Gender And Workplace Associated With Psychosocial Status Of Nursing Population In Third Month Covid-19 Outbreak

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Abstract

Health care professionals have a higher risk of contracting Covid-19 with high stress, overwork, sometimes without proper training and personal protective equipment. Gender, occupation and workplace were factors affected to cope stress ability in person daily life. Aim of this study was to identify association between gender and workplace with psychosocial status on 920 mental health nursing seminar participants in the first three months of Covid-19 outbreak in various Indonesian regions. Accidental sampling was conducted an hour before the Indonesian National Nurses Association of South Sulawesi started the seminar with The Self-Reporting Questionnaires (SRQ29) online form with informed consent. There were 920 of 1500 participants filled the form. Variable association was analyzed by using Pearson Chi Square and Fisher Exact Test. The results show that based on gender, women significantly dominated anxiety symptom, somatic symptom, decreased energy symptom and post traumatic stress symptom Workplace significantly associated with depression symptom, cognitive symptom, psychotic symptom and post traumatic stress symptom which dominate in college. Gender and workplace were associated with psychosocial symptom. Therefore, it is essential for further research to arrange strategies for minimizing those symptoms.

Keywords: Covid-19, Gender, Nursing, Psychosocial Status.

Introduction

At the end of 2019, the world was shocked by the incidence of respiratory infections which we finally know as Corona Virus Disease 2019 (Covid-19) after being named by the World Health Organization (WHO) on February 11, 2020. Corona Virus whose virus is similar to the virus that causes MERS and Severe Acute Respiratory Syndrome (SARS), has now become a global problem (Zhu et al., 2020). A total of 216 countries have been infected with a total of 17,660,523 people who have tested positive for Covid-19. Indonesia reported its first case on March 2, 2020, which was suspected of contracting it from a foreigner visiting Indonesia. Cases in Indonesia also continued to increase until June 26, 2020, the number of positive patients with Covid-19 was 51,427 people (World Health Organization, 2020).

The high number of confirmed cases of Covid-19 has led several countries to impose various rules regarding restrictions on gathering, one of which is in Indonesia. Therefore, the Indonesian people as one of the countries affected by Corona have implemented efforts to prevent the spread, namely through social distancing and self-isolation (Mona, 2020). Another regulation is to impose Large-Scale Social Restrictions or PSBB which are stated in Government Regulation Number 21 of 2020. With the issuance of this policy, activities such as work, study, worship are carried out from home (Harahap, 2020). However, there are some workers from workplace agencies who cannot work from home (working from home) in this case are health workers, one of which is a nurse and must work as usual in health service facilities (Puskesmas, clinics, & hospitals) so that this also a psychological burden for nurses.

Health care professionals, especially those at the forefront, have a higher risk of contracting covid 19. This can occur because workers are working under extreme pressure, high stress, overwork, sometimes without proper training and personal protective equipment. adequate, and even experienced discrimination (Greenberg, Docherty, Gnanapragasam, & Wessely, 2020). Psychosocial problems in nurses in response to the coronavirus pandemic can include changes in concentration, irritability, anxiety, insomnia, reduced productivity, and interpersonal conflicts (Brooks, Dunn, Amlôt, Rubin, & Greenberg, 2018). It was also reported that health workers are very prone to experiencing physical fatigue, fear, emotional disturbances, stigmatization, insomnia, depression and anxiety, substance use, symptoms of post-traumatic stress and even suicide (Kang et al., 2020).

A study showing the mental health of health care providers working in China during the coronavirus outbreak, found that healthcare workers reported feelings of depression, anxiety and overall psychological burden especially among female nurses and workers directly involved in diagnosing and treating patients with COVID-19. 19 (Panchal et al., 2020). The survey also found that 64% of health care workers who are housewives show concern and stress over the corona virus causing them to experience at least one adverse effect, such as difficulty sleeping or eating, as well as an increase in alcohol or substance consumption (Lai et al., 2020).

Everyone has a different level of adjustment to stress. This is because each person has differences or the demands of his daily life so that a person's ability to stress depends on age, gender, occupation, social status, emotions, personality and intelligence (Desima, 2013). Research conducted by (Wang et al., 2020) shows that the anxiety ratio of women is higher than that of men. Women are 3.01 times more likely to experience anxiety than men. The purpose of this study is to see the relationship between sex and workplace with psychosocial conditions in third month Covid-19 outbreak.

Methods

This study is a cross-sectional survey conducted online. Respondents who participated in this study were participants in the national mental nursing seminar which was conducted online by the Indonesian National Nurses Association (INNA) South Sulawesi in June 2020 (n = 920). The data was collected using accidental sampling technique from a total of 1500 participants who participated in the seminar. Data

collection allowed by the head of INNA South Sulawesi before the seminar. It were carried out using a demographic data questionnaire and Self Reporting Questionnaire (SRQ29) which consisted of 29 question items. The demographic data questionnaire provides an overview of the respondent's age, gender, employment status and place of work. SRQ consists of 29 questions with sub-questions regarding anxiety symptoms, depression symptoms, somatic symptoms, cognitive symptoms, energy loss symptoms, psychotic symptoms, post-traumatic stress symptoms as well as alcohol and narcotics usage. This questionnaire as a screening and early detection instrument of psychosocial state of mental health problem which validity and reliability was conducted by health ministry of Indonesia in 2017. Data were collected some time before the seminar by providing informed consent containing an explanation of the survey and a statement of willingness to participate in the research. Data collection was carried out by taking into account the principles of information disclosure and confidentiality by not including names and only using the respondent's initials.

Data were analyzed using a data analysis program using the chi square test and / or the Fisher Exact Test (Significant value using a P value <0.05) to see the relationship between gender (male and female) and workplace (health office, hospital, community health center, lecturers, students, and others) with psychosocial symptoms (anxiety symptoms, depression symptoms, somatic symptoms, cognitive symptoms, energy loss symptoms, psychotic symptoms, post-traumatic stress symptoms as well as alcohol and narcotics usage) experienced by respondents.

Results

Respondent characteristics in table 1 show that the average age of respondents was 31.41 years old, where more than half of the respondents were female (73.1%), the majority worked (85.33%), and they worked as nurses in hospitals (47.07%). The survey results showed that almost half of respondents (47%) had complaints of having emotional distress, 15% of them experienced emotional distress and 38% of them were normal (Figure. 1).

Table 1. Subject Characteristics

Characteristics	Proportion
Age (years)	**31.41 + 7.35**
Gender	
Male	**248 (26.9%)**
Female	**672 (73.1%)**
Employment status	
Employed	**785 (85.33%)**
Students	**118 (12.82%)**
Jobless	**17 (1.85%)**
Work	
Nurses in public health	**208 (22.61%)**
Nurses in hospital	**433 (47.07%)**
Nurses in other setting	**90 (9.78)**
Nursing Students	**118 (12.82%)**
Nursing Lecturer	**54 (5.87%)**
Jobless	**17 (1.85%)**

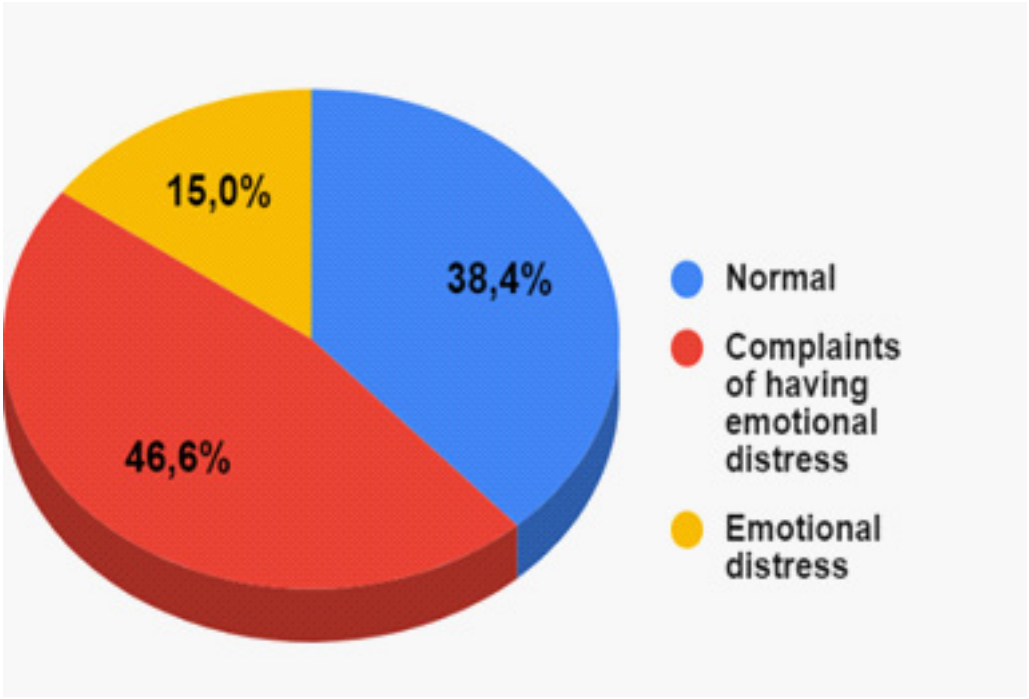

Figure 1. Emotional Distress Proportion (n=920)

Psychosocial complaints proportion consisting of anxiety symptoms, depression symptoms, somatic symptoms, cognitive symptoms, decreased energy symptoms, psychotic symptoms, post-traumatic stress symptoms and drug abuse shown in Figure 2.

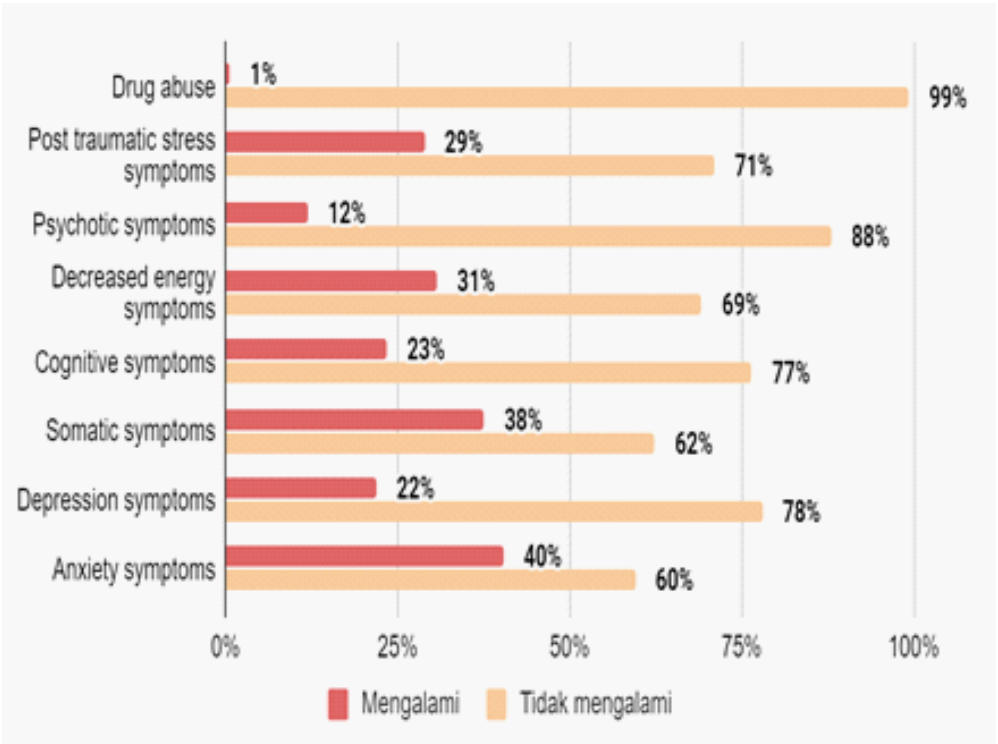

Figure 2. Psychosocial Complaints Proportion (n=920)

Base on Figure 2, it was found that the symptoms most experienced by respondents were anxiety symptoms as much as 40%, then somatic symptoms (38%), and symptoms of decreased energy (31%). Symptoms of post-traumatic stress were also experienced by a number of respondents, reaching 29%. In addition, symptoms of depression were also experienced by 22% of respondents, 12% of them experienced psychotic symptoms and 1% of them used alcohol and narcotics.

Proportion of symptoms that experience by respondents base on subjects gender between male and female shown in table 2.

Table 2. Proportion of Symptoms based on Subjects Gender (n=920)

Kind of Symptoms	Gender		p value
	Male	Female	
Anxiety symptoms	32.30%	43.50%	0.003*
Depression symptoms	18.10%	23.40%	0.108*
Somatic symptoms	27.40%	41.40%	0.000*
Cognitive symptoms	20.20%	24.70%	0.176*
Decreased energy symptoms	23.80%	33.30%	0.007*
Psychotic symptoms	10.50%	12.50%	0.470*
Post traumatic stress symptoms	21.00%	31.80%	0.002*
Drug abuse	1.20%	0.40%	0.352**

***continuity correction of Chi Square**
**** Fisher Exact Test**

Table 2 shows that all symptoms are dominant in female compared to male. Where the most common symptom is anxiety in both female and male (n = 920). There was a significant association between gender with anxiety symptoms, and somatic symptoms, decreased energy symptoms, and post traumatic stress symptoms

Proportion of the associated between symptoms (anxiety symptoms, depression symptoms, somatic symptoms, cognitive symptoms, decreased energy symptoms, psychotic symptoms, post-traumatic stress symptoms and drug abuse) and workplace (health departemen, hospital, public health centre, education unit, college, and other) shown in Table 3.

Table 3. Proportion of Symptoms based on Subjects Workplace (n=920)

Symptoms	Workplace						p value*
	Health Department	Hospital	Public health center	Education unit (lecturer)	(College) Students	Other	
Anxiety symptoms	17.60%	42.10%	38.50%	38.90%	42.40%	37.30%	0.35
Depression symptoms	5.90%	20.80%	17.30%	18.50%	34.70%	25.30%	0.004
Somatic symptoms	23.50%	34.00%	40.40%	31.50%	41.50%	49.40%	0.073
Cognitive symptoms	11.80%	35.60%	25.00%	25.90%	36.40%	27.70%	0.000

Decreased energy symptoms	**23.50%**	**28.20%**	**33.20%**	**24.10%**	**33.90%**	**37.30%**	**0.318**
Psychotic symptoms	**5.90%**	**9.30%**	**12.50%**	**11.10%**	**16.90%**	**15.70%**	**0.005**
Post traumatic stress symptoms	**23.50%**	**28.20%**	**26.90%**	**27.80%**	**33.10%**	**30.10%**	**0.002**
Drug abuse	**5.90%**	**0.50%**	**1.00%**	**0.00%**	**0.80%**	**0.00%**	**0.188**

***Person Chi Square Tests**

Table 3 show that workplace significantly associated with depression, cognitive, psychotic and post traumatic stress. Based on the workplace or role status, the subjects who experienced the most symptoms were students, namely the dominant symptoms of anxiety, depression, somatic symptoms, cognitive, psychotic, and PTSD. For symptoms of anxiety, outside of student subjects, subjects who worked in hospitals also experienced a lot, namely 42.1%, only 0.3% different from the largest proportion.

Discussion

The survey results showed that almost half of respondents (47%) had complaints of having emotional distress, 15% of them experienced emotional distress and 38% of them were normal (Figure. 1). The results of an online survey conducted in India in April 2020 found that 32.5% experienced anxiety and 10.5% experienced depression (Kandeger, Guler, Egilmez, & Guler, 2020). The impact of the lockdown due to Covid-19 on students in Greece is major depression and suicide (Patsali et al., 2020). The general public reported that 23.6% experienced moderate to severe psychological impacts due to the plague, 28.3% experienced depression, 24% experienced anxiety and 22.3% experienced moderate to severe stress (Alkhamees, Alrashed, Alzunaydi, Almohimeed, & Aljohani, 2020).

The strict quarantine in China has resulted in a wide range of psychological disorders such as panic disorder, anxiety and depression (Qiu et al., 2020). A total of 584 adolescents registered as respondents found that 40.4% of adolescents were prone to psychological problems and 14.4% of adolescents experienced PTSD symptoms, the results of univariate logistic regression found that adolescent mental health was significantly associated with lower education, being company employees, suffering from PTSD symptoms and using negative coping styles (Liang et al., 2020).

Based on the results of research (Huang & Zhao, 2020) with a cross-sectional study method, the results showed that 35.1% experienced generalized anxiety disorder (GAD), 20.1% experienced depressive symptoms and 18.2% decreased sleep quality. The incidence of GAD and depressive symptoms was higher in younger people compared to older people, while the multivariate logistic regression results showed age (<35 years) and time spent focusing on COVID-19 (> 3 hours per day) were associated with GAD and health workers are at high risk for decreased sleep quality. Case reports in India found that there were 2 cases of attempted suicide by shooting yourself and hanging yourself with a rope for fear of contracting Covid-19 after contact with a positive sufferer of COVID-19, fear of transmitting to their families and painful death due to being infected with COVID-19 -19 (Sahoo et al., 2020).

From further analysis, it was found that the symptoms most experienced by respondents were anxiety symptoms as much as 40%, then somatic symptoms (38%), and symptoms of decreased energy (31%). Symptoms of post-traumatic stress were also experienced by a number of respondents, reaching 29%. In addition, symptoms of depression were also experienced by 22% of respondents, 12% of them experienced psychotic symptoms and 1% of them used alcohol and narcotics. According to (Ellepola, 2020) the predicted

psychological impact of Covid 19 in Sri Lanka is children and adults, as well as staff at risk and susceptibility to psychological disorders during the post-Covid period. This literature suggests that women, health care workers, quarantined people and patients with a history of psychiatry are at higher risk. PTSD may not have a high incidence in the general population, whereas other conditions such as anxiety, depression, sadness, substance-related disorders, insomnia, avoidance behavior, hand washing and psychosis are more common. Health care workers may experience stress, fatigue, isolation, depression, anxiety, and PTSD. Meanwhile, individuals who are quarantined have an increased risk of acute stress disorder, PTSD, substance abuse and dependence, irritability, anxiety, insomnia, decreased concentration and decreased work ability, depression and stigma. The results of an online survey of students in Greece regarding the impact of lockdown and quarantine on mental health found that 42.5% experienced anxiety, 74.3% experienced depression, 63.3% had suicidal thoughts, decreased sleep quality 43% and decreased quality of life 57.0% (Kaparounaki et al., 2020).

The same thing was stated by Odriozola-González, Planchuelo-Gómez, Irurtia, and de Luis-García (2020) that the psychological impact of the lockdown due to the COVID-19 outbreak at the University of Valladolid Spanyol, namely a higher incidence of anxiety, depression and stress. in students versus employees. As a result of the lockdown due to the Covid-19 outbreak, acute panic, anxiety, violent behavior, obsession, hoarding, paranoia and depression as well as post-traumatic stress disorder (PTSD) in the long term is due to the spread of information through social media platforms. Reported outbursts of racism, stigmatization and xenophobia against certain communities. In addition, health workers are at the forefront of a higher risk of contracting diseases and experiencing adverse psychological impacts such as fatigue, anxiety, fear of transmitting infection, feelings of inadequacy, depression, increased substance dependence and PTSD (Dubey, Biswas, Ghosh, & Chatterjee, 2020).

Table 1 above shows that all symptoms are dominant in women compared to men. Where the most common symptom is anxiety in both women and men (n = 920). According to research results (Zhu et al., 2020) in China with 922 respondents (657 health workers and 266 general public) it was found that out of 922 (18.3%) experienced more psychological health problems than the general public and women experienced more psychological problems than men. The same thing was expressed by (Varshney, Parel, Raizada, & Sarin, 2020) from 1106 respondents, it is estimated that one-third of the total number of respondents experienced a significant psychological impact (IES-R score> 24). The higher psychological impact occurs at a younger age, female sex and has a history of comorbidities.

The impact of the Covid-19 outbreak in Spain based on the results of a survey of 3055 respondents about 36% experienced moderate to severe psychological effects, 25% showed mild to severe anxiety, 41% reported symptoms of depression and 41% felt stressed. Women, young people and those who lost their jobs during the COVID-19 outbreak experienced the most negative psychological symptoms (Rodríguez-Rey, Garrido-Hernansaiz, & Collado, 2020). Different things are expressed by (Wu et al., 2020) that the prevalence of anxiety, depression, a combination of anxiety, depression, and the risk of psychological disorders is more common in men than women. Psychological health status varies by age group, education level, occupation, and income level. SEM analysis reveals that inadequate material intake, low income, low education, lack of knowledge or confidence in the epidemic and lack of exercise are major risk factors for psychological distress.

Based on the workplace and / or role status, the subjects who experienced the most symptoms above were students, namely the dominant symptoms of anxiety, depression, somatic, cognitive, psychotic, and PTSD. For symptoms of anxiety, outside of student subjects, subjects who worked in hospitals also experienced a lot, namely 42.1%, only 0.3% different from the largest proportion. Based on the results of research (Cao et al., 2020) in China with a sample size of 7143 using the Generalized Anxiety Disorder

Scale (GAD-7) questionnaire, it shows that 0.9% of respondents experienced severe anxiety, 2.7% experienced moderate anxiety and 21.3% experienced mild anxiety. . Living in urban areas (OR = 0.810, 95% CI = 0.645 -0.817) and living with parents (OR = 0.752, 95% CI = 0.596 - 0.950) are factors that can reduce anxiety while the presence of relatives or acquaintances who are positive for COVID -19 is a risk factor for increased student anxiety. The results of the correlation analysis showed that the economic impact, and the impact of daily life as well as the delay in academic activities were positively related to anxiety (P <0.001). However, social support was negatively correlated with anxiety levels (P <0.001). It was found that the results of research conducted in Albania indicated that quarantine measures had a significant impact on the depression level of students and family members (Mechili et al., 2020).

Based on research conducted by Li et al. (2020) on health workers in hospitals in Wuhan with 948 respondents (219 volunteers to Wuhan and 729 living in Ningbo) using the Athenst Insonmia Scale (AIS) questionnaire and Self-Reporting Quenstionnaire -20 (SRQ-20), it was found that there was no significant difference between sex, age, education and marital status between the two groups (p> 0.05). 58.90% of health workers in Wuhan experienced insomnia while in Ningbo there were 24.97%). And have general psychological symptoms 13.24% in Wuhan and 8.64% in Ningbo. Based on the results of multivariate logistic regression analysis that health workers in Wuhan experience symptoms of insomnia related to gender, education and general psychological symptoms, a different thing in Ningbo isonymy occurs not only related to general psychological but related to marital status. The results of screening for health professionals in China, namely 40.2% showed positive symptoms for post-traumatic stress disorder, 13.6% experienced depression, 13.9% experienced anxiety and 8.6% experienced mild to severe stress (Si et al., 2020).

According to Aksoy and Koçak (2020) in their research with nurse respondents (56.9%) and midwives (43.1%) in Turkey who were in charge of providing health services to Covid-19 patients, it was found that nurses and midwives experienced anxiety, had difficulty dealing with situations that were uncertain during an outbreak, needs psychological support, and experiences an unpleasant stigma because of his profession as a health worker. The results of the analysis showed that officers experienced significantly higher psychological stress than students (p <0.001), while health workers in Wuhan experienced significantly higher levels of stress than those outside of Wuhan about thoughts of being in a dangerous condition, possibly being sick, worrying about their family. (p <0.001), psychological items about poor sleep quality, need psychological guidance and fear of infection (p <0.001) and items of winning confidence in facing the epidemic found that the group in the Wuhan area was significantly lower than the group outside Wuhan (p <0.001). <0.005) (Wu et al., 2020)

Conclusion

A survey of mental nursing seminar participants showed that participants experienced psychosocial symptoms during the Covid-19 pandemic, Workplace significantly associated with depression, cognitive, psychotic and post traumatic stress which are dominant in college for students. Gender and workplace were associated with symptom expression. Therefore, it is essential for further research to arrange strategies for minimizing those symptoms. Special interventions to promote mental well-being in health care workers need to be immediately implemented, with women, and nurse's students. The complex health problems experienced by nurses in dealing with Covid-19 patients led to the need for more intense socialization from Indonesian National Nurses Association in holding seminars to provide knowledge about handling, care, and psychosocial support for nurses in dealing with the Covid-19 outbreak.

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