the results of statistical analysis on the relationship between knowledge about Covid-19 and mental health using the Spearman rank test obtained a value of \( \text{sig (2-tailed)} = 0.001 < = 0.05 \) and the value of the correlation coefficient \( = 0.443 \) which indicates there is a relationship. Thus, it can be concluded that there is a relationship between knowledge about Covid-19 and the mental health of nurses at the South east Sulawesi province al mental health hospital.

<table>
<thead>
<tr>
<th>Research Variables</th>
<th>Mental Health</th>
</tr>
</thead>
</table>
| Attitude           | \( r = 0.294 \)  
| \( p \) Value = 0.033  
| \( n = 53 \) |

Table 4 shows the results of statistical analysis on the relationship between attitudes about Covid-19 and mental health using the Spearman rank test, the value of \( \text{sig (2-tailed)} = 0.033 < = 0.05 \) and the value of the correlation coefficient \( = 0.294 \) which indicates a weak relationship, so it can be concluded that there is there is a weak relationship between attitudes about Covid-19 and mental health of nurses at the South east Sulawesi province al mental health hospital.

**Discussion**

*The relationship between knowledge about Covid-19 and mental health of nurses*

The results of the research suggest a moderate relationship between knowledge about Covid-19 with the mental health of nurses at the Southeast Sulawesi provincial mental health hospital. Statistically, the reisarelationship between knowledge and mental health because the \( p \)-value obtained is smaller than the alpha value which means that the respondent understands well about Covid-19. Based on the research, it is known that the average respondent gets a high score for the questions asked. Fur ther more, most of the respondents answered correctly that Covid-19 is a disease caused by virus, transmitted through direct on tact with infected people and droplets, causes pneumonia, respiratory failure, and death, wash hands with soap, water or alcohol, avoid touch in gyes, nose and mouth, wear face masks and avoid crowds in public places.

The respondent’s good knowledge about Covid-19 is supported because the nursing profession, which is at the fore front in handling Covid-19, not only treats patients infected with Covid-19 but also provides education about Covid-19 and efforts to prevent transmission to the wider community, which requires nurses to understand Covid-19. This hypothesis follows is the theory that knowledge is an important element ineffortstosolve health problems, especially regarding Covid-19 (Yanti et al., 2020).

Knowledge is important in handling Covid-19 cases, By having good knowledge of athing, one will have the ability to determine and make decisions on how to deal with it (Purnamasari & Ell Raharyani, 2020). Expanding
self-knowledge and a realistic attitude is a must in achieving optimal mental health (Dewi, 2012; Director General of Disease Prevention and Control of the Indonesian Ministry of Health, 2020). Mental health is the ability to restrain one self, show intelligence, behave with tolerance for other people’s feelings, and have a happy life attitude (Dewi, 2012).

The for mental health in this study, from the results of filling out the questionnaire, respondents had feelings such as fear, anxiety, in doing their daily work as nurses they were not enjoyed because they were mixed with fear, and sometimes there was an unpleasant feeling in the stomach. This has shown the presence of mental health problems for nurses. The mental health paradigm of nurses during the pandemic is working a midintense media and public attention, long, massive work duration, and triggers the occurrence of negative psychological effects includes emotional disturbances, depression, stress, low mood, irritability, panic attacks, phobias, symptoms, insomnia, anger, and emotional exhaustion (Brooks et al., 2020). In addition, the stigmatization that is accepted and makes medical personnel including nurses as if they are carriers of the virus that can trigger psychological disorders in the medical team (Tsamakis et al., 2020). Lack of personal protective equipment (PPE), as well as a snap prop Gentle use of PPE have put the nurses in a high risk of being infected with Covid-19 (Tri Atmojo et al., 2020).

Nurses’ knowledge about Covid-19 and its various aspects strongly supports self-management abilities on mental health (Wemma & Wulfert, 2019). As per the theory that a person’s good preventive behavior is driven by good knowledge (Silalahi et al., 2013). Study by Huynh et al (2020), shows that Knowledge and attitudes to wards Covid-19 have a significant and positive relation ship to anxiety through mental health variables. Similarly, research by Fadli et al (2020), proves that there is an influence between knowledge on one of the symptoms of mental health disorders, namely the feeling of anxiety of health workers when handling, preventing and caring for Covid-19 patients.

Researchers as sume that there is a relationship between knowledge about Covid-19 and mental health because where they search sample knows well about he Covid-19 virus that causes the pandemic. Nurses already standed forts to prevent things that can interfere with mental health while providing mental health services and are always trying to improve compliance with health protocols, because they understand that being infected with the Covid-19 virus can disrupt their mental health.

The relationship between attitudes about Covid-19 and mental health of nurses

The results of the study found that there was a weak relationship between attitudes about Covid-19 and the mental health of nurses at the South east Sulawesi provincial mental health hospital. Based on statistical analysis there is a relationship between mental health attitudes indicated by smaller p value than the alpha value. The study carried out showed that many respondents had a positive attitude, this was shown from the questionnaire where many respondents stated that covid-19 can be prevented, standard precautions can protect us from Covid-19, also Covid-19 patients can recover from illness.

The positive attitude of the respondents can be supported by good knowledge where respondents as nurses are indirectly required to have good knowledge in order to provide appropriate education to the community. This study is in accordance with several other studies in which there is a relationship between the knowledge of health workers about Covid-19 and their attitudes (Huynh et al., 2020; Saqlain et al., 2020; Zhang et al., 2020). Knowledge of health workers is a crucial prerequisite for positive attitudes, belief about Covid-19 prevention, and promoting positive practices and can influence their coping strategies to maintain mental health status to some extent (Abdel Wahed et al., 2020; McEachan et al., 2016).

The results of mental health measurements showed that most respondents answered that they did not sleep well, felt anxious, worried, felt tense, shook hands, found it difficult to think clearly, daily activities, feelings of inadequacy and loss of interest. This shows that they feel stigmatized because they feel them selves in contact with mental patients with the criteria of a symptomatic people in the patient room and feel anxious if they infect others, especially those closest to them. Moreover, in adequate PPE in the mental patient care room exacerbated this condition. Another study on the relationship between attitudes and mental health of respondents who are married suggested that this condition triggers anxiety in providing care services to mental patients with a high risk of contracting positive Covid-19 which can transmit it to their families (Shanafelt et al., 2020).

Treatment for mental health disorders during the Covid-19 pandemic should be necessary and immediately carried out to reduce their psychological pressure. Program interventions that can be carried out include trauma healing, hypnotherapy, and psychological assistance for health workers (Economou et al., 2016; R. T. Handayani et al., 2020). This present study gives similar results to the study by Huynh et al. (2020), where most of the respondents had a positive attitude about Covid-19, but there was significant concern that they could catch the virus and in turn transmit the virus to family members, especially their parents. Also, this study is in line with Pasaribu (2021) research which shows that respondents’ positive attitudes encourage active behavior in tackling the Covid-19 pandemic trying to protect them selves from exposure to the Covid-19 virus and their mental health disorders. There researcher as sumes that the reas a relationship between attitudes about Covid-19 and the mental health of nurses because most of the respondents have a positive attitude, which is supported by good knowledge of respondents about Covid-19. The positive attitude of the respondent will encourage the respondent to take action to prevent the mental health disorder of nurses.

Conclusion

There is a moderate relationship between knowledge about Covid-19 and mental health of nurses and a weak relationship between attitudes about Covid-19 and mental health of nurses in the mental health hospital of South east
Sulawesi province. It is suggested, particularly to the local Hospital of South east Sulawesi, to make a policy to improve the mental health status of patients with high risk of being infected with Covid-19 when treating patients with mental disorders considering that patients find it difficult to comply with health protocols while under going good care especially patients with anxiety.

Acknowledgement

We from all the authors would like to thank the psychiatric hospital for giving permission for the research and all the respondents who participated in our research to completion.

Funding

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

References


