

Original Article

Nurses's Burnout and Anxiety about Risk of Infection toward Quality of Life during the COVID-19 Outbreak

Ina Martiana^{1*}, Hendra Dwi Cahyono¹

¹ Nursing, Faculty of Health Science, Universitas dr. Soebandi, Indonesia

(Correspondence author's email, martiana.im@gmail.com, +6285755377726)

ABSTRACT

The novel coronavirus disease (COVID-19) is a global pandemic in all over countries. Nurses as frontline worker who taking care of infected patients and have high risk of being infected by COVID-19. This pandemic affects physical and psychological conditions of nurses. The aim of this study was to identify the correlation between nurse's burnout and risk of infection anxiety toward quality of life. This study used descriptive cross-sectional design. A total of 102 participants joined this research. The participants were nurses who work in COVID-19 isolation room. The data collecting process has done by online. The participants filled informed consent and questionnaire by online questionnaire. The study was assessed by Professional Quality of Life-5 (ProQOL-5), C-19ASS (COVID-19 Anxiety Syndrome Scale), and CBI (Copenhagen Burnout Inventory). This study was analyzed using non-parametric Kruskal Wallis. The results of the study were 56.9% of respondents had a high level of anxiety, 50% of them experienced burnout. There is a significant relationship between length of work and quality of life of CS (p value = 0.048). There is also a relationship between burnout and STS quality of life (p value = 0.033). The pandemic situation is being fluctuated and people adapted to it. The anxiety and burnout feeling was also change anytime. The more nurses being prepared, the lower burnout, and having good quality of life. The good teamwork to support and feeling of being appreciate give good quality of life for nurses.

Keywords : Anxiety, Burnout, COVID-19, Nurse, Quality of Life

<https://doi.org/10.33860/jik.v16i3.1258>



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INTRODUCTION

Corona virus or COVID-19 pandemic is not over, since it spreads in March 2020 in Indonesia. Until then, this airborne infection's virus still becomes global pandemic. Health care workers were the first liner to dealing with COVID-19 patients. This abnormal situation was forcing humans to have new normal in life. We can tell that everybody start to get tired of this abnormalities. Nurses as one of health care worker which taking care of COVID-19 patients have more challenging situations. They work under pressure with uncertain conditions and high risk of infection ¹.

The emotional stress and physical exhausted make it worse. The feeling of fear, anxiety, and depression are responses to stress. Health worker might feel afraid of being infected, high anxiety and depression. They are also stigmatized by the environment in which

they live ². They have higher risk of being infected than the rest of other people. In such daily routine's conditions, it might have been disturbed their quality of life. This pandemic condition has correlation with quality of life ³.

Quality of life is the general well-being of negative and positive aspect in life. Quality of life becomes multidimensional which consist of mental health, physical health, economic, personal beliefs, and interaction with environment⁴. The repeat exposure of unpredicted situation may cause symptoms of anxiety, exhaustion, and stress ⁵. The factors influence the quality of life of working nurses are workload, lack of facilities, unbalance work and family needs, lack of professional development, or low environment security ^{6,7}.

Workload is amount of work done by an individual that consider physical and cognitive duties ^{8,9}. The workload in the pandemic may need a lot of focus on physical and mental needs

of nurses. With an undetermined time, it becomes a burnout. The respondents working in hospital demonstrated prevalence of pandemic-related burnout 45.6%¹⁰. The more burnout the higher risk of infection due to fatigue.

Some studies reported health care worker were feared of infection from their close people. The previous study in China has evidence of health care worker's anxiety of 44.6%¹¹. 55.3% of health care workers feared having contact with COVID-19. 66.9% of them feared carrying the virus home¹⁰. The fear or anxiety more likely to increase the burnout. Certain conditions may affect quality of life among nurses. The evidence of nurse quality of life during pandemic is a bit quite. Most of the study shows a burnout working when the case of COVID-19 high in the first year. The longitudinal study might need to be done or seen for the second year. The prolonged pandemic might affect nurse quality of life. The pandemic might change nurses working frame, which may be positive or negatively affect nurse's well-being.

The aim of the study was to analyze the correlation between nurses burnout and risk of infection anxiety toward quality of life. The quality of life was defined in three domains (Compassion Satisfaction (CS), Burnout (BO), and Secondary Traumatic Stress (STS)).

METHODS

This study used descriptive cross-sectional design. The total population was all nurses in Indonesia who work in COVID-19 isolation room. There were 102 participants who has joined this study. The study used consecutive sampling. Participants with criteria inclusion were allowed to participate, such as age 18 and above, a nurse, can access and fill online questionnaire, working in COVID-19 isolation room for at least 3 months, and willingness to participate. All participants filled the form completely. The participants were asked for informed consent.

This study used three kind of questionnaire, such as C-19ASS (COVID-19 Anxiety Syndrome Scale), CBI (Copenhagen Burnout Inventory), and PROQOL-5 (Professional Quality of Life-5). The questionnaires had been translated to Indonesian. C-19ASS is a questionnaire for measure anxiety of COVID-19 risk infection. This questionnaire has validity and reliability value with alpha = 0.89. There were 9 questions

with yes or no¹².

CBI is a questionnaire for measure nurse's burnout in the situation of pandemic. Reliability score for CBI is 0.57. There were 15 questions with five point likert scale from 1 'always' to 5 'never'¹⁰. PROQOLs is a questionnaire for measure nurse's quality of life during pandemic. PROQOLs has three domain that is Compassion Satisfaction (CS) with alpha reliability = 0.88. CS is about a pleasure and satisfying feeling that comes from helping others. Burnout (BO) with alpha reliability 0.75. BO is a state of emotional, mental, and physical exhaustion brought on by prolonged stress. Secondary Traumatic Stress (STS) with alpha reliability = 0.81. STS is a compassion fatigue may include feelings of isolation, sleep disturbances, traumatized working with client, or others. There were 15 questions with five choices 1-5 from never to very often⁵.

The study has done in March to April 2020 when the COVID-19 infection rising in Indonesia. The data had collected by online questionnaire. The researchers spread the link of questionnaires by social media application such as whatsapp group. The candidate of participant who include as criteria inclusion, can join and fill the questionnaire. First, they were asked to fill the informed consent as the agreement. Then the form page will bring them to the next step. If the respondent doesn't agree with the informed consent, then they can exit the link without any punishment or data record. The data will automatically save in goggle drive. The researcher downloads the data has been filled and tabulated it.

The tabulated data was analyzed with univariate and bivariate. The univariate analysis was used to know the amount and percentage of each variable, also data demographic. The bivariate analysis was used to know the correlation between the variables. The data analyzed with SPSS version 20.0. The data has left skewed distribution or non-normal distribution data. This study has more than two variables, so it used non-parametric *Kruskal Wallis* to analyze the result. P value <0.05 was considered as statistically significant.

This study was obtained ethical approval from the ethics committee of Universitas dr. Soebandi with number No.019/KEPK/SDS/II/2021. The participants filled the google form without writing their real name to safeguard their privacy.

RESULTS

Table 1 shows that majority of the respondents were male (85.5%), having length of work more than 3 year as a nurse (58.8%), mostly have been completed COVID-19 vaccination (85.3%). 56.9% of the respondents had high anxiety level, 50% of them had working burnout. The quality of life can be measure as each domain. There was 54.9% participants had high CS in quality of life. There was 67.6% of participants had low burnout quality of life. There was 51% of the participants had moderate STS of quality of life.

Table 1. Data Demographic (N=102)

Variables	n	%
Gender (n=102)		
Male	171	85.5
Female	29	14.5
Work Length		
<1 year	22	21.6
1-3 year	20	19.6
>3 year	60	58.8
Vaccination status		
Complete	87	85.3
Not complete	15	14.7

Variables	n	%
Anxiety		
Low	44	43.1
High	58	56.9
Burnout		
Low	51	50.0
High	51	50.0
Quality of life domain Comparison Satisfaction		
Moderate	46	45.1
High	56	54.9
Quality of life domain Burnout		
Low	69	67.6
Moderate	33	32.4
Quality of life domain Secondary Traumatic Stress		
Low	48	47.1
Moderate	52	50.0
High	2	1.9

Table 2 shows significant correlation between length of work to quality of life (CS) with p value $0.048 < \alpha 0.05$. There is also significant correlation between burnout with quality of life (STS) with p value $0.033, < \alpha 0.05$.

Table 2. Correlation between variables (N=102)

Variable	PROQOL (n, %, p-value)									
	Comparisson Satisfaction (CS)			Burnout (BO)			Secondary Traumatic Stress (TS)			
	High	Moderate	p	High	Moderate	p	High	Moderate	Low	p
Gender										
Male	25 (24.5)	20 (19.6)	0.906	31(30.4)	14 (13.7)	0.812	19 (18.6)	25 (24.5)	1 (1)	0.684
Female	31 (30.4)	26 (25.5)		38 (37.2)	19 (18.7)		29 (28.4)	27 (26.5)	1 (1)	
Work length										
<1 years	17 (16.7)	5 (4.9)	0.048*	18 (17.6)	4 (3.9)	0.274	13 (12.7)	8 (7.8)	1 (1)	0.469
1-3 years	11 (10.8)	9 (8.8)		13 (12.7)	7 (6.9)		10 (9.8)	10 (9.8)	0 (0)	
>3 years	28 (27.4)	32 (31.4)		38 (37.2)	22 (21.7)		25 (24.5)	34 (33.4)	1 (1)	
Vaccination status										
Completed	51 (50)	36 (35.3)	0.069	61 (59.8)	26 (25.5)	0.199	40 (39.2)	45 (44.1)	2 (2)	0.757
Not completed	5 (4.9)	10 (9.8)		8 (7.8)	7 (6.9)		8 (7.8)	7 (6.9)	0 (0)	
Anxiety										
Low	20 (19.6)	24 (23.5)	0.095	32 (31.4)	12 (11.8)	0.339	21 (20.6)	22 (21.6)	1 (1)	0.970
High	36 (35.3)	22 (21.6)		37 (36.3)	21 (20.5)		27 (26.5)	30 (29.3)	1 (1)	
Burnout										
Low	27 (26.5)	24 (23.5)	0.691	39 (38.2)	12 (11.8)	0.057	29 (28.4)	20 (19.6)	2 (2)	0.033*
High	29 (28.4)	22 (21.6)		30 (29.4)	21 (20.6)		19 (18.6)	32 (31.4)	0 (0)	

*significant <0.05

DISCUSSION

The findings show the majority of nurses were having anxiety of infection (56.9 %). This related with the previous study from Alnazly E et al (2021) ¹³, 60% of health care worker has extremely severe anxiety. Nurse who have high stress level will accumulate become anxiety,

frustration, depression, and other psychological problems ¹⁴. This study was conducted in the second wave of COVID-19 spreading. Even so, the nurses still have anxiety of being infected. They were afraid getting infected or bring the virus home.

The burnout result was 50-50. It doesn't

really significantly relate with pandemic situation. This result was the same as previous result by Teo I et al (2021) ¹⁵, which just 24% of health care worker had burnout in pandemic. As we can see the job burnout of nurse or all the health works were high in the beginning of the pandemic. It cause of unpreparedness to face the pandemic. The hospital workload decreased when the government initiated lockdown in all area. Even if the second wave started to appear, it doesn't cost much change of burnout. But we don't have data to compare the burnout in the beginning of the pandemic. It may because all health supplies were already distribute, the vaccination is running, and the nurse's mental already steady.

The nurse quality of life in three domains. The CS was high (54.9%). This is a good thing being a sign that they work with excellent service. The patients might feel happy and satisfied with the caring they had. The patients might recover well. Or they might had done their job perfectly. The feeling of compassion of satisfaction can make nurses work with all their might in a good mood and happy. The BO remains low (67.6%). This result was different with nurse burnout in the beginning of pandemic in 2020 which high. It might because the nurse was already adapted with the situation. The stressful situation will come when the number of infected patients increased. This was in line with the STS result which shows majority moderate (51%). This result might be because the situation was under control, the COVID-19 patients was few shows by national COVID distribution data, and the protective equipment was already fulfilled. Therefore, the nurse quality of life was good in the pandemic situation. But, it might be change depend on the situation of COVID-19 virus spreading. The quality of life of nurses might worse due to the increase of infected number in their work place.

The correlation between anxiety and quality of life find not significant. This might be because majority the respondents were male (85.5%) and work more than 3 years (58,5%). The work experience was enough so even they work in the isolation room, it doesn't matter. Male rarely show their anxiety or being anxious and the complete vaccine give them secondary barrier during work in isolation room. The nurse burnout was significantly correlate with quality of life with p value= 0.033. It was in line with the previous research which shows strong

negative relationship between nurse burnout and quality of life ¹⁶. Burnout in nurse can increase due to workload and affecting their quality of life.

The length of work also has significant relationship with quality of life with p value= 0.048. Nurse with experience more than 3 years are more likely to have CS. Additional leadership and mindfulness training may be needed to avoid burnout. The more year of experience above 20 years, have higher CS, lower BO, and STS in previous study. They are more passionate with their work ¹⁷.

There might be needed for another research to conclude more factors. Study for pandemic situation will be fluctuated in the future. It needs the right time in the highest infection rate to know the burnout or other responses. The high rate data in the past might be important to know the difference in year over year.

CONCLUSION

Our study found during the second year of the pandemic in Indonesia, the nurse burnout fluctuated according to the infected wave. The results show that nurses still have anxiety regarding the risk of infection. They were afraid if accidentally bring the virus home. Year after year, the pandemic situation is being fluctuated and people start to adapt to it. The work burnout was also change anytime. The burnout become lower and the quality of life increase. For further research, it might need to be compared the nurse's anxiety and burnout from the first wave of pandemic with the time after it to get more relevant data.

Acknowledgments: We thank Universitas dr. Soebandi for the funding given for our study.

Conflicts of Interest: The authors declare no conflict of interest.

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