

Occupational Stress Among Health Professional During Covid-19 Pandemic

Supratman¹, Dewi Mastuti², Arif Widodo³, Fahrur Nur Rosyid⁴

¹Department of Community Health Nursing, Faculty of Health Sciences, Universitas Muhammadiyah Surakarta (UMS), Surakarta, Indonesia

²Faculty of Health Sciences, Undergraduated Nursing Program, Universitas Muhammadiyah Surakarta (UMS), Surakarta, Indonesia

³Department of Mental Psychiatry Nursing, Faculty of Health Sciences, Universitas Muhammadiyah Surakarta (UMS), Surakarta, Indonesia

⁴Department of Medical Nursing, Faculty of Health Sciences, Universitas Muhammadiyah Surakarta (UMS), Surakarta, Indonesia

Corresponding author: sup241@ums.ac.id

Abstract

Purpose: This study aim was to describe occupational stress among health professional staff during Covid-19 pandemic at Baki Community Health Center (puskesmas), Distric of Sukoharjo, Jawa Tengah, Indonesia.

Methodology: The study employed a descriptive survey design. The study population was enlisted from Community Health Centre (puskesmas) Kecamatan Baki, District of Sukoharjo. They were employing a total of 54 health professional include physicians, nurses and midwives. A questionnaire was administered in November 2020. There were 54 health professionals and we received consecutively completed responses. An instrument - Perceived Stress Scale - were used for data collection. The stressors were divided in to those that were related to health, those that were psychosocial in nature and those that were related to work environment.

Results: Physicians were the most health professional feeling stress compared to nurses and midwives (33.3%). Again males participant were more stress than female health professional (28.6%). They are age less than 40 years old mostly stressful compare to more age (45.9%). From all respondents who has work experience less than 10 year are more stress than others (33.3%).

Applications/Originality/Value: This study was an investigation during pandemic Covid-19 related to stress among health care workers in Indonesia. It can be seen that the study could to provide valuable contribution to promote mental health problems among health professional.

Keywords: survey, Covid-19, health professionals, stress, perceived stress scale, Indonesia

Introduction

Coronavirus is a viral infection notified as cold as early 1960. The novel 2019-nCoV, as renamed by the coronavirus study group of the International Committee on Taxonomy of Viruses as severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), is the third coronavirus to cross species to infect human populations as coronavirus disease 2019 (Covid-19) in the past two decades after the severe acute respiratory syndrome (SARS) and the Middle East respiratory syndrome MERS1-3 (Zhi et al., 2020). Started as a series of pneumonia like cases caused by SARS-CoV-2 from Wuhan of Hubei province, China in December 2019, it has spread rapidly across the globe (Spoorthy et al., 2020; Woodford et al., 2020). The World health Organization (WHO) has defined Covid-19 as a global pandemic, and considerable researches have been focused on identification and prevention of SARS-CoV-2 (Spoorthy et al., 2020). Early December 2020 data released a confirmed of Covid-19 patients by World Health Organization around 80 millions globally. Ministry of Health Republic of Indonesia also released a total cases of Covid-19 around 707,000 case and more than 20,000 were death. Again, Province Central Java is second highest case of Covid-19 after Capital Jakarta with around 88,000 case. In Distric of Sukoharjo around 2,500 confirmed as Covid-19 with a total death about 150 patient. Around 350 people have been occure Covid-19 at Subdistrict of Baki.

As an effect of pandemic people experience a lot of emotional disturbances such as stress, insomnia, frustration, irritability which could lead to psychiatric disorders like depression, anxiety, behavioural changes, also post-traumatic stress disorder in later stages (Sheroun et al., 2020). Anxiety, stress, depression, and panic were a common problems to the health workers whom are direct contact on giving treatment Covid-19 patients

(Huang et al., 2020; Shen et al., 2020; Woodford et al., 2020). Nowadays most people are in at risk occurring the fetal viruse which are close on contact to Covid-19 patients, include those who giving treatment to the patients (Directorate General of Disease Prevention and Control, 2020). Health professional workers, especially physicians, nurses, and midwives are a vanguard of any disease outbreak and more vulnerable to contracting disease outbreak because they were directly interact and provide treatments at close range with the sufferer (Center for the Study of Traumatic Stress, 2020b, 2020a; Otgonbaatar et al., 2020). Again, health workers whos direct contact with sufferer, thus triggering trauma towards suffering and death of patients which could increase stress and anxiety (McFee, 2020; Ornell et al., 2020; Özdemir & Kerse, 2020; Shen et al., 2020).

A recent research finding suggests that healthcare workers who were exposed and are suspected Covid-19 positive are at a high risk of not only the viral infection, but also of developing mental health-related problems (Özdemir & Kerse, 2020; Pasay-an, 2020). Previous study reported health professionals is the most ones who has mental health problem such as stress, anxiety, and panic; its was ranging from 15 – 92% (International Council of Nurses, 2020; Lai et al., 2020). The main reason of mental health problems during pandemic Covid-19 is being infected. Also ignoring about how to protect by theirself (Aiyer et al., 2020; Huang et al., 2020; Özdemir & Kerse, 2020). The other reason of mental problems was low adherence to wearing an equipment, fear of being infected, and lack of access to Covid-19 test (Lee et al., 2020; Pasay-an, 2020). They also fear of virus transmitting possibility, feeling doubts that the institutions have not support if they were infected. Furthermore, health professional is being fear and/or unknown accurate information about Covid-19 infection (Shen et al., 2020).

The worst of higher level of stress, it could to get tired, to stay more sleepless, to spend less time with their families, and even to live separate from them (Özdemir & Kerse, 2020). It is also feel dizziness, sleep disorders and vomiting or nausea (Lee, 2020). Occupational stress were associate with disorders in bodily function, coping mechanisms depression and increased suicidal desire (Wang et al., 2020). Mismanagement of stress cause on long-term effects towards job performance, work satisfaction, leading to frequent absences and turnover (Labrague & De los Santos, 2020). Poor mental health among nurses may not affect individually but may affect professionally on carry out of duties and treatment qualities to their patients (Brandford & Reed, 2016).

From the above mentions, it can be brief summary that Covid-19 pandemic have been direct impacts towards the mental or psychological health of workers such as stress, anxiety, depression, dizzines as the vanguard of treating Covid-19 patients. The authors would to investigate with the aim was to describe the level of stress among health professional staff (physicians, nurses, midwives) during Covid-19 pandemic at Baki Community Health Center, Sukoharjo, Indonesia.

Methodology

The study employed a descriptive survey design to discover the whole aspect of stress among health professionals. This design was appropriate for describing the status of phenomenon or for exploring among phenomenon. Again, this could to describes a population, situation, or phenomenon that is being studied. This is mainly because it is important to have a proper understanding of what a research problem is about before investigating why it exists in the first place (de Lima & Valério, 2011; Heryana, 2019; Mccombes, 2019; Nassaji, 2015). The study population was enlisted from Community Health Centre (puskesmas) Kecamatan Baki, District of Sukoharjo, Central Java, Indonesia. They were employing a total of 54 health professional include physicians, nurses and midwives whom directly contacted with the patients. Inclusion criteria for participation consisted of: both nurses and midwives and they are willing to participate in this study.

Data used for this analysis were collected from three main health professional who worked for Baki community health centre. A questionnaire was administered in November 2020. There were 54 health professional and we received all response from participants. We used Perceived Stress Scale (PSS) as an instrument to collect the data. A sociodemographic profile sheet was also attached to the questionnaire to describe personal characteristics of the sample population. The Perceived Stress Scale had 10 questions and the respondents were asked to indicate their level of agreement with a given statement by the way of an ordinal scale (0 = Never; 1 = Almost; 2 = Sometimes; 3 = Fairly Often; 4 = Very Often) (Andreou et al., 2011; Lazenby, 2018;

Leung et al., 2010; Meng et al., 2020; Mimura & Griffiths, 2008). We categorized stress within three group: high (score 26.9-40), moderate (score 14-27), and low stress (score 0-13.9). The advantages of PSS is that it can be applied to a wide range of setting, to different subject type and includes items measuring reactions to stressful situations as well as measures of stress. Information pertaining to 16 selected stressor (factors related to stress) was collected in the second section. The stressors were divided in to those that were related to health, those that were psychosocial in nature and those that were related to work environment. Internal consistency reliability was used of Cronbach's alpha with coefficients about 0.69 to 0.81.

The data were analyzed by using descriptive statistics, including means, standard deviations, frequency, and percentages. Chi-square test was used to compare proportions. This analyses were used to describe the data initially. Descriptive statistics were employed to analyse research question "What are the occupational stress among health professional facing Covid-19 pandemic?. The information thus collected was entered on a Microsoft Excel spread sheet.

Results

Table 1. Demographic characteristics of health professionals

Variables (with categories)	Frequency	%
Category of health professional		
Physicians (+Dentists)	6	11.1
Nurses	14	25.9
Midwives	34	63.0
Gender		
Males	14	25.9
Females	40	74.1
Age (years)		
23 – 28	6	11.1
29 – 34	8	14.8
35 – 40	10	18.5
41 – 46	9	16.7
47 – 52	11	20.4
53 – 58	10	18.5
Work experience		
≤ 5 year	4	7.4
5 – 10 year	17	31.5
10 – 15 year	16	29.6
15 – 20 year	8	14.8
≥ 20 year	9	16.7
Marital status		
Married	40	74.1
No married	14	25.9
Health training experiences		
Yes	37	68.5
No	17	31.5
Intention to contacted with patients		
Yes	38	70.4
No	16	29.6

Contact duration with patients		
≤ 3 hour per day	19	35.2
> 3 hour per day	35	64.8
Follow health protocols		
Very often	49	90.7
Fairly often	5	9.3

Demographic characteristics are described in Table 1. Majority of the health professional were midwives (63%). The most proportion of age was on range of 47 – 52 years old (20.4%). Of the samples 74.1% are married. Interestingly they have the work experiences within 5 – 10 years about 31.5%. From the Respondents was obtained in the health-related training of advanced education experiences around 68.5%. Most health professional have been contacted with patients was 70.4%. 64.8% of them was contacted with patients more than three hour per day. Using self-administered was found that just 9.3 of health professional tend to fairly often on adherence with health protocols or procedures.

Table 2. Proportion of stress among health professionals

Variables	High f (%)	Moderate f (%)	Low f (%)
Health professional			
Physicians	2 (33.3%)	4 (66.7%)	0 (0.0%)
Nurses	3 (21.4%)	9 (64.3%)	2 (14.3%)
Midwives	7 (20.6%)	23 (67.6%)	4 (11.8%)
Gender			
Males	4 (28.6%)	8 (57.1%)	2 (14.3%)
Females	10 (25.0%)	23 (57.5%)	7 (17.5%)
Age (years)			
≤ 40 years old	11 (45.9%)	8 (33.3%)	5 (20.8%)
> 40 years old	9 (30.0%)	13 (43.3%)	8 (26.7%)
Work experiences			
≤ 10 year	7 (33.3%)	10 (47.6%)	4 (19.1%)
> 10 year	9 (27.3%)	18 (54.5%)	6 (18.2%)

Description about levels of stress were described in Table 2. Physicians were the most health professional feeling stress compared to nurses and midwives (33.3%). Again males participant were more stress than female health professional (28.6%). They are age less than 40 years old mostly stressful compare to more age (45.9%). From all respondents who has work experience less than 10 year are more stress than others (33.3%).

Discussions

Few studies have described among health professional staff against Covid-19 pandemic in Indonesia (Handayani et al., 2020; Saraswati, 2017). This study set out with the aim to examined occupational stress during virus disease outbreak. The Perceived Stress Scale (PSS) is an instrument designed to measures level of stress, addressing multiple domains: health-related stressor, work environment stressor, psycho-social stressor (Andreou et al., 2011; Leung et al., 2010; Meng et al., 2020). Among the three domains of occupational stress assessed by the PSS, the subjects studied in the recent study obtained the worst score in the domain of: physical health and environment (Handayani et al., 2020; Lesage et al., 2012; Mishra & Alok, 2017). Population-based studies

carried out in other countries also found lower scores, especially in the health-related stressor component. Lesage et al (2012) in the study carried out in France in health professional worker found the lowest score in domain health-related stressor. Mimura and Griffiths (2008) suggest that health-related stressor was the lowest score as well. Compared to other questionnaire, PSS more general and wide range to measures stress with various condition. Compared to PSS-14, PSS-4, PSQ – PSS-10 used in this study more adaptable to measure level of stress (Leung et al., 2010).

Several previous studies have shown negative effects of Covid-19 pandemic on mental psychological health. The corona virus outbreak was impacted on work stress among health workers (Handayani et al., 2020) (Bennaoui et al., 2020; Cai et al., 2020; National Center for Post Traumatic Stress Disorder, 2020), anxiety (Center for the Study of Traumatic Stress, 2020a; Labrague & De los Santos, 2020a; McFee, 2020; Otgonbaatar et al., 2020; Pouralizadeh et al., 2020; Prevention, 2020), depression (Hu et al., 2020; Labrague & De los Santos, 2020b; Lai et al., 2020; Muller et al., 2020; Pasay-an, 2020), intent to leave and burn out (Hu et al., 2020; Huang et al., 2020; Lee et al., 2020), social care workforce (McMurray, 2020), somatization symptoms (Zhou et al., 2020), and suicide risk (Zhou et al., 2020). This serious health impact may occur in health services setting in Indonesia, even it so difficult to obtain several evidences based on investigation.

Our study provides valuable information that Covid-19 pandemic in present study was a few evidences which investigate and it so similar with former findings. In developed countries, most of investigations may have used many designs and tools to measures psychological problems to assessed stress and solving managements. Otherwise we had been adopted and manipulated PSS it's suitable in developing countries to examine mental health problem such stress (Meng et al., 2020; Saraswati, 2017). Basically, from various resources indicate that there were any similarities stress background and condition such health service setting, cause and background of stress, and timing of pandemic and common response to Covid-19.

These results are consistent with those of other studies and suggested that mental health problems affected on personal health, environment problem psycho-social problem (Cabarkapa et al., 2020; Labrague & De los Santos, 2020a, 2020b; Lai et al., 2020; Pasay-an, 2020; Shen et al., 2020; West et al., 2020) Settings, and Participants: This cross-sectional, survey-based, region-stratified study collected demographic data and mental health measurements from 1257 health care workers in 34 hospitals from January 29, 2020, to February 3, 2020, in China. Health care workers in hospitals equipped with fever clinics or wards for patients with COVID-19 were eligible. Main Outcomes and Measures: The degree of symptoms of depression, anxiety, insomnia, and distress was assessed by the Chinese versions of the 9-item Patient Health Questionnaire, the 7-item Generalized Anxiety Disorder scale, the 7-item Insomnia Severity Index, and the 22-item Impact of Event Scale-Revised, respectively. Multivariable logistic regression analysis was performed to identify factors associated with mental health outcomes. Results: A total of 1257 of 1830 contacted individuals completed the survey, with a participation rate of 68.7%. A total of 813 (64.7%). In relation to this study, the present study found significant finding for health professional staffs. More, study in China found stress impacted on somatization problem such appetite, fatigue, difficulty sleeping (Shen et al., 2020). Study in Egypt found stress on nurses are related to inadequate emotional preparation (Said & El-Shafei, 2020). Nurses and other health team are the frontline team those whom against the Covid-19, so they need to well prepare before and during provide health service are to be action. This was need to prepare and regulate how to organize health teams.

Other study demonstrates that pandemic regulation and management are prepare well to anticipate increasing cases and other problems. Study found that specific rules and guidance may not be provided for every situation. It can be helpful to develop family rules and procedures that help families feel safe in managing exposures (Center for the Study of Traumatic Stress, 2020b). Study in Indonesia found about stress management to reduces mental problem such with healing program, hypnotherapy, and encourage by mental psychiatric expert (Handayani et al., 2020). Study in China giving important suggestion which health staff should be retrained to strengthen their ability to manage and cope with the disease (Huang et al., 2020). It can be seen that stress management should be taken by all segment; government, private, family and individual as well.

In conclusion, this study shows that health professionals in the clinics have a high level of stress related to this unpredictable situation, even after long time pandemic history, it is still become more dangerous than previous. The findings here suggest that Covid-19 management regulate by government is most important

things to take into account when evaluating pandemic situation not become safe and well for health professional team. Those with stress represent a vulnerable's health workers that merits special attention from community, government and systems. Further study is required involving continuous follow-up observation to determine the mental health status of health staff in a timely manner and to provide a series of interventions.

In this study a few limitations should be noted. Some participant those who engaging in this investigation has been selected as non probability sampling, it could be impact on generalization we conclude. We state this investigation is a proceed step to explore more information about stress and other health conditions. The samples size we select are too limit, so it difficult to analyse more accurate in some aspect. Yet, this investigate is the first step in understanding variability in mental health conditions according to Covid-19 recent situation with the complexity of health service policies in Indonesia.

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Conflicts of interest

Authors declare no conflict of interests.

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