

Burnout in Health Workers in Pasar Minggu Hospital: Associated Risk Factors During the COVID-19 Pandemic

¹Ria Maria Theresa, ²Lisa Safira, ³Nunuk Nugrohowati

¹Department of Psychiatry, Medical Faculty, Universitas Pembangunan Nasional Veteran Jakarta, Indonesia

²Department of Pediatric, Medical Faculty, Universitas Pembangunan Nasional Veteran Jakarta, Indonesia

³Department of Public Health, Medical Faculty, Universitas Pembangunan Nasional Veteran Jakarta, Indonesia

ABSTRACT

Background: The number of positive cases of Covid-19 in Indonesia in March 2020 was 6760 cases with the number of deaths amounting to 590 people, until 20/4/2020 the number of probable patients became 186,330 people, with 16,763 people were suspected patients. The incidence rate that shows a significant increase definitely puts a very heavy burden on hospitals especially referral hospitals. The limited medical personnels had made working hours in the hospital uncertain. The purpose of this study was to determine the risk factors that most influence the occurrence of burnout of health workers at Pasar Minggu Hospital, South Jakarta. **Subjects and Method:** An observational analytic study with a cross sectional approach had been done with online data from the Pasar Minggu Regional General Hospital, South Jakarta in August 2020 amid the atmosphere of the Covid-19 pandemic. The target population is health workers who have met the inclusion and exclusion criteria. The variables studied were gender, marital status, handling Covid-19 patients, number of working hours, PPE availability, new policies related to Covid handling, type of work and Burnout. The data were analyzed by univariate, bivariate and multivariate analysis. **Results:** The number of respondents who had burnout was 23 people (51.1%) compared to those who did not feel that they had burnout. All samples said PPE had been provided and 97.8% said about new policy regarding the handling of Covid-19. There is a relationship between the experience of handling Covid-19 patients with the incidence of burnout with $p = 0.010$; and $OR = 7.69$ with 95% CI is 1.447-40.906 and between the number of hours worked with the incidence of burnout in $p = 0.012$; and $OR = 4.96$ with 95% CI is 1.388-17.711. The variables that most influenced the incidence of burnout were handling Covid-19 patients with $p = 0.043$ and $OR = 6.45$ and 95% CI were 1.061-39.256; and the number of hours worked with $p = 0.027$ and $OR = 5.09$ and 95% CI is 1.199-21.568. **Conclusion:** Burnout of health workers increases by caring Covid-19 patients more often, as well as increasing number of hours of worked health workers, which leads to the burnout of health workers accordingly. Reducing the number of hours worked by increasing health workers and improving working conditions are among the solution.

Keywords: Burnout, Health Workers, Factors, Covid-19 Pandemic

BACKGROUND

Burnout or fatigue is a response to a situation that is created in which the causative factor interacts with other factors within itself so that conflict occurs which results in stress. (Eliyana, 2015). Burnout as a condition that describes a person's emotional reaction when providing humanitarian services related to humanity (Bukumirovičl, A.M. 2018). Burnout also means a state of fatigue experienced by medical personnel when providing services in health care facilities to Covid-19 patients. Burnout can arise from a person's internal factors which are added by other burdens continuously, causing stress on a person. The factors that cause burnout are emotional, depersonalization and low self-esteem (Eliyana, 2015). As with the coronaviruses, health care–

associated transmission appears to be a major mode of infection, with one study suggesting that 41% of 138 cases were presumed to have been health care acquired (Rio, Malani, 2020). The survey found by the British Medical Association in April, 2020 that 44% of respondents indicated they affected by burnout, depression, anxiety, or other mental health conditions due to COVID-19-related factors (BMA, 2020)

Factors that affect the burnout of health workers include marital status, type of work, have handled Covid-19 patients, number of working hours, availability of PPE for medical personnel, workplace policies and work fatigue / burnout. Burnout is defined as a syndrome conceptualized as resulting from chronic workplace stress that has not been successfully managed. It is characterised by feelings of energy depletion or exhaustion; increased mental distance from one's job, or feelings of negativism or cynicism related to one's job; and a sense of ineffectiveness and lack of accomplishment (ICD 11 rev, 2020). The problem is decreased appearance due to mental health of medical personnel in providing services to patients. Many medical personnel who have been affected have even died as a result of the Covid-19 virus so that most medical personnel become afraid, anxious, feel insecure, and sad, the resulting impact is that the services provided then are not optimal. This can cause the patient's recovery to be longer, which can prolong the period of stay. The research objective was to determine the risk factors that most influence the occurrence of burnout for health workers at Pasar Minggu Hospital, South Jakarta. The benefit of research is to be used as a material for determining policies so that early detection of work fatigue / burnout factors could be used to prevent and control them.

SUBJECTS AND METHOD

- 1. Study Design.** This research was an observational analytic study with a cross sectional approach, was conducted in Pasar Minggu Hospital, South Jakarta in September 2020.
- 2. Population and Sample.** The target population is the health worker who work in Pasar Minggu Hospital, with *consecutive sampling*, a total of 45 samples have met the inclusion and exclusion criteria.
- 3. Study Variables.** The variables studied were gender, marital status, handling covid-19 patients, number of working hours, available PPE, the existence of new policies related to the covid-19 pandemic, type of work. The dependent variable is the burnout event.
- 4. Operational Definition of Variables**

- Burnout: A response to a situation that is created in which the causative factor interacts with other factors in itself resulting in a conflict which results in stress.
- Gender: someone who has special characteristics (hereditary characteristics, etc.)
- Marital status: Status of health workers who are legally married and who live together as husband and wife
- Handling Covid-19 Patients: Health workers who work in the part of the Hospital that handles Covid-19 patients
- Number of hours worked: workers who are already working in the hospital about 40 hours per week
- PPE availability: health workers have prepared personal protective equipment provided by the hospital while on duty at the hospital

- Presence of a new policy regarding handling of covid-19 patients: a new policy has been issued at the Hospital regarding the rules applied in the hospital around the handling of covid-19
- Type of work: the type of work that will produce goods or services that are beneficial to someone

5. Study Instruments. In order to avoid the transmission of sarcoV-2, all data variables were collected by questionnaires (G-form).

6. Data analysis. Associations between variables were analyzed by chi square analysis, interpretation in the discussion section and conclusion based on multivariate (adjusted) analysis, instead of bivariate (crude) analyses.

7. Research Ethics. The research ethical clearance approval letter was obtained from the Research Ethics Committee at Universitas Pembangunan Nasional Veteran Jakarta, Indonesia.

RESULTS

1. Sample Characteristics. On the basic characteristics of the sample, it can be seen that the number of samples of women (68.9%) is greater than that of men, most of the samples are married (75.6%). Most of the samples came from the section that handles Covid-19 patients (73.3%). At most samples, 55.6% of the total working hours are less or 40 hours per week. All samples said PPE had been provided and 97.8% said there was a new policy regarding the handling of Covid-19. Most of the samples (46.7%) occupations were specialist doctors. While the assumption of the sample affected by burnout is 23 people (51.1%) compared to those who did not feel burnout (see Table 1).

2. Bivariate Analysis. In the bivariate results, there was a relationship between the experience of handling Covid-19 patients and the incidence of burnout with $p = 0.010$; and $OR = 7.69$ with 95% CI is 1.447-40.906, and there is a relationship between the number of hours worked and the incidence of burnout with $p = 0.012$; and $OR = 4.96$ with 95% CI is 1.388-17.711. Variables Gender, handling covid-19, number of hours worked and type of work are candidates for multivariate testing (see Table 2).

TABLES AND FIGURES

Table 1. Sample characteristics

Variable	Frequency(%)
Gender	
Male	14 (31.1%)
Female	31 (68.9%)
Marriage Status	
Not Married	11 (24.4%)
Married	34 (75.6%)
Covid-19 Patient Handling	
Yes	33(73.3%)
No	12 (26.7%)
Work Hours Number	
>40 Hours per Week	20 (44.4%)
<=40 Hours per Week	25 (55.6%)

PPE Availability	
No	0
Yes	45 (100%)
New Policy regarding Covid Handling	
No	1(2.2%)
Yes	44 (97.8%)
Type of Work	
Midwife	2 (4.4%)
Dentist Specialist	1 (2.2%)
Medical Specialist	21 (46.7%)
General Practitioner	7 (15.6%)
Nurse	14 (31.1%)
Burn Out	
Yes	22 (48.9%)
No	23 (51.1%)

Table 2 for bivariate analysis using categorical data

Variable	Burnout		P-value	OR 95%CI
	Yes (< 72.10)	No (>=72.10)		
Gender				
Male	9 (64.3%)	5 (35.7%)	0.143	2.49 (0.676-9.194)
Perempuan Female	13 (41.9%)	18 (58.1)		
Marriage Status				
Not Married	6 (54.5%)	5 (45.5%)	0.466	1.16 (0.566-2.395)
Married	16 (47.1%)	18 (52.9%)		
Covid-19 Patient Handling				
Yes	20 (60.6%)	13 (39.4%)	0.010*	7.69 (1.447-40.906)
No	2 (16.7%)	10 (51.1%)		
Work Hours Number				
>40 Hours per Week	14 (70%)	6 (30%)	0.012*	4.95 (1.388-17.711)
<= 40 Hours per Week	8 (32%)	17 (68%)		
PPE Availability				
No	0		N/A	
Yes	22 (48.9%)	23 (51.1%)		
New Policy regarding Covid-19 Handling				
No	1 (100)	0	N/A	
Yes	21 (47.7%)	23 (52.3)		
Type of Work				
Midwife	0	2 (100)	0.147	0.65 (365-1.163)
Dentist Specialist	1 (100)	0		
Medical Specialist	8 (38.1)	13 (61.9)		
General Practitioner	5 (71.4)	2 (28.6)		
Nurse	8 (57.1)	6 (42.9)		

3. Multivariate analysis. In the multivariate test results, it appears that the most influencing incidence of burnout is handling Covid-19 patients with $p = 0.043$ and $OR = 6.45$ and 95% CI is 1.061-39.256; and the number of hours worked with $p = 0.027$ and $OR = 5.09$ and 95% CI is 1.199-21.568. (see Table 3).

Table 3 for multiple linear regression

Variabel	B	SE	P-value	OR 95%CI
Gender	-0.758	0.795	0.340	2.13 (0.449-10.140)
Covid-19 Patient Handling	1.865	0.921	0.043*	6.45 (1.061-39.256)
Work Hours Number	1.626	0.737	0.027*	5.09 (1.199-21.568)
Type of Work	-0.417	0.324	0.659	0.66 (0.349-1.243)

DISCUSSION

The number of sample are women (68.9%) and most of them are married (75.6%). Most of the sample came from the section that handles Covid-19 patients (73.3%). At most samples, 55.6% of the total working hours are less or 40 hours per week and most of the samples (46.7%) are specialist doctors. Even all samples said PPE had been provided, the assumption of the sample affected by burnout is 23 people (51.1%). This result similar to Rapid Scoping Review done by Sriharan, A. et al, 2020 that in Individual-level factors, Women Health Workers are more likely than men Health Workers to experience psychological stress and burnout, specifically young women Health Workers and mid-career women Health Workers were more likely to experience emotional and mental health issues due to COVID-19, less working experience and self perception about lack of competency to care for COVID-19 patients was associated with increased prevalence of stress and burnout. Women who are single or lacking social support are more at risk of developing symptoms of anxiety, stress and burnout, surprisingly women Health Workers who have more than two children experience higher prevalence of psychosocial well-being (Sriharan, A. et al, 2020).

Every level of the health care workforce is susceptible to high levels of burnout during this pandemic. Modifiable workplace factors include adequate training, avoiding prolonged shifts ≥ 8 hours, and promoting safe working environments. Mitigating strategies should target every level of the health care workforce, including frontline and nonfrontline staff. Addressing and ameliorating burnout among Health Workers should be a key priority for the sustainment of efforts to care for patients in the face of a prolonged pandemic (Tan, B. Y. Q, 2020).

Limitations of the study

The study was conducted at the Covid-19 Referral Hospital, namely RSUD Pasar Minggu, South Jakarta, a very busy hospital that only accepts Covid-19 patients and reduces outpatient services. Therefore we get very limited respondents and less than the 93 respondents specified.

Conclusion and policy implication

Women Health Workers are more likely than men Health Workers to experience burnout most of them are married. Most of the sample came from the section that handles Covid-19 patients, the

total working hours are less or 40 hours per week and most of them are specialist doctors. There were relationship between the experience of handling Covid-19 patients and the number of hours worked with the incidence of burnout in Pasar Minggu Hospital. The burnout of health workers increases by handling for Covid-19 patients more often, as well as the more hours of work for health workers, the burnout of health workers will also increase accordingly. Reducing the number of hours worked by increasing numbers of health workers and improving working conditions are among the solution.

FINANCIAL SUPPORT AND SPONSORSHIP

Financial Support by Research and Community Service Institution of Universitas Pembangunan Nasional Veteran Jakarta Indonesia.

ACKNOWLEDGEMENT

Thank you to Research and Community Service Institution (LPPM) of Universitas Pembangunan Nasional Veteran Jakarta Indonesia for the financial support and health workers of Pasar Minggu Hospital in South Jakarta for collaboration in this Research.

CONFLICT OF INTEREST

“There are no conflicts of interest”

REFERENCE

- [1]. Bukumirović, A.M., Sanja D. Totić-Poznanović^{2,7}, Ljiljana N. Marković-Denić. Burnout Syndrome at Work by Doctors Employed at Emergency Center of Clinical Center of Serbia. *Hospital Pharmacology*. 2018; 5(2):647-653
- [2]. BMA news team. Steps and burnout warning over COVID-19.[cited 2020 Desember 2]. Available from: <https://www.bma.org.uk/news-and-opinion/stress-and-burnout-warning-over-covid-19>
- [3]. Ching Sin Siau¹, Lei-Hum Wee¹, Norhayati Ibrahim. PREDICTING BURNOUT AND PSYCHOLOGICAL DISTRESS RISKS OF HOSPITAL HEALTHCARE WORKERS. *Malaysian Journal of Public Health Medicine* 2018, Special Volume (1): 125-136
- [4]. Ehsan Zarei¹, Fariba Ahmadi², Muhammad Safdar Sial. Prevalence of Burnout among Primary Health Care Staff and Its Predictors: A Study in Iran. *Int. J. Environ. Res. Public Health* 2019, 16, 2249; doi:10.3390/ijerph16122249
- [5]. Eliyana, 2015. Faktor-Faktor yang berhubungan dengan Burnout Perawat Pelaksana Ruang Rawat Inap RSJ Provinsi Kalimantan Barat Tahun 2015
- [6]. Huang C, Wang Y, Li X, Ren L, Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China, *Lancet*
- [7]. Rio, Carlos del., Malani, Preeti N., 2020. COVID-19—New Insights on a Rapidly Changing Epidemic. *JAMA* April 14, 2020 Volume 323, Number 14, 1339- 1340. Published Online: February 28, 2020. doi:10.1001/jama.2020.3072. Downloaded From: <https://jamanetwork.com/> on 06/29/2020
- [8]. Sriharan, A., Ratnapalan, S, Tricco, A.C. Lupea, D, Ayala, A.P, Pang, H. Dongjoo D, L. 2020. Stress, Burnout and Depression in Women in Healthcare during COVID-19 Pandemic: Rapid Scoping Review. : <https://doi.org/10.1101/2020.07.13.20151183>. this version posted July 14, 2020. <https://www.medrxiv.org/content/10.1101/2020.07.13.20151183v1.full.pdf>.
- [9]. Tan, B. Y. Q, Kanneganti. A, Lim. L J H, Tan. M, Ying X C, Li. T, C H S, Denning. et al., 2020. Burnout and Associated Factors among Health Care Workers in Singapore during the COVID-19 Pandemic. *J Am Med Dir Assoc*. 2020 Dec; 21(12):1751-1758.e5. doi: 10.1016/j.jamda.2020.09.035. Epub 2020 Oct 5.

- [10]. Coronavirus Disease (Covid-19) Outbreak: Rights, Roles and Responsibilities of Health Workers, including Key Considerations for Occupational Safety and Health. https://www.who.int/docs/default-source/coronaviruse/who-rights-roles-respon-hw-covid-19.pdf?sfvrsn=bcabd401_0
- [11]. Factors Influencing Emergency Nurses' Burnout During an Outbreak of Middle East Respiratory Syndrome Coronavirus in Korea https://www.researchgate.net/publication/309874347_Factors_Influencing_Emergency_Nurses'_Burnout_During_an_Outbreak_of_Middle_East_Respiratory_Syndrome_Coronavirus_in_Korea
- [12]. Caring for our caregivers during COVID-19. <https://www.ama-assn.org/delivering-care/public-health/caring-our-caregivers-during-covid-19>
- [13]. Half of UK health workers suffering stress because of Covid-19. <https://www.theguardian.com/society/2020/apr/23/half-of-uk-health-workers-suffering-stress-because-of-covid-19>
- [14]. International Classification of Diseases 11th Revision, QD85 Burnout. ICD-11 (Version: 09/2020) <https://icd.who.int/browse11/l-m/en#/http://id.who.int/icd/entity/129180281>. Downloaded on 25/01/2022.
- [15]. Study Finds More Than One-Third of Healthcare Workers Suffered From Insomnia During COVID-19 Epidemic in China <https://www.ajmc.com/newsroom/study-finds-more-than-onethird-of-healthcare-workers-suffered-from-insomnia-during-covid19-epidemic-in-china>
- [16]. Pasien Sembuh Bertambah Menjadi 842, Kasus Positif COVID-19 Meluas ke 257 Kabupaten, BNPB. 21 April 2020. <https://bnpb.go.id/berita/pasien-sembuh-bertambah-menjadi-842-kasus-positif-covid19-meluas-ke-257-kabupaten>
- [17]. Badan Penelitian dan Pengembangan Kesehatan. Riset Kesehatan Dasar 2013
- [18]. Badan Penelitian dan Pengembangan Kesehatan. Riset Kesehatan Dasar 2018