Overview of Nurse Anxiety Screening Dealing with the Covid-19 Pandemic

Tonika Tohri
Sekolah Tinggi Ilmu Kesehatan Rajawali

Risna Yuliani
Rumah Sakit Dr Hasan Sadikin

Muhammad Deri Ramadhan (✉ deriramadhan030394@gmail.com)
Institut Kesehatan Rajawali

Research

Keywords: Covid-19, Worry, Nurse Anxiety

DOI: https://doi.org/10.21203/rs.3.rs-681704/v1

License: ☑️ This work is licensed under a Creative Commons Attribution 4.0 International License. Read Full License
OVERVIEW OF NURSE ANXIETY SCREENING
DEALING WITH THE COVID-19 PANDEMIC

Tonika Tohri¹, Risna Yuliani², Muhammad Deri Ramadhan¹*

¹Faculty of Nursing, Institut Kesehatan Rajawali, Bandung, Indonesia
²Rumah Sakit umum Pusat Hasan Sadikin, Bandung, Indonesia
*Corresponding email: deriramadhan030394@gmail.com

ABSTRACT

Background: The increasing number of Covid-19 patients every day has caused anxiety in all circles of society, including nurses. Even though these prevention efforts have been carried out strictly, the potential for exposure to this virus is still quite high, even causing clusters in several buildings at Hasan Sadikin Hospital (RSHS) Indonesia.

Destination: Knowing An overview of nurses' anxiety screening in the face of the Covid-19 pandemic and an overview nurse characteristics at RSHS by gender, age, education level.

Methodology: The research design is descriptive. The number of research samples is 301 people. The sampling technique is Probability Sampling: Cluster Random Sampling. The research time is March 2021 using the Coronavirus Anxiety Scale (CAS).

Result: Of the total respondents 301 people there are 14 (4.65) people experiencing dysfunctional anxiety, women i.e. 13 (4.32) people, aged 26 - < 46 years old that is 9 (2.99) people and D3 is 8 (2.66) people.

Conclusion: The picture of nurses' anxiety at RSHS is very low because the pandemic has been running for 1 (one) year, the researcher recommends doing research by comparing the anxiety of nurses at the beginning of the pandemic with the current pandemic.

Keywords: Covid-19 ; Worry ; Nurse Anxiety
BACKGROUND

Coronavirus Disease 2019 (COVID-19) is an infectious disease caused by Severe Acute Respiratory Syndrome Coronavirus2 (SARS-CoV-2). SARS-CoV-2 is a new type of coronavirus that has never been previously identified in humans. Common signs and symptoms of COVID-19 infection include symptoms of acute respiratory distress such as fever, cough and shortness of breath. The average incubation period is 5-6 days with the longest incubation period being 14 days. In severe cases of COVID-19 it can cause pneumonia, acute respiratory syndrome, kidney failure, and even death. (Ministry of Health. Guidelines and Control of Coronavirus Disease 2019 (Covid-19); 2020).

On December 31, 2019, WHO China Country Office reported a case of pneumonia of unknown etiology in Wuhan City, Hubei Province, China. On January 7, 2020, China identified the case as a new type of coronavirus. On January 30, 2020, WHO declared the incident a Public Health Emergency of Global Concern. (KKMMD)/Public Health Emergency of International Concern (PHEIC) and on March 11, 2020, WHO has declared COVID-19 a pandemic.

The increase in the number of cases took place quite quickly, and spread to various countries in a short time. Until February 2021, WHO reported 180 million confirmed cases with 3.89 million deaths worldwide. Indonesia reported its first case on March 2, 2020. Cases are increasing and spreading rapidly throughout Indonesia. As of February 2021, the Ministry of Health reported 2.03 million confirmed cases of COVID-19 with 55,594 deaths.

In West Java, Until February 2021, the number of confirmed cases of Covid-19 was 210,442 people and 2309 people died. (Wikipedia, JHU COVID-19 DATA). Meanwhile, at dr Hasan Sadikin Hospital, which is the General Hospital of the Covid-19 Referral Center in West Java, until February 2021 the total who have been treated are 2288 people (RSHS 2021).

The impact of the Covid-19 pandemic has caused many losses such as physical health problems, economic inequality, social inequality and mental disorders (Wang et al. 2020). Mental disorders that occurred during the Covid-19 pandemic were anxiety, fear, stress, depression, panic, sadness, frustration, anger, and denial (Huang et al. 2020). With the increasing number of Covid-19 patients every day, causing anxiety in all circles of society, especially medical officers and paramedics who work on the front lines of the Covid-19 pandemic, one of which is a nurse. Nurse is a health worker actively involved 24 hours in providing nursing care asuhanso that there is direct contact with Covid-19 patients. This makes the community have a negative stigma so that in some cases there are nurses who are not accepted in their environment, even people refuse the bodies of nurses who died to be
buried in public cemeteries. The Covid-19 pandemic has also caused the workload of nurses to increase due to the large number of patients who need health services. In addition, the work culture of nurses has also changed, where in all hospital environments they use PPE in accordance with the ring level and must follow a strict flow of entry and exit, especially in the Covid special treatment room, nurses must go through several stages of preparation before entering for treatment. Care for the patient and after leaving the room after treating the patient.

In carrying out her duties as a nurse, she faces many physical and mental risks. As those who are closest to patients when carrying out treatment, they are vulnerable to being exposed to the corona virus that is spread by patients. Even though these prevention efforts have been carried out strictly, the potential for exposure to this virus is still quite high, even causing clusters in several buildings in RSHS and this of course can trigger nurses' anxiety and disrupt services for patients due to lack of personnel.

Anxiety is a natural thing that has been experienced by every human being. Anxiety is considered a part of everyday life. Anxiety is a feeling that is general in nature, where a person feels afraid or loses self-confidence whose origin or form is unclear (Sutardjo Wiramihardja, 2005: 66). Anxiety is something that happens to almost everyone at some point in their life. Anxiety is a normal reaction to situations that are very stressful for a person's life. Anxiety can appear alone or in combination with other symptoms of various emotional disorders (Savitri Ramaiah, 2003:10). Excessive anxiety can have a detrimental impact on the mind and body and can even lead to physical illness (Cutler, 2004). Anxiety that is left unchecked will have an impact, namely a decrease in immunity, one of which is recurrence of genetic diseases and digestive disorders (Nechita, & Motorga, 2018).

From the results of a study conducted by Yun Liu, et al entitled The prevalence and Influencing factors for anxiety in medical workers fighting COVID-19 in China: A cross-sectional survey (2020) it can be concluded that out of 512 medical staff from China, 164 officers health workers (32.03%) had direct contact with treating infected patients Covid-19. The prevalence of anxiety was 12.5%, with 53 workers suffering from mild (10.35%), 7 workers from moderate (1.36%) and 4 workers from severe anxiety (0.78%). The government should carry out early detection of high risk anxiety among medical staff, and implement intervention programs regarding psychological, to prevent medical staff from experiencing psychological disorders that could potentially have an adverse effect on eradicating the epidemic Covid-19.

This is in line with research conducted by Mo Y entitled Work Stress among Chinese Nurses to support Wuhan in Fighting against COVID-19 Epidemic; A cross-sectional survey
(2020) which can be concluded that the results of the Stress Overload Scale (SOS) score of $39.91 \pm 12.92$ and the Self-rating Anxiety Scale (SAS) of $32.19 \pm 7.56$ from this group of nurses are positively correlated ($r = 0.676$, $p < 0.05$), Anxiety is the main factor that affects nurses' stress ($p = 0.000$). Leaders must pay attention to the workload and factors affecting nurses who are battling Covid-19 and offer solutions to maintain the mental health of these nurses.

From the results of a preliminary study by conducting interviews with 5 nurses at the Kemuning Building, Dr Hasan Sadikin Hospital, Bandung, the 5 nurses said that they were still experiencing anxiety because they were afraid of being infected and infecting their family, even though they had used level 3 PPE because some of their colleagues had confirmed it positive after carrying out their duties, they also said that they hoped this pandemic would end soon because they began to feel discomfort when wearing level 3 PPE.

**METHODS**

The design used is descriptive, which aims to see a description of the anxiety screening of nurses facing the Covid-19 pandemic and a description of the characteristics of nurses based on age, gender and education at RSUP Dr. Hasan Sadikin Bandung in March 2021. The population of this study were all nurses who were on active duty at Dr Hasan Sadikin Hospital in Bandung, totaling 1220 people. The number of samples in this study was 301 people calculated using the Slovin formula. The sampling technique used in this study is the probability sampling method: side random cluster. Respondent data were taken from direct measurements, the samples used in this study were nurses on duty in the Intensive (GICU, PICU, NICU, RIIK), Central Surgery (COT and Anasthesi), children (Yannga), Infection (Kemuning), Installation Outpatient, Internal Medicine (Fresia), Emergency Room.

The instrument used is the Coronavirus Anxiety Scale which was adopted from Sherman Lee, 2020 and is used with the approval of the author which is then translated by a sworn translator and a content validity test is carried out by 4 (four) experts, then a pilot study is carried out and a construct validity test is carried out, and the results from the validity test, this CAS was declared valid and reliable to be used in this study. *Coronavirus Anxiety Scale* (CAS) is a mental health screening that can be filled directly by users to determine whether there is excessive anxiety related to the corona virus crisis. Most people experience clinically apparent fear and anxiety during the outbreak of the infectious disease. CAS was developed to help doctors and researchers to identify those who are experiencing disruption of daily
functions/activities by anxiety related to the corona virus. Each CAS item is rated on a 5-point scale, from 0 (not at all) to 4 (almost daily), based on experience over the past two weeks. This scaling format is consistent with the DSM-5’s cross-cutting symptom measurement. A total CAS score ≥ 9 indicates the possibility of dysfunctional anxiety related to corona virus. An increase in the score on a particular item or a high total scale score (shown ≥ 9) may indicate problematic symptoms for the individual who may require further action and/or treatment. Interpretation of CAS results should be guided by clinical considerations.

RESULTS

Table 1 Characteristics of All Respondents by Gender, Age and Education

| Variable   | Frequency | Percentage |
|------------|-----------|------------|
| **Gender** |           |            |
| Man        | 75        | 24.92      |
| girl       | 226       | 75.08      |
| **Age**    |           |            |
| <26 years old | 5     | 1.66       |
| 26 - < 46 years old | 201 | 66.78     |
| 46 - < 56 years old | 83  | 27.57     |
| 56 years old           | 12   | 3.99       |
| **Education** |       |            |
| D3          | 187       | 62.13      |
| S1          | 112       | 37.21      |
| S2          | 2         | 0.66       |
| **Total**   | 301       | 100.00     |

Based on Table 1 above, it can be seen that from a total of 301 respondents at Dr Hasan Sadikin Hospital in Bandung, the highest number was female respondents, namely 226 (75.08) people. Meanwhile, based on age, the highest number of respondents was aged 26-<46 years as many as 201 (66.78) people and the lowest age distribution was age < 26 years, namely 5 (1.66) people and based on education showed that the highest number of respondents were Diploma graduates, namely as many as 187 (62.13) people and the education distribution of the lowest respondent is Master degree as many as 2 (0.66) people.
Table 2 Description of respondents' anxiety in the Sub-Room of Dr.Hasan Sadikin Hospital Bandung

| Subsection       | Not Dysfunctional Anxiety | Dysfunctional Anxiety | Total   |
|------------------|---------------------------|-----------------------|---------|
|                  | n    | %       | n    | %       | n    | %       |
| Intensive        | 64   | 21.26   | 5    | 1.66    | 69   | 22.92   |
| Emergency        | 35   | 11.63   | 0    | 0.00    | 35   | 11.63   |
| Outpatient       | 40   | 13.29   | 2    | 0.66    | 42   | 13.95   |
| Internal disease | 29   | 9.63    | 1    | 0.33    | 30   | 9.97    |
| Child            | 16   | 5.32    | 3    | 1.00    | 19   | 6.31    |
| Central Surgery  | 43   | 14.29   | 1    | 0.33    | 44   | 14.62   |
| Infection        | 60   | 19.93   | 2    | 0.66    | 62   | 20.60   |
| Total            | 287  | 95.35   | 14   | 4.65    | 301  | 100.00  |

Table 2 shows a description of anxiety in each sub-section at Dr Hasan Sadikin Hospital, Bandung. From a total of 301 respondents studied, the results showed that as many as 14 people experienced dysfunctional disorders, the highest number was in the intensive sub-section as many as 5 (1.66) people and the Emergency Installation sub-section was the only sub-section where there were no respondents with dysfunctional anxiety disorder.
Table 3 Description of respondents' anxiety by gender, age and education

| Age                | Anxiety         | Total |  |
|--------------------|-----------------|-------|-------|
|                     | Not Dysfunctional | dysfunctional | n | % | n | % | n | % |
| Gender              | Not Dysfunctional | dysfunctional | n | % | n | % | n | % |
| Man                 | 74              | 24.58 | 1 | 0.33 | 75 | 24.92 |  |
| girl                | 213             | 70.76 | 13 | 4.32 | 226 | 75.08 |  |
| Age                 | Not Dysfunctional | dysfunctional | n | % | n | % | n | % |
| <26 years old       | 5               | 1.66  | 0 | 0.00 | 5 | 1.66  |  |
| 26 - <46 years old  | 192             | 63.79 | 9 | 2.99 | 201 | 66.78 |  |
| 46 - <56 years old  | 78              | 25.91 | 5 | 1.66 | 83 | 27.57 |  |
| >56 years old       | 12              | 3.99  | 0 | 0.00 | 12 | 3.99  |  |
| Education           | Not Dysfunctional | dysfunctional | n | % | n | % | n | % |
| D3                  | 179             | 59.47 | 8 | 2.66 | 187 | 62.13 |  |
| S1                  | 106             | 35.22 | 6 | 1.99 | 112 | 37.21 |  |
| S2                  | 2               | 0.66  | 0 | 0.00 | 2 | 0.66  |  |
| Total               | 287             | 95.35 | 14 | 4.65 | 301 | 100.00 |  |

Table 3 above shows that the highest number by gender who experienced dysfunctional anxiety were women, namely 13 (4.32) people, while based on age, age group 26 - <46 years old is the age group with the most dysfunctional anxiety, as many as 9 (2.99) people, and based on education there is no significant difference between D3 and S1 education who experience dysfunctional anxiety because there are 8 D3 education (2.66) people who experience dysfunctional anxiety and S1 there are 6 (1.99) people who experience dysfunctional anxiety.

**DISCUSSION**

Based on the characteristics of all respondents based on gender, age and education, the description of the characteristics of nurses at Dr Hasan Sadikin Hospital Bandung from a total sample of 301 people consisting of 75 (24.92) men and 226 (75.08) women, based on age, namely age. <26 years as many as 5 (1.66) people, age 26 - < 46 years as many as 201 people, age 46 - < 56 years as many as 83 (27.57) people and age 56 years as many as 12
people and based on D3 education as many as 187 (62.13) people, 112 (37.21) undergraduate education and 2 (0.66) master's education.

In this study, the results showed that the description of anxiety in all respondents amounted to 301 people, there were 14 (4.65) respondents who experienced dysfunctional anxiety. This number according to the researcher's assessment is very low because it is not in line with research conducted by Amir Moghanibasi (2020) which said that the total level of anxiety was $8.61 \pm 6.95$ and the severity of anxiety symptoms in 49.1% of normal cases, in 9.3% severe and 9.8% very severe and not in line with research conducted by Rossi (2020), namely from the total sample in this study amounted to 1379 respondents, the results of the study were PTSD (49.38%), major depression 341 (24.73%), Anxiety 273 insomnia (19.80%), 114 (8.27%) and stress 302 (21.90%) and most of the health workers involved with the COVID-19 pandemic have mental health issues. This, according to the researcher's assessment, could be because this research was conducted after the Covid-19 pandemic lasted for 1 year, so that the support from the leadership has been given to the maximum.

The Coronavirus Anxiety Scale also only interprets the results that indicate dysfunctional anxiety so that it does not describe the level of mild, moderate or severe anxiety, while from the results of the respondents' answers, if they can be classified, the answers are still given a value of 2 (two) from several question points which means that the complaint is felt for a few days. This, according to the researcher's assessment, could be because this research was conducted after the Covid-19 pandemic lasted for 1 year, so that the support from the leadership has been given to the maximum.

The description of respondents' anxiety by gender, based on the results of the study it was found that the number of respondents who experienced dysfunctional anxiety in nurses
amounted to 14 (4.65%) people, and of these, female respondents experienced more dysfunctional anxiety as many as 13 (4.32) people compared to male respondents who only 1 (0.33) people. This is in line with the research conducted by Lin Han 2020, which examined the level of anxiety and depression of frontline nurses working in 14 provinces of Gansu, China where from the results of his research the number of female nurses experienced more anxiety than the number of men who experienced anxiety. Anxiety that is from the number of 20,909 (98.6) respondents, the average number who experience anxiety is $42.80 \pm SD 9,099$.

This is also in line with research conducted by Qing-Qing Wang, 2020 which examined strategies for managing anxiety, depression and emotional knowledge in Chinese nurses during the Covid-19 outbreak. From the results of Qing-Qing Wangi's research, it was found that the number of female respondents who experienced anxiety was higher than the number of male respondents, namely the number of female respondents as many as 563 (96.08%), who experienced as much anxiety as 157 (96.91%). This is in accordance with the theory According to Stuart & Laraia (2005) which says that this anxiety disorder is more often experienced by women than men because women have higher levels of anxiety than male subjects.

The description of respondents' anxiety by age, based on the results of the study, it was found that the number of respondents who experienced dysfunctional anxiety in nurses was 14 (4.65%) people, and of these respondents aged 26 - < 46 years old experienced more dysfunctional anxiety, namely 9 (2.99) people compared to the age of 46 - < 56 years whototaling 5 (1.66) people. This is not in line with research conducted by Rulin Li 2020, who researched Anxiety and related factors in clinical nurses on the front lines facing the Covid-19 pandemic in Wuhan. From the results of Rulin Li’s research, it was found that the number of respondents aged 35–40 years there is anxiety with a lower mean of $26.0 \pm SD 4.6$ compared to age $\geq$40 years average $36.0 \pm SD 5.4$, while 20-35 years old experienced the lowest anxiety. But this is not in accordance with the theory According to Stuart & Laraia (2005) which says that someone who has a younger age is more likely to experience anxiety disorders than someone who is older.

The description of respondents' anxiety based on education, based on the results of the study it was found that the number of respondents who experienced dysfunctional anxiety in nurses amounted to 14 (4.65%) people, and from that number of respondents who experienced dysfunctional anxiety with diploma education, the highest number was 8 (2.66) people. There is no significant difference with the number of respondents with S1 education
who experience dysfunctional anxiety as many as 6 (1.99) people This is in line with research conducted by Leodoro 2020 in the Philippines which examined nurses' anxiety about Covid-19, respondents with undergraduate graduates had a lower number, with an average 8.251 ±SD 4,309, but there is no significant difference because the average number of respondents with master's education is 9,310 ±SD 4,342. Thus this is in accordance with the theory according to Notoatmojo (2005) states that it does not mean that someone with low education must also have low knowledge. Because an increase in one's knowledge is not absolutely obtained in formal education but can also be obtained from other sources of information Untari (2014) who said that people with low levels of education are easy to experience anxiety, because the higher education will affect a person's thinking ability.

LIMITATION OF THE STUDY

The Coronavirus Anxiety Scale (CAS) instrument is a new research instrument adopted from researchers in China that has just been used, for further researchers it is recommended to make a comparison of the CAS anxiety instrument with existing anxiety instruments, and look for correlations between Age, Gender, Education and level of anxiety. anxiety, because the CAS only measures dysfunctional anxiety without classifying it with mild, moderate or severe anxiety.

In anxiety research using the Coronavirus Anxiety Scale (CAS), from the results of the research the anxiety level of nurses during this pandemic is very low because the pandemic has been running for 1 year so nurses have gone through a new adaptation process during this pandemic and hospitals have provided support and assistance. facilitating facilities and infrastructure for security purposes in providing services, even providing incentives for nurses who treat Covid-19 patients during the pandemic, so the researchers recommend that further researchers conduct research by comparing the anxiety of nurses at the beginning of the pandemic with the current pandemic using this instrument.

In order to prevent the increase in nurses' anxiety levels during the pandemic, Dr Hasan Sadikin Hospital should make standard operational procedure about anxiety and its management, and provide counseling facilities when nurses feel anxiety that interferes with daily activities.
CONCLUSION

Based on the results of the analysis and discussion of the data, the authors obtain conclusions that can be drawn from the research as follows: the description of the characteristics of nurses at Dr Hasan Sadikin Hospital in Bandung from a total sample of 301 people consisting of 75 (24.92) men and 226 (75.08) women, based on age, namely age. <26 years as many as 5 (1.66) people, age 26 - < 46 years as many as 201 people, age 46 - < 56 years as many as 83 (27.57) people and age 56 years as many as 12 (3.99) people and based on D3 education as many as 187 (62.13) people, 112 (37.21) undergraduate education and 2 (0.66) master's education. From a total of 301 respondents there were 14 (4.65%) people who experience dysfunctional anxiety, the highest number who experience dysfunctional anxiety is in the intensive room, which is as many as 5 (1.66) people. Of these respondents who are female more experienced dysfunctional anxiety as many as 13 (4.32) person, while based on age, those aged 26 - < 46 years old experienced more dysfunctional anxiety, namely 9 (2.99) people and based on the education of respondents who experienced dysfunctional anxiety with diploma education, the highest number was 8 (2.66).

ETHICS APPROVAL

The study was conducted after ethical approval with number LB.02.01/X.6.5/15/2021.

CONSENT FOR PUBLICATION

Written informed consent was obtained from the participants for the publication of this report.

AVAILABILITY OF DATA AND MATERIALS

The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

COMPETING INTERESTS

The authors declare that they have no competing interests.

FUNDING

Not applicable
AUTHORS’ CONTRIBUTION

All authors read and approved the final manuscript.

ACKNOWLEDGEMENT

We acknowledge the contribution of nursing staffs of Rumah Sakit Hasan Sadikin Bandung Indonesia for their generosity in giving their time to participate in this study. Thank you to Dr. Dr. Anggraini Alam, Sp.A (K); Dr. Shelly Iskandar, SpKJ (K), Ph.D; Mrs. Maria Turnip, S.Kep, M.Kep., Ns, Sp.Kep.J; Mrs. Raden Indrawati, S.Kep., Ners; Mrs. Istianah, S.Kep., Ners, M.Kep for sharing their insight and experiences.

REFERENCES

Albott, CS Wozniak, McGlinch, Wall, Gold, Vinogradov Battle Buddies: Rapid Deployment of a Psychological Resilience Intervention for Health Care Workers During the COVID-19 Pandemic”, Anesthesia and analgesia, 2020, 131(1), pp. 43–54.
Atmojo JT, Sudaryanto WT, Widiyanto A, Emerati A, Arradini D, Telemedicine, Cost Effectiveness, and Patients Satisfaction: A Systematic Review. Journal of Health Policy and Management, 5(2): 103-107.
Balasubramanian, A. Paleri, Bennett, Paleri, (2020) ,Impact of COVID-19 on the mental health of surgeons and coping strategies”, Head and Neck, 2020 (May), pp. 1–7.
Cai, H. et al., Psychology Impact & Coping Strategies of Frontline Medical Staff in Hunan Between January and March 2020 During the Outbreak of Coronavirus Disease 2019 (COVID-19) in Hubei, China. Medical Science Monitor, 2020; Volume 26, pp. 1-16.
Christiansen, Dorte M. "Examining sex and gender differences in anxiety disorders." A fresh look at anxiety disorders (2015): 17-49.
Doctors, Guidelines for the Prevention and Control of Coronavirus Disease (Covid-19). 2020; 5th ed. Jakarta: Indonesian Ministry of Health.
HAN, Lin, et al. Anxiety and depression of nurses in a north west province in china during the period of novel coronavirus pneumonia outbreak. Journal of nursing scholarship, 2020, 52.5:564-573.
Handayani, et al, Conditions and Strategies for handling anxiety in Healthcare workers, Journal of Mental Nursing Volume 3 No 3, Pages 365-374, August 2020.
Handayani, R., Kuntari, S., Darmayanti, A., Widiyanto, A., Atmojo, J, Factors Causing Stress in Health and Community When the Covid-19 Pandemic. Journal of Mental Nursing, 2020 8(3) 353-360.
Hendryadi, H. Content Validity: Initial Stage of Questionnaire Development. FE-UNIAT Management and Business Research, Volume 2(2),2017; pp. 169-178.
PDPI, TC-1., 2020. COVID-19 Management Guidelines. 2nd ed. Jakarta: Indonesian Lung Doctors Association (PDPI)
Lee, SA, Coronavirus Anxiety Scale: A Brief Mental Health Screener For COVID-19 Related Anxiety. Death Studies, 2020; Volumes 44:7, pp. 393-401.
LI, Ruilin, et al. Anxiety and related factors in frontline clinical nurses fighting COVID-19 in Wuhan. Medicine, 2020, 99.30.
Lim, JM et al., Population Anxiety and Positive Behavior Change During The COVID-19 Epidemic: Cross-sectional Surveys In Singapore, China, and Italy. 2020; pp. 1-10.
Liu, C.-Y. et al., The Prevalence and Influencing Factors In Anxiety In Medical Workers Fighting COVID-19 in China: A Cross-Sectional Survey. Epidemiology & Infection, 2020; 148(COVID-19), pp. 1-7.

Larague, Leodoro J., and Janet Alexis A. De los Santos. COVID-19 anxiety among front-line nurses: Predictive role of organizational support, personal resilience and social support. Journal of nursing management 28.7 (2020): 1653-1661.

Mo MM, Y. et al., Work Stress Among Chinese Nurses To Support Wuhan In Fighting Against COVID-19 Epidemic. J Nurs Manag, 2020;Volume 28, pp. 1002-1009.

Nursalam, Nursing Research Methods, 2017; 4th ed. Jakarta: Salemba Medika.

Nemati, M., Ebrahimi, B. & Nemati, F., Assessment Of Iranian Nurses Knowledge & Anxiety Toward COVID-19 During The Current Outbreak In Iran. Arch Clin Infect Dis, 2020; pp. 1-5.

Notoatmodjo, Soekidjo. 2010. Health Research Methodology. Jakarta: PT Rineka Cipta

O'Brien, PG, Kennedy, WZ & Ballard, KA,. Psychiatric Mental Health Nursing. Jakarta 2014; EGC.

Rossi, R. et al., Mental Health Outcomes Among Frontline and Second-Line Health Care Workers During the Coronavirus Disease 2019 (COVID-19) Pandemic in Italy. Jama Network, 2020; Volumes 3(5), pp. 1-4.

Sugiono., Quantitative, Qualitative, and R&D Research Methods. 2016.23th ed. Bandung: Alphabeta.

Soraci, P. et al., Validation and Psychometric Evaluation Of The Italian Version Of The Fear of COVID-19 Scale. Springer Science & Business Media, LLC, Part Of Springer Nature, 2020; pp. 1-10.

Stuart, GW, Keliat, BA & Pasaribu, J., Stuart Mental Health Nursing. 2016; 1st ed. Depok: Elsevier.

Sun, N. et al., A Qualitative Study on the Psychological Experience of Caregivers Of COVID-19 Patients. American Journal of Infection Control, 2020; Volume 48, pp. 592-598.

WANG, Qing-Qing, et al. Anxiety, depression and cognitive emotion regulation strategies in Chinese nurses during the COVID-19 outbreak. Journal of Nursing Management, 2021.

WHO, Process of translation and adaptation of instruments, 2021 WHO

Xiao, H. et al., The Effect of Social Support on Sleep Quality of Medical Staff Treating Patients with Coronavirus Disease 2019 (COVID-19) in January and February 2020 in China. Medical Science Monitor, 2020; pp. 1-8.

Zhang, Y. & Ma, ZF, Impact Of The COVID-19 Pandemic On Mental Health and Quality Of Life Among Local Residents In Liaoning Province, China: A Cross-Sectional Study. Environmental Research & Public Health, 2020; Volume 17, pp. 1-12.