

Burnout syndrome among COVID-19 vaccinators

Retno Purwandari, Anisah Ardiana, Alfid Tri Afandi, Dicky Endrian Kurniawan

Center of Fundamental Nursing Studies (CFUNS), Faculty of Nursing, Universitas Jember, Jember, Indonesia

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ABSTRACT

Vaccinators, who are health workers, are continuing to make efforts to accelerate the achievement of the COVID-19 vaccination. This study aimed to analyze burnout syndrome among vaccinators. An analytical descriptive with a cross-sectional approach was used. The number of samples using G*Power obtained 138 samples with the criteria of health workers who had been on the COVID-19 vaccinating team from public health centers (*Puskesmas*) and hospitals in Jember, Indonesia. The instrument used in this study was demographic data, factors causing burnout syndrome, and burnout syndrome. The statistical test is a correlative analysis (Spearman's rho, $\alpha=0.05$). Most of the respondents were aged 31-40 years, the majority were women, the majority were married, most came from the *Puskesmas*, more than half had worked >10 years, and more than half had been on the COVID-19 vaccine team for >18 months. There is a significant relationship between individual effort ($p=0.039$, $r=-0.176$) and organizational effort ($p=0.009$, $r=-0.220$) with burnout syndrome. However, the work environment was not significantly related to burnout syndrome ($p=0.146$, $r=-0.124$). Efforts are needed to reduce the incidence of burnout, especially those related to increasing individual welfare and significant organizational support so that the target for the COVID-19 vaccination is achieved.

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Corresponding Author:

Retno Purwandari

Center of Fundamental Nursing Studies (CFUNS), Faculty of Nursing, Universitas Jember

Kalimantan Street No. 37, Campus of Tegal Boto, Sumbersari, Jember, East Java, Indonesia

Email: retno_p.psik@unej.ac.id

1. INTRODUCTION

One of the COVID-19 pandemic's impacts on health is the high morbidity and mortality rates [1]–[4]. According to the Indonesia's COVID-19 task force in May 2022, more than 517 million people faced COVID-19 globally. In Indonesia, more than 6 million people infected by COVID-19 and 150 thousand of them death. To reduce the transmission of COVID-19 cases and their morbidity, the government has decided to vaccinate against COVID-19 since early 2021 [1], [3]–[5]. By mid-2022, vaccination coverage in Indonesia still needs to be improved. About 95% Indonesian have received 1st dose COVID-19 vaccine, 79.78% of them have received 2nd dose, and only 20.37% of them have received 3rd dose. Meanwhile, according to the Ministry of Health of Indonesia, the achievement of COVID-19 vaccination in Jember, East Java, Indonesia, was still around 82.96% of the provincial target on May 14, 2022. The willingness to receive COVID-19 vaccination may lead to some problems with coverage [6], [7].

The COVID-19 pandemic in Indonesia has heavily burdened the country's healthcare system, including health workers. The team of vaccinators, which are health workers from every healthcare facility, including doctors, nurses, and midwives, are continuing to make efforts to accelerate the achievement of the COVID-19 vaccination. The additional job as a vaccinator may increase the workload among health providers. The most obvious risk is the safety aspect of health workers, especially those at the forefront,

including the vaccinator team, who are very vulnerable to exposure to COVID-19 to the point where they risk life safety. Another risk that can significantly affect health workers' quality of life and productivity of medical services is the mental health aspect, including burnout syndrome or mental fatigue [8]. Health workers can potentially be exposed to very high-stress levels, but no rules or policies can protect them from a mental health perspective. High job demand may cause stress related to job and burnout syndrome as a result [9], [10].

The results of a survey on one of the vaccinating teams in Jember show various problems can occur in the vaccinating team during the vaccination process, including fatigue both physically and emotionally. There are reports that when the number of targets is high, it can result in the vaccinator team needing to be more optimal in providing services and increasing errors in all vaccination processes. According to news in 2021, COVID-19 vaccine workers experienced physical-mental fatigue and burnout syndrome. It caused by work pressure to meet daily targets. Data collection on vaccine recipients was still in disarray. It also supports the study about burnout syndrome among vaccinators [11]. Previous studies have shown a significant influence between individual and organizational efforts with burnout syndrome [9], [12].

The impact of burnout syndrome is decreased performance, so the patient outcome is also low [13]. Nurses with high burnout syndrome will impact patient services, such as healthcare uncertainty, poor interpersonal relationships, and inability to work with patients [13]. The research team has yet to find any results or definitive data on the causes of burnout syndrome the vaccinating team faces. This must be identified immediately; it will impact the vaccination service process of the vaccinating team. This study aimed to analyze the causes and their relationship with the incidence of burnout syndrome.

2. RESEARCH METHOD

The research design is quantitative: analytical descriptive with a cross-sectional approach. Samples were approached using the purposive sampling method with the number of samples determined by the G*Power test, the 138 respondents with the criteria of health workers on the COVID-19 vaccinating team both from public health centers (*Puskesmas*) and hospitals in Jember, Indonesia. The instrument used in this study was a closed questionnaire. The questionnaire includes three main components: demographic data, factors that cause burnout syndrome (individual effort, organizational factors, and work environment), and burnout syndrome [14]. Previous researchers, Andarini [14], have done empirical validity and reliability testing for the instruments. The result of the validity test with the Pearson Product Moment on individual effort, organizational factors, work environment, and burnout syndrome was $p < 0.05$; the reliability test with Cronbach's Alpha on individual effort, organizational factors, work environment, and burnout syndrome was 0.780, 0.844, 0.729, and 0.902 [14]. The statistical test is correlative analysis with Spearman's rho, $\alpha = 0.05$. Ethical clearance was declared by The Ethical Committee of Medical Research Faculty of Dentistry Universitas Jember with registration number 1608/UN25.8/KEPK/DL/2022.

3. RESULTS AND DISCUSSION

In this section, the researcher presents the results and conducts a discussion based on identifying the characteristics of the respondents, the causes of burnout syndrome, the incidence of burnout syndrome, and the relationship between the characteristics of the respondents and the causal factors for burnout syndrome. According to Table 1, most of the respondents were aged 31-40, women, and married. Most respondents were nurses with a diploma-level education from the *Puskesmas*. More than half respondents had worked >10 years, and more than half respondents become part of the COVID-19 vaccine team over 18 months. According to correlation analysis between characteristics and burnout syndrome, several respondent characteristics are significantly related to burnout scores, including age ($p = -0.030$), sex ($p = -0.011$), marital status ($p = -0.040$), educational background ($p = -0.030$), health provider group ($p = -0.027$), work experience ($p = -0.017$), and experience as COVID-19 vaccinator ($p = -0.014$). Only institutional background is not related to burnout ($p = 0.080$).

Burnout syndrome occurs when a person experiences severe psychological stress and experiences emotional exhaustion [15] and low work motivation [9], [16]. The team of vaccinators, who are health workers from every healthcare facility, is continuing to make efforts to accelerate the achievement of the COVID-19 vaccination. The additional job as a vaccinator may increase the workload among health providers [10]. Health workers can potentially be exposed to very high-stress levels, but no rules or policies can protect them from a mental health perspective [17]. High job demand may cause stress-related to job burnout syndrome [10].

Table 1. Characteristics of respondents (n=138)

Variable	Frequency (f)	Percentage (%)	p-value
Age (years)			-0.030*
21-30	33	23.9	
31-40	69	50.0	
41-50	30	21.7	
>50	6	4.3	
Sex			-0.011*
Male	32	23.2	
Female	106	76.8	
Marital status			0.040*
Marriage	118	85.5	
Unmarriage	17	12.3	
Divorced	3	2.2	
Institution			0.080
Hospital	44	31.9	
Public health center	94	68.1	
Education			0.030*
Diploma 3	81	58.7	
Diploma 4	13	9.4	
Bachelor	26	18.8	
Profession	13	9.4	
Master	5	3.6	
Health provider			-0.027*
Physician	4	2.9	
Dentist	1	0.7	
Nurse	70	50.7	
Midwife	26	18.8	
Pharmacist	4	2.9	
Dietitian	6	4.3	
Public health	5	3.6	
Medical recorder	5	3.6	
Environmental health	2	1.4	
Others	15	10.9	
Work experience (years)			0.017*
0-5	42	30.4	
5-10	16	11.6	
>10	80	58.0	
Experience as COVID-19 vaccinator (months)			-0.014*
0-6	13	9.4	
6-12	23	16.7	
12-18	31	22.5	
>18	71	51.4	

*Significant correlation; Spearman's rho ($\alpha=0.05$)

Table 2 shows a significant relationship between burnout syndrome between individual and organizational effort. Two factors significantly influence burnout syndrome: individual effort ($p=0.039$, $r=-0.179$) and organizational effort ($p=0.009$, $r=-0.220$). The previous study shows a significant influence between individual and organizational efforts with burnout syndrome [12].

According to Table 3, it is known that there are several findings on the indicators that cause burnout. The respondent's median value on the individual effort factor is 31 (out of the maximum score of 40). The vaccinator team experienced relatively high burnout on the individual effort factor. Uncontrollable stress levels or administrative mistakes can lead to psychological problems, such as burnout syndrome [18]. It should be kept in that burnout syndrome can affect both the quality of healthcare and healthcare professionals negatively [19]. Employee effort has a statistically significant direct effect on emotional burnout [20]. The correlation between individual efforts to burnout syndrome is negative. The correlation means that the higher the individual effort, the lower the burnout syndrome in the vaccinating team. When viewed from the strength, these factors have a weak correlation.

Job stress is negatively related to self-efficiency and positively associated with burnout [21]. Job stress is a predictor of burnout [22], and at the same time, it must be the dependent variable of self-efficiency. Thus, positive thinking is put forward by placing work pressure between personal resource factors and the consequences of burnout [14]. In addition to reducing negative stress, comfort and positive thinking will create more excellent value and balance in life [18].

Workers' positive thinking creates positive behavior, and the triggers make behavior. This problem is not only people who have separate responsibilities but also managers. For managers, stress management refers to adaptive behavior in changing aspects of the environment or people in such a way as to reduce the

stress response and improve organizational or individual health [20], [23]. Creative thinking and behavior focus on their personality or work, so they concentrate on their responsibilities [12].

Determination and obedience are motivating factors for a person. The higher the intention and compliance, the more integrated into their workplace. Several factors affect a person's determination and obedience; one of the factors is people who are bound in work life. Here are five reasons why other people have influence when they have the chance. The five reasons include indifference, lack of confidence, feelings of fear, low self-confidence, and pride [24].

Table 2. Analysis of correlation between factors associated with burnout syndrome (n=138)

Variable	Burnout Syndrome	
	p	r
Individual effort	0.039	-0.176
Organizational effort	0.009	-0.220
Work environment	0.146	-0.124

*Spearman's rho ($\alpha=0.05$)

Table 3. Identification of causes and burnout syndrome incident (n=138)

Variable	Median	Min	Max
Cause of burnout syndrome			
Individual effort	31	26	40
Positive thinking	9	7	12
Creative behavior	12	8	16
Determination and compliance	9	8	12
Organizational effort	45	39	60
Workmates support	12	9	16
Managerial support	18	16	24
Organizational atmosphere	15	11	20
Work environment	10	7	15
Incident of burnout syndrome (maslach burnout inventory)			
Burnout syndrome	11	0	42
Emotional exhausted	6	0	15
Depersonalization	2	0	12
Decrease in self-achievement	3	0	16

According to Table 3, on the organizational effort factor, the respondent's median value is 45 (out of the maximum value of 60). The vaccinating team experienced burnout, which was not too high, but there were problems. The correlation between organizational effort and burnout syndrome is negative-the higher the organizational effort, the lower the burnout syndrome in the vaccinating team. Although it is thought that organizational commitment is primarily an idea that reduces the possibility of people leaving an organization, it is also recognized as a concept that affects burnout [8]. The COVID-19 pandemic has accelerated and exacerbated long-standing corporate challenges to employee health and well-being, particularly mental health [13], [25]. When viewed from its strength, the organizational effort has higher power than individual effort.

Workmates support reduces burnout syndrome for workers. Peer support and participative leadership significantly reduce emotional exhaustion [11], [26]. Meanwhile, there is a very close relationship between superior support and burnout syndrome [12]. Support from managers offers interpersonal resources that can help create a supportive work environment and meet resource regulations, especially for employees who experience stress [23]. A study shows that support from superiors to their subordinates by providing care is an essential resource used by employees to overcome dysfunctional work or the effects of stress on employee performance and welfare [27]. Organizational behavior arises from intrinsic motivation, including positive moods and the need for achievement [15], [16].

Meanwhile, the work environment is not significantly related to burnout syndrome ($p=0.146$, $r=-0.124$). The respondent's median value for the work environment factor is 10 (out of the maximum value of 50). The problems encountered in the work environment cause personal exhaustion and simultaneously impact the performance and efficiency of the institution indirectly [8]. This reason is the basis for important health service agencies to pay attention to the work environment in the vaccinator team. As a result, people who have experienced burnout syndrome cannot fulfill their potential [8]. Because viewed from the direction of the correlation, the better the work environment, the lower the burnout syndrome that occurs in the vaccinating team.

The work environment factor, the incidence of burnout in the vaccinating team, is low. Meanwhile, from the total burnout syndrome score, the respondent's mean value is close to the minimum value, which means that the respondent's level of burnout is low. The work environment can determine the possibility of burnout [28], such as excessive workload, role conflict, number of individuals to be served, responsibilities to

be carried, routine and non-routine work, role ambiguity, inadequate social support from colleagues, social support from inadequate superiors, low control over work and lack of stimulation at work. The results of previous research showed that there was a significant relationship between the work environment and burnout syndrome [16].

Individual effort as an intrinsic factor and organizational effort as an extrinsic factor [29], [30] that influence burnout syndrome [12], [31]. When these factors are combined, it will get completeness. If these factors are combined and used effectively, it can overcome burnout syndrome in work life. The results of this study recommend that health facilities managers and the government start prioritizing aspects of mental health interventions, such as psychological assistance and counseling for health workers, especially those on duty during a pandemic. These can protect safety and physical health among COVID-19 vaccinators.

4. CONCLUSION

According to the results, it can be concluded that many COVID-19 vaccinators are facing burnout—individual and organizational efforts significantly influence burnout syndrome. However, the work environment does not significantly influence burnout syndrome in COVID-19 vaccinators. The workload of health provider may influence their emotions during the COVID-19 pandemic. The limitation of this study is not exploring how burnout syndrome can affect COVID-19 vaccination services. It may be done by next study.

Managers should reduce the incidence of burnout syndrome among COVID-19 vaccinators, especially in increasing individual well-being and significant organizational support, so that the team does not experience burnout and the COVID-19 vaccination can reach the target. The next study is needed to analyze the influence of organizational support on vaccinators' burnout.

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BIOGRAPHIES OF AUTHORS



Retno Purwandari    is an assistant professor at the Faculty of Nursing Universitas Jember, Indonesia. Research Leader at the Center of Fundamental Nursing Study (CFUNS) in the same faculty she works. She graduated with a Master of Nursing from the Faculty of Nursing Science, Universitas Indonesia. She is focusing on the fundamental of nursing and nursing management study. She can be contacted at email: retno_p.psik@unej.ac.id.



Anisah Ardiana    is an associate professor at the Faculty of Nursing Universitas Jember, Indonesia. Researcher fellow at the Center of Fundamental Nursing Study (CFUNS) in the same faculty she works. She graduated with a Ph.D. in Nursing, from the University of Manchester, UK. She is focusing on the fundamental of nursing and nursing management study. She can be contacted at email: anisah_a.psik@unej.ac.id.



Alfid Tri Afandi    is lecturer at the Faculty of Nursing Universitas Jember, Indonesia. Researcher fellow at the Center of Fundamental Nursing Study (CFUNS) in the same faculty he works. He graduated with a Master of Nursing, from the Faculty of Nursing, Universitas Airlangga, Indonesia. He is focusing on the fundamental of nursing study. He can be contacted at email: alfid@unej.ac.id.



Dicky Endrian Kurniawan    is lecturer at the Faculty of Nursing Universitas Jember, Indonesia. Researcher fellow at the Center of Fundamental Nursing Study (CFUNS) in the same faculty he works. He graduated with a Master of Nursing, from the School of Nursing, Faculty of Health Science, Universitas Brawijaya, Indonesia. He is focusing on the fundamental of nursing and HIV/AIDS care study. He can be contacted at email: dickyendrian@unej.ac.id.