Nurse Media Journal of Nursing
e-ISSN: 2406-8799, p-ISSN: 2087-7811
https://ejournal.undip.ac.id/index.php/medianers
11(1): 50-60, April 2021
https://doi.org/10.14710/nmjn.v11i1.34093

ORIGINAL RESEARCH

Nurses' Intention to Work during the COVID-19 Outbreak in West Sumatra, Indonesia

Fitri Mailani[1], Emil Huriani[1], Rahmi Muthia[1], Rika Sarfika[1]

[1]*Faculty of Nursing, Universitas Andalas, Padang, Indonesia*

Article Info

Article History:
Received: 11 November 2020
Revised: 30 March 2021
Accepted: 31 March 2021
Online: 21 April 2021

Keywords:
Hospital supply; intention; novel coronavirus; responsibility

Corresponding Author:
Fitri Mailani
Faculty of Nursing, Universitas Andalas, Padang, Indonesia
Email:
fitrimailani22@nrs.unand.ac.id

Abstract

Background: Nurses who work on the front-line and are involved in caring for COVID-19 patients have a high risk of transmission. The increase in the number of confirmed and suspected cases, followed by an increase in workload, a limitation of personal protection equipment, a lack of effective treatment, and inadequate emotional support may contribute to the work intention during a pandemic.
Purpose: This study aimed to describe nurses' intention to work and provide care when people may be at risk of the COVID-19 and examine its relating factors.
Methods: This was a cross-sectional and survey-based study that collected the respondents' characteristics and the intention to work measurements from 238 nurses in 36 hospitals in West Sumatera, Indonesia. Data analysis was performed using descriptive statistics, T-tests, and ANOVA.
Results: The mean and standard deviation scores of nurses' intention to work during the COVID-19 outbreak were 42.49±5.92. The isolation experience, the presence of authorized beds for COVID-19, and sufficient protection equipment supply, were correlated to the intention to work (p=0.016, p=0.035, p=0.000). Nurse respondents expected that hospital managers should provide more attention to nurses who agreed to attend to work during the COVID-19 outbreak.
Conclusion: Nurses showed preserved intention to work during the COVID-19 outbreak. The factors correlated with intention to work were isolation experience, the presence of authorized beds for COVID-19, and protection equipment supply. The government and hospital management should ensure strategies and regulations to provide adequate hospital protective equipment supplies. They should also support compensations to nurses who actively care for patients during the COVID-19 outbreak.

How to cite: Mailani, F., Huriani, E., Muthia, R., & Sarfika, R. (2021). Nurses' intention to work during the Covid-19 outbreak in West Sumatra, Indonesia. *Nurse Media Journal of Nursing, 11*(1), 50-60. https://doi.org/10.14710/nmjn.v11i1.34093

1. Introduction

The outbreak of coronavirus disease 2019 (COVID-19) has shown its effect globally. By 15 April 2020, WHO reported 1,918,138 persons confirmed of COVID-19, with 123,126 deaths. In Indonesia, the number of infected COVID-19 patients in early 2020 was 5,136, and the number of death was 469 (WHO, 2020), including 13 nurses (Nurita, 2020). This disease spreads quickly from infected person to healthy person and could transmit from an asymptomatic carrier person (Bai, Yao et al., 2020).

Nurses who work on the front lines are involved in delivering care to COVID-19 patients (Cai et al., 2020; Tan et al., 2020). The high risk of transmission from the COVID-19 exposes the nurses a lot. Therefore, working in an outbreak of COVID-19 may differ from that in daily routines. The increased number of confirmed and suspected cases, followed by an increase in workload, a constraint of personal protection equipment, a lack of effective treatment, and inadequate emotional support, contribute to intention to attend work (Lai et al., 2020). Nurses who work in an infectious disease outbreak have increased pressure and capability to experience a new challenge (Kim & Choi, 2015).

A previous study showed that when the Severe acute respiratory syndrome (SARS) outbreak occurred, healthcare workers were afraid of contaminating their family and friends (Mounder et al., 2003). It is reported that stigmatization impacts the nurse's psychological well-being (Tan et al., 2020), reluctance to work, and consideration of resignation (Bai, Lin et al., 2004). The nurses revealed high levels of stress, anxiety, and depression symptoms, which could have long-term

psychological implications (Lee et al., 2007). This situation is similar to COVID-19 outbreak issues in which healthcare providers suffer from mental health symptoms, psychological adjustment, and unwillingness to work.

Reports on mortality from COVID-19 infection and concerns on personal and family safety could lead to psychological effects. However, nurses had a social and professional obligation to deliver health care, even though the adverse consequences might arise (Lai et al., 2020). According to Oh et al. (2017), the intention to provide care for patients in response to infectious disease emergencies is associated with nursing professionalism. Several factors influence a person's willingness to attend work and are involved in their workplace during a disaster, such as individual characteristics, family, and workplace factors (Arbon, Ranse et al., 2013).

Previous narrative reviews reported that healthcare workers' willingness to work during an influenza pandemic was moderately high (Aoyagi, 2015). Another study reported that 60.4% of nurses were willing to accept their work during the COVID-19 outbreak in South Korea, and the hospital employees' intention to work was associated with the perceived threat and effectiveness of hospital response (Jang et al., 2020). Nevertheless, a study on this phenomenon could be said immature to conclude the whole population. In COVID-19, research shows different phenomena from previous emerging diseases. The COVID-19 spreads very rapidly globally all over the world to all populations, including nurses (Bai, Yao et al., 2020). The nurses' working environment is highly contagious compared to the previous pandemic. Therefore, it is necessary to investigate nurses' intention to work during a pandemic and its related factors. This study aimed to describe the nurses' intention to work and provide care when people may be at risk of COVID-19 and examine its relating factors.

2. Methods

2.1 Research design

This study used a cross-sectional descriptive design. This survey-based study collected the respondents' characteristics and the intention to work measurements from nurses who worked at 36 hospitals in West Sumatra, Indonesia.

2.2 Setting and sample

This study involved nurses from public and private hospitals in West Sumatra Province, Indonesia, working during the COVID-19 outbreak, and was conducted in April 2020. The inclusion criteria were nurses having clinical experience at the specified hospital for more than 1 year, whereas the exclusion criteria were pregnant women and nurses who were on temporary leave for one month before the time of the study. There were 238 nurses from 36 public and private hospitals who responded voluntarily to an online survey according to the criteria. This study included nurses who work in a hospital in 18 out of 19 regions in West Sumatra.

2.3 Measurement and data collection

An online survey was designed based on the intention to work questionnaires. We constructed the intention-to-work questionnaire since no existing published and validated tool was suitable for this study. We referred to literature with the relevant topic (Arbon, Cusack et al., 2013; Arbon, Ranse et al., 2013), extracted information, and developed 12 items, a five-point Likert scale (strongly disagree to agree strongly) assessing the nurse willingness to attend work during an emergency infectious disease pandemic. For statistical analysis purposes, the respondents' response was scored from 1 for strongly disagree to 5 for strongly agree, for favorable items; and reversely for unfavorable items. The total score ranged from 12 to 60. The questionnaire was piloted on 20 nurses from one public and one private hospital in Padang. The researcher asked respondents to answer the questionnaire and write down comments on the clarity of the questions at the end of the instrument. The statements of the respondents were used to improve the face validity. These pilot study results were summarized, discussed by the research team, and minor adjustments were made in response to the pilot's comments. The instrument's internal consistency coefficients in this study were 0.824, and the range of reliability scores of the instrument was between 0.71-0.89 (Cronbach's α). We created an online form and distributed the survey link via social media to approximately 200 personal accounts and 50 group accounts from 6 to 13 April 2020. There were 238 nurses from 36 hospitals who completed the survey. At the beginning of the questionnaire, there were questions on the hospital's characteristics (the

presence of authorized beds for COVID-19 and protection equipment supply), job-related characteristics (working division, clinical experience, duty type, type of hospital, and employment status), and the stated intention to attend work conditions during the COVID-19 pandemic.

2.4 Data analysis

The characteristics of the respondents and the intention to work were explored using descriptive statistics. Univariate association between the overall intention to attend their workplace and the participants' characteristics were assessed using t-tests and ANOVA. T-test was used to analyze differences of willingness to attend work for dichotomous data such as gender, marital status, presence of children, and isolation experience. ANOVA was used to analyze differences in willingness to attend work for data with more than two groups: age, clinical experience, and education. The data were previously tested for normality by the Kolmogorov-Smirnov test and were tested by the Levene test for homogeneity. The test showed that the data were normally distributed and homogenous.

2.5 Ethical considerations

The ethics approval to conduct this research was granted by the Medical Research Ethics Committee of Faculty of Medicine Universitas Andalas (reference number: 281/KEP/FK/2020). The study was conducted following the approved protocol. Surveys were anonymous, and informed consent was implied when participants completed and returned their survey.

3. Results

3.1 Personal characteristics, job-related characteristics, and hospital condition during the pandemic

Among 238 nurses who responded to the survey and worked in West Sumatera, most of them were 30-39 years old (48.7%), female (86.1%), married (74.4%), with children (59.2), with 1-4 persons at home (57.1%), completed undergraduate level of study (62.2%), and without isolation experience (84.9%). Based on job-related characteristics, 36.6% of respondents worked at wards, 54.6 % had more one to ten years of clinical experience, 81.5% were shift workers, and 78.2% worked as a permanent employee. Regarding the characteristics of hospitals during the COVID-19 pandemic, 67.2% of respondents reported the presence of authorized beds for COVID-19 patients, and 67.6% reported insufficient protection equipment supply to the hospital (Table 1).

Table 1. Personal characteristics, job-related characteristics of study subjects, and relationships with the intention to work (n=238)

Variables	Frequency (%)	Intention to work Mean±SD	*t*	*F*	*p*
Personal characteristics					
Age (year)					
20-29	77 (32.4)	42.29±6.88		0.98	0.376
30-39	116 (48.7)	42.19±5.67			
40-50	45 (18.9)	43.60±4.65			
Gender					
Male	33 (13.9)	43.67±6.17	1.19		0.241
Female	205 (86.1)	42.30±5.88			
Marital status					
Not married	61 (25.6)	43.15±6.07	9.99		0.323
Married	177 (74.4)	42.26±5.87			
Presence of children					
No children	97 (40.8)	42.87±6.39	0.79		0.427
With children	141 (59.2)	42.23±5.59			
Number of the person at home					
1-4	136 (57.1)	42.17±6.46		0.95	0.385
5-8	98 (41.2)	43.03±5.14			
≥9	4 (1.7)	40.00±4.08			

Table 1. Continued

Variables	Frequency (%)	Intention to work Mean±SD	t	F	*p*
Education level					
Diploma	83 (34.9)	43.00±5.56		0.80	0.447
Undergraduate	148 (62.2)	42.13±6.07			
Postgraduate	7 (2.9)	44.00±7.23			
Isolation experience					
Yes	36 (15.1)	44.75±5.89	2.50		0.016*
No	202 (84.9)	42.08±5.85			
Job-related characteristics					
Working division					
Emergency	27 (11.3)	42.04±5.55		1.39	0.226
ICU/HCU	41 (17.2)	43.32±5.81			
Ward	87 (36.6)	41.87±6.37			
Ward for COVID-19	19 (8)	45.26±5.89			
Outpatient clinic	28 (11.8)	41.46±5.62			
Others	36 (15.1)	42.69±5.23			
Clinical experience (years)					
1-10	130 (54.6)	41.92±6.26	-1.66		0.098
>10	108 (45.4)	43.18±5.45			
Duty type					
3-shifts per day	194 (81.5)	42.44±5.91	-0.26		0.792
Daytime only	44 (18.5)	42.70±6.05			
Type of hospital					
Public	186 (78.2)	42.42±6.13	-0.33		0.738
Private	52 (21.8)	42.73±5.20			
Employment status					
Permanent	186 (78.2)	42.35±5.76	-0.63		0.529
Non-permanent	52 (21.8)	42.98±6.51			
Hospital condition during the pandemic					
The presence of authorized beds for COVID-19					
Yes	160 (67.2)	43.06±5.86	2.12		0.035*
No	78 (32.8)	41.32±5.93			
Protection equipment supply					
Sufficient	77 (32.4)	45.21±5.09	5.41		0.000*
Insufficient	161 (67.6)	41.19±5.87			
Intention to work		42.49±5.92			

Note. The t is the result for the T-test, and F is the result for ANOVA; * Statistically significant ($p<0.05$).

3.2 Intention to work according to personal characteristics, job-related characteristics, and hospital condition during the pandemic

The mean scores of intention to work are also presented in Table 1. The overall mean score of intention to work during the COVID-19 pandemic was 42.49, and mean scores of intention to work were significantly higher in respondents with isolation experience ($p=0.016$), the presence of authorized beds for COVID-19 ($p=0.035$), and in respondents who work at a hospital with sufficient protection equipment supply ($p<0.001$).

3.3 Intention to work among nurses during COVID-19 pandemic

Table 2 shows each statement's mean scores on nurses' intention to attend to work during a pandemic. The highest mean score of intention to work was for the information, "Hospital managers should pay more attention to the nurses who agreed to attend work during the COVID-19 pandemic," which was 4.69. The lowest score was for the statement "I have the right to say 'no' to attend work during the COVID-19 pandemic if it is threatening to my family", which was 2.33.

Table 2 also illustrates the frequency of respondent agreement or disagreement with each intention to work statement outlined in the survey. Responses demonstrated that nurses have a great expectation to hospital managers to pay more attention to the nurses who agrees to attend work during the COVID-19 outbreak. The majority of respondents agreed on all other statements except that they have the right to say 'no' to attend work during the COVID-19 outbreak if it is threatening themselves or their family.

Table 2. Mean scores and agreement or disagreement with statement intention work among nurses during COVID-19 outbreak (n=238)

No	Willingness to attend work	Mean±SD	Strongly Disagree f (%)	Disagree f (%)	Undecided f (%)	Agree f (%)	Strongly Agree f (%)
1	I would attend the workplace even knowing there is COVID-19 outbreak	3.94±0.69	2 (0.8)	8 (3.4)	29 (12.2)	163 (68.5)	36 (15.1)
2	I have a responsibility to work during the COVID-19 outbreak.	4.10±0.63	1 (0.4)	3 (1.3)	22 (9.2)	158 (66.4)	54 (22.7)
3	I have the knowledge to work during the COVID-19 outbreak	3.72±0.78	1 (0.4)	20 (8.4)	50 (21)	140 (58.8)	27 (11.3)
4	I have skills to deal with the COVID-19 outbreak	3.60±0.82	4 (1.7)	19 (8)	66 (27.7)	128 (53.8)	21 (8.8)
5	I feel I will be able to work during the COVID-19 outbreak	3.58±0.78	4 (1.7)	13 (5.5)	81 (34)	122 (51.3)	18 (7.6)
6	My work environment supports working in the COVID-19 outbreak	3.50±0.90	7 (2.9)	27 (11.3)	65 (27.3)	119 (50)	20 (8.4)
7	I have rights to say 'no' to attend work during the COVID-19 outbreak if it is threatening to me	2.42±1.12	52 (21.8)	94(39.5)	40 (16.8)	43 (18.1)	9 (3.8)
8	I have rights to say 'no' to attend work during the COVID-19 outbreak if it is threatening to my family	2.33±1.05	58 (24.4)	90 (37.8)	46 (19.3)	42 (17.6)	2 (0.8)
9	Hospital managers should pay more attention to nurses who agree to attend work during the COVID-19 outbreak	4.69±0.49	0	0	3 (1.3)	68 (28.6)	167 (70.2)
10	I feel that I have a high level of choice to actively participate in response to COVID -19 outbreak	3.76±0.83	3 (1.3)	12 (5)	64 (26.9)	120 (50.4)	39 (16.4)
11	I believe that there is personal protection equipment available during the COVID-19 outbreak	3.49±0.89	9 (3.8)	16 (6.7)	85 (35.7)	105 (44.1)	23 (9.7)
12	Management in my working place ensures security and safety at the workplace	3.37±0.93	14 (5.9)	18 (7.6)	87 (36.6)	104 (43.7)	15 (6.3)

3.4 Relationship between the isolation experience, the presence of authorized beds for COVID-19, and protection equipment supply with the statement on the intention to attend work

Table 3 shows the significance value *(p-value)* of the t-test to measure differences of the average in the intention to work expressed on each statement within the questionnaire with three characteristics that have a significant relationship with the intention to attend work. The result shows that the hospital protection equipment supply has a significant correlation with 6 out of 12 statements on the intention to attend work ($p<0.05$). The presence of authorized beds for COVID-19 also has correlations with five statements on the questionnaire, and isolation experience has a significant correlation with two statements on the questionnaire.

Table 3. Job-related characteristics and hospital condition predictors of the statement intention to attend work

No	Intention to attend work, mean (SD)	Isolation experience			The presence of authorized beds for COVID-19			Protection equipment supply		
		No	Yes	*p-value*	No	Yes	*p*-value	No	Yes	*p*-value
1	I would attend in the workplace even knowing there is COVID-19 pandemic	3.91 (0.69)	4.11 (0.71)	0.114	3.74 (0.75)	4.03 (0.65)	0.004 *	3.91 (0.63)	3.99 (0.82)	0.485
2	I have a responsibility to work during the COVID-19 pandemic	4.07 (0.63)	4.22 (0.64)	0.205	3.95 (0.56)	4.17 (0.66)	0.008 *	4.04 (0.62)	4.21 (0.66)	0.067
3	I have the knowledge to work during the COVID-19 pandemic	3.73 (0.79)	3.69 (0.79)	0.816	3.56 (0.78)	3.80 (0.78)	0.031 *	3.59 (0.83)	4.00 (0.63)	<0.001 *
4	I have skills to deal with the COVID-19 pandemic	3.58 (0.85)	3.72 (0.66)	0.258	3.44 (0.86)	3.68 (0.79)	0.036 *	3.47 (0.87)	3.87 (0.66)	<0.001 *
5	I feel I will be able to work during the COVID-19 pandemic	3.54 (0.79)	3.78 (0.68)	0.065	3.45 (0.82)	3.64 (0.76)	0.089	3.47 (0.79)	3.81 (0.69)	0.001*
6	My work environment supports working in the COVID-19 pandemic	3.46 (0.90)	3.72 (0.91)	0.113	3.35 (0.91)	3.57 (0.90)	0.077	3.24 (0.91)	4.03 (0.63)	<0.001 *
7	I have rights to say 'no' to attend work during the COVID-19 pandemic if it is threatening to myself	2.36 (1.11)	2.78 (1.19)	0.058	2.53 (1.13)	2.38 (1.13)	0.335	2.39 (1.14)	2.49 (1.12)	0.513
8	I have rights to say 'no' to attend work during the COVID-19 pandemic if it is threatening to my family	2.29 (1.05)	2.56 (1.05)	0.166	2.28 (1.04)	2.35 (1.07)	0.640	2.30 (1.01)	2.38 (1.15)	0.638
9	Hospital managers should pay more attention to nurses who agree to attend work during the COVID-19 pandemic	4.68 (0.49)	4.72 (0.45)	0.642	4.65 (0.48)	4.71 (0.49)	0.435	4.69 (0.49)	4.69 (0.49)	0.987
10	I feel that I have a high level of choice to actively participate in response to COVID -19 pandemic	3.72 (0.83)	3.97 (0.85)	0.101	3.60 (0.73)	3.83 (0.87)	0.034 *	3.70 (0.85)	3.88 (0.78)	0.094

Table 3. Continued

No	Intention to attend work, mean (SD)	Isolation experience			The presence of authorized beds for COVID-19			Protection equipment supply		
		No	Yes	*p*-value	No	Yes	*p*-value	No	Yes	*p*-value
11	I believe that there is personal protection equipment available during the COVID-19 pandemic	3.44 (0.89)	3.81 (0.92)	0.030 *	3.44 (0.86)	3.52 (0.92)	0.497	3.26 (0.93)	3.97 (0.58)	<0.001 *
12	Management in my working place ensures security and safety at the workplace	3.32 (0.94)	3.67 (0.86)	0.031 *	3.33 (0.96)	3.39 (0.92)	0.680	3.12 (0.98)	3.90 (0.53)	<0.001 *

* Statistically significant ($p<0.05$)

4. Discussion

This study aimed to describe the nurse's intention to work and provide care during the COVID-19 pandemic and examine its related factors. The result showed that the mean intention to work score was 42.49 (70.8%), which is higher than a previous study, with approximately 60% of hospital workers willing to accept their work during the early COVID-19 outbreak in South Korea (Jang et al., 2020). The nurse faces the challenge to balance professional roles in delivering care of high-risk patients without adequate personal protective equipment. It affects the nurses' intention to work due to lack of medication or available COVID-19 vaccine at the time of this study. However, even COVID-19 is very contagious (Devnani, 2012), the nurses in Indonesia do not want to quit their jobs since it is a generally permanent employee. Even the level of attendance might be disrupted, the nurses' sense of responsibility obliged them to work during an infectious disease pandemic (Ives et al., 2009).

Previous studies showed different results related to the nurse's willingness to work during a pandemic. In the Ebola virus, 26.8% of the nurses were willing to care for infected patients (Kim & Choi, 2016). It is quite low compared to the nurses' willingness to work during the COVID-19 pandemic. A study conducted by Jang et al. (2020) found that 60.4% of the nurses were willing to attend their work during the early COVID-19 outbreak, while 90% of nurses indicated an intention to work during a pandemic (Martin et al., 2013). In addition, Lee and Kang (2020) found that the willingness to care for novel H1N1 patients scored 4.31 of 7 points (61.6%), which is lower than the present study results. According to these results, the researchers suggest that this condition corresponds with previous work, which showed an ambiguity between feeling motivated by a sense of obligation to work and a significant barrier that might prevent from doing so (Ives et al., 2009).

The intention to work during a pandemic was closely linked to duty's dedication (Damery et al., 2010). According to this study's results, a sense of responsibility was reported as high by the respondents. When natural disasters occur, healthcare workers are more likely to be willing and able to respond, and otherwise, less likely to be willing and able during infectious outbreaks (Couig, 2012). Therefore, the nurses' intention to work during a pandemic should be prepared with several policyholders' attempts, such as developing self-efficacy education programs and the capability to care for infected patients and train nurses accordingly (Lee & Kang, 2020). The most learning need for nurses regarding disaster nursing was mitigation/ prevention, response phase, and disaster nursing management plans (Phakdeechanuan et al., 2015). These aspects found compelling on willingness to work as training in pandemic preparedness, confidence in individual skills, general and specific role knowledge, good communication skills, and perception of role (Aoyagi et al., 2015).

The study results showed that the presence of authorized beds for COVID-19 was associated with the nurses' intention to work during the COVID-19 outbreak. The nurses provide care and make direct contacts with COVID-19 patients; they are more exposed to traumatic events such as patients' suffering and deaths (Pappa et al., 2020). Among healthcare workers, nurses were reported to experience the highest anxiety levels and the highest prevalence of anxiety, ranging

from 15% to 92% (Luo et al., 2020). Fear and anxiety are associated with a willingness to work (Wong et al., 2011). Shanafelt et al. (2020) identified one of the sources of anxiety in nurses is the lack of personal protective equipment (PPE); therefore, hospitals need to supervise and monitor employees' safety by providing appropriate PPE and mental health support during an outbreak. Previous studies have reported that the intention to work and willingness to work increase when hospitals provide PPE (Martin, 2011; Chaffee, 2009) and accurate information appropriately (Gershon et al., 2010). In particular, hospitals need to consider the types of tasks that workers conduct during emergencies, and the government should emphasize the efforts to provide physical and psychological worker protection programs and policies to improve healthcare workers' presence at work (Gershon et al., 2010). Healthcare workers' feeling of being protected is treasurable because it increases the healthcare workers' motivation and lowers reluctance to work (Imai et al., 2010).

The isolation experienced was significantly correlated to the intention to work during the COVID-19 pandemic. The isolation experienced indirectly built up the knowledge and skills of a nurse. Control factors such as knowledge and skills (internal) and supplies (external) influenced more than normative aspects on the intention to respond to an outbreak period (Connor, 2014). This study result suggests the need for attention from the hospital management and government to be prepared for the emergency needs during a pandemic and considering the potential that staff may be absent for reasons beyond those today expected. A hospital is a health institution that deals directly with victims when a disaster or disease outbreak occurs. Therefore, the organization must provide well-planned workplace protocols, such as guidelines for caring for affected patients, a set of actions related to a disaster or disease outbreak, and safety practices when treating patients. Hospitals should also collaborate with institutions at the local and national levels in preparing appropriate training and response plans (Hirshouer et al., 2020). As nurses are front-line health workers, they must be oriented and familiar with workplace protocol content; they should be knowledgeable and skillful in carrying it out (Labrague et al., 2018).

The highest mean score of intention to work was for the statement regarding attention from hospital managers to the nurses who agree to attend during the COVID-19 pandemic. The lowest score was for the statement "I have rights to say 'no' to attend work during the COVID-19 pandemic if it is threatening to my family." Previous research demonstrated the same result on institutional support would influence positive attitudes among nurses and the intention to work during new emerging infectious diseases (Lee & Kang, 2020). Nurses would appreciate the compensation payments and confession from management. The executive hospital gives compensation, appreciation and ensures nurses and their families are safe. Simultaneously, they care for patients with Ebola infection disease (EID) to improve nurses' positive attitudes and reduce nurse managers' concerns and anxieties (Lee & Kang, 2020). Another study reported that hospital response's perceived threat and effectiveness were associated with hospital employees' intention to work during the early COVID-19 outbreak (Jang et al., 2020).

Respondents demonstrated that the hospital managers should provide more attention to the nurses during the COVID-19 outbreak. This study found most of the nurses agreed with some statements such as, "My work environment supports working in the COVID-19 outbreak", "I have a responsibility to work during the COVID-19 outbreak", and "Hospital managers should pay more attention to the nurses who agree to attend work during the COVID-19 outbreak." These three items showed that the government needs to scrutinize healthcare providers' technical problems and demands for establishing a safe healthcare system. The hospital managers should develop strategies to protect healthcare workers' providers from severe physical and psychological stress related to pandemic (Kim, 2018). Besides, the majority of respondents agreed on all statements unless if the pandemic threatens themselves or their family. Compared to the general population, nurses have a higher risk of infected COVID-19. Therefore, it causes the nurse's anxiety to increase at work, fear of infection from the patients, fear of accidentally infecting family, friends, and other people. Besides, with the increasing number of patients, the workload and limitations of personal protective equipment related to COVID-19, social distancing, and community quarantine increase fear among nurses that also affects performance, psychological and emotional well-being (Maben, 2020).

Specifically, the results showed that more than half of nurses agreed with the statement "I have rights to say 'no' to attend work during the COVID-19 outbreak if it is threatening to my family", "I have rights to say 'no' to attend work during the COVID-19 outbreak if it is threatening

to myself", "I have the knowledge to work during the COVID-19 outbreak" (70.1%), "I have skills to deal with the COVID-19 outbreak", and I feel I will be able to work during the COVID-19 outbreak. According to the theory of Ajzen's planned behavior (TPB) (2005), three main factors contribute to the intention to work: the attitude toward the behavior, subjective norms, and perceived behavioral control. The results are consistent with the TPB theory, in which many of the nurses are married, have children, and have large families living together. The personal condition could be social pressure for nurses considering COVID-19 is an infectious disease and could be transmitted to their families. So, the subjective norms explained in the TPB theory have been proven in this study.

5. Implication and limitation

This study has implications for nursing and health policy to maintain an adequate workforce during the COVID-19 pandemic. The government and hospital management should ensure that policies and regulations include providing adequate hospital goods supply. Moreover, we suggest that hospital administrators provide compensations and recognitions to nurses who actively care for patients during the COVID-19 pandemic, thereby cultivating positive attitudes, guaranteeing nurses and their family's safety, and reducing distresses and anxieties of the nurse managers. Furthermore, this study has limitations. It was an online survey that distributed the link to the contact persons that the researchers have and then spread the survey link to their contacts. As a result, the proportion of nurses in each hospital who responded to this survey varied. However, the respondents have represented a large number of institutions and regions in West Sumatra. The researchers do not have comparable data on the desire to work for nurses before the COVID-19 pandemic, so the researchers cannot conclude whether there has been a change in nurses' willingness to work. This study cannot determine whether the COVID-19 pandemic influenced nursing professionalism. Besides, the instrument's development seemed to be immature, although the reliability test showed an excellent mark. Therefore, there is a need to test the validity and reliability of this study's questionnaire to prove its psychometric properties.

6. Conclusions

The factors correlated with intention to work were isolation experience, the presence of authorized beds for COVID-19 and sufficient protection equipment supply. This study revealed that nurses has a professional responsibility to care for patients during the COVID-19 pandemic. The nurses may be in a dilemma and try to balance their role to take care of patients with risks of infection and even death without adequate PPE. Future studies are recommended to distribute the survey link through the hospital management. It is expected the distribution of the association will occur equally, and the proportion of responses received is more significant.

Acknowledgment

We would like to thank all nurses who participated in this study.

Conflict of interest

The authors have no conflicts of interest associated with this study.

References

Ajzen, I. (2005). *Attitudes, personality, and behavior*. Open University Press.

Aoyagi, Y., Beck, C. R., Dingwall, R., & Nguyen-Van-Tam, J. S. (2015). Healthcare workers' willingness to work during an influenza pandemic: A systematic review and meta-analysis. *Influenza and Other Respiratory Viruses, 9*(3), 120–130. https://doi.org/10.1111/irv.12310

Arbon, P., Cusack, L., Ranse, J., Shaban, R. Z., Considine, J., Kako, M., Woodman, R. J., Mitchell, B., Bahnisch, L., & Hammad, K. (2013). Exploring staff willingness to attend work during a disaster: A study of nurses employed in four Australian emergency departments. *Australasian Emergency Nursing Journal, 16*(3), 103–109. https://doi.org/10.1016/j.aenj.2013.05.004

Arbon, P., Ranse, J., Cusack, L., Considine, J., Shaban, R. Z., Woodman, R. J., Bahnisch, L., Kako, M., Hammad, K., & Mitchell, B. (2013). Australasian emergency nurses' willingness to attend work in a disaster: A survey. *Australasian Emergency Nursing Journal*, *16*(2), 52–57. https://doi.org/10.1016/j.aenj.2013.05.003

Bai, Y., Lin, C. C., Lin, C. Y., Chen, J. Y., Chue, C. M., & Chou, P. (2004). Survey of stress reactions among health care workers involved with the SARS outbreak. *Psychiatric Services*, *55*(9), 1055-1057.

Bai, Y., Yao, L., Wei, T., Tifrontlinen, D.Y., Chen, L., & Wang, M. (2020). Presumed Asymptomatic Carrier Transmission of COVID-19. *The Journal of the American Medical Association, 323*(14), 1406–1407. https://doi.org/10.1001/jama.2020.2565

Cai, H., Tu, B., Ma, J., Chen, L., Fu, L., Jiang, Y., & Zhuang, Q. (2020). Psychological impacts and coping strategies of front-line medical staff during the COVID-19 outbreak in Hunan, China. *Medical Science Monitor*, *26(1)*, e924171–16. https://doi.org/10.12659/msm.924171

Chaffee, M. (2009). The willingness of health care personnel to work in a disaster: An integrative review of the literature. *Disaster Medicine and Public Health Preparedness*, *3*(1), 42–56.

Connor, S. B. (2014). Factors associated with the intention of health care personnel to respond to a disaster. *Prehospital and Disaster Medicine*, *29*(6), 555–560. https://doi.org/10.1017/S1049023X14001186

Couig, M. P. (2012). Willingness, ability, and intentions of health care workers to respond. *Annual Review of Nursing Research*, *30* (1), 193-200. https://doi.org/10.1891/0739-6686.30.193

Damery, S., Draper, H., Wilson, S., Greenfield, S., Ives, J., Parry, J., Petts, J., & Sorell, T. (2010). Healthcare workers ' perceptions of the duty to work during an influenza pandemic. *Journal of Medical Ethics*, *36* (1), 12–18. https://doi.org/10.1136/jme.2009.032821

Devnani, M. (2012). Factors associated with the willingness of health care personnel to work during an influenza public health emergency: An integrative review. *Prehospital and Disaster Medicine*, *27*(6), 551–566. https://doi.org/10.1017/S1049023X12001331

Gershon, R. R. M., Magda, L. A., Qureshi, K. A., Riley, H. E. M., Scanlon, E., Carney, M. T., Richards, R. J., & Sherman, M. F. (2010). Factors associated with the ability and willingness of essential workers to report to duty during a pandemic. *Journal Occupational and Environmental Medicine*, *52*(10), 995-1003. https://doi.org/10.1097/JOM.0b013e3181f43872

Hirshouer, M., Edmonson, J. C., & Hatchel, K. K. (2020). Hospital preparedness. In *Nursing management of pediatric disaster* (pp. 301-314). Springer, Cham.

Imai, H., Matsuishi, K., Ito, A., Mouri, K., Kitamura, N., Akimoto, K., Mino, K., Kawazoe, A., Isobe, M., Takamiya, S., & Mita, T (2010). Factors associated with motivation and hesitation to work among health professionals during a public crisis: A cross-sectional study of hospital workers in Japan during the pandemic (H1N1) 2009. *BMC Public Health*, *10*(1), 672. https://doi.org/10.1186/1471-2458-10-672

Ives, J., Greenfield, S., Parry, J. M., Draper, H., Gratus, C., Petts, J. I., Sorell, T., & Wilson, S. (2009). Healthcare workers' attitudes to working during pandemic influenza: A qualitative study. *BMC Public Health*, *9*, 1–13. https://doi.org/10.1186/1471-2458-9-56

Jang, Y., You, M., Lee, S., & Lee, W. (2020). Factors associated with the work intention of hospital workers' in South Korea during the early stages of the COVID-19 outbreak. *Disaster Medicine and Public Health Preparedness*, 1-8. https://doi.org/10.1017/dmp.2020.221

Kim, J. S., & Choi, J. S. (2015). Factors predicting clinical nurses' willingness to care for Ebola virus disease-infected patients: A cross-sectional, descriptive survey. *Nursing & Health Sciences*, *18*(3), 299–305. https://doi.org/10.1111/nhs.12269

Kim, Y. (2018). Nurses' experiences of care for patients with Middle East respiratory syndrome-coronavirus in South Korea. *American Journal of Infection Control*, *46*(7), 781–787.

Labrague, L. J., Hammad, K., Gloe, D. S., McEnroe-Petitte, D. M., Fronda, D. C., Obeidat, A. A., & Mirafuentes, E. C. (2018). Disaster preparedness among nurses: A systematic review of literature. *International Nursing Review*, *65*(1), 41-53. https://doi.org/10.1111/inr.12369

Lai, J., Ma, S., Wang, Y., Cai, Z., Hu, J., Wei, N., Wu, J., Du, H., Chen, T., Li, R., Tan, H., Kang, L., Yao, L., Huang, M., Wang, H., Wang, G., Liu, Z., & Hu, S. (2020). Factors associated with mental health outcomes among health care workers exposed to Coronavirus disease 2019. *The Journal Of The American Medical Association Network Open*, *3*(3), e203976-86. https://doi.org/10.1001/jamanetworkopen.2020.3976

Lee, A. M., Wong, J. G., McAlonan, G. M., Cheung, V., Cheung, C., Sham, P. C., & Chua, S. E. (2007). Stress and psychological distress among SARS survivors 1 year after the outbreak. *The Canadian Journal of Psychiatry*, *52*(4), 233-240.

Lee, J., & Kang, S. J. (2020). Factors influencing intention to care for patients with emerging infectious diseases: Application of the theory of planned behavior. *Nursing and Health Sciences*, *22*(1), 82–90. https://doi.org/10.1111/nhs.12652

Luo, M., Guo, L., Yu, M., & Wang, H. (2020). The psychological and mental impact of coronavirus disease 2019 (COVID-19) on medical staff and general public–A systematic review and meta-analysis. *Psychiatry Research*, *291*(9), 113190. https://doi.org/10.1016/j.psychres.2020.113190

Maben, J., & Bridges, J. (2020). Covid-19: Supporting nurses' psychological and mental health. *Journal of Clinical Nursing*, 29, 2742-2750. https://doi.org/10.1111/jocn.15307

Martin, S. D. (2011). Nurses ability and willingness to work during pandemic flu. *Journal of Nursing Management*, *19*(c), 98–108. https://doi.org/10.1111/j.1365-2834.2010.01190.x

Martin, S. D., Brown, L. M., & Reid, W. M. (2013). Predictors of nurses' intentions to work during the 2009 influenza A (H1N1) pandemic. *The American Journal of Nursing, 113*(12), 24–31. https://doi.org/10.1097/01.NAJ.0000438865.22036.15

Maunder, R., Hunter, J., Vincent, L., Bennett, J., Peladeau, N., Leszcz, M., & Mazzulli, T. (2003). The immediate psychological and occupational impact of the 2003 SARS outbreak in a teaching hospital. *The Canadian Medical Association Journal*, *168*(10), 1245-1251.

Nurita, D. (2020, April 17). *1 Lagi perawat meninggal karena Covid-19, total 13 orang [1 more nurse died of Covid-19, total 13 people].* Majalah Tempo. https://nasional.tempo.co/read/1332726/1-lagi-perawat-meninggal-karena-covid-19-total-13-orang/full&view=ok

Oh, N., Hong, N. S., Ryu, D. H., Bae, S. G., Kam, S., & Kim, K. Y. (2017). Exploring nursing intention, stress, and professionalism in response to infectious disease emergencies: The experience of local public hospital nurses during the 2015 MERS outbreak in South Korea. *Asian Nursing Research*, *11*(3), 230–236. https://doi.org/10.1016/j.anr.2017.08.005

Pappa, S., Ntella, V., Giannakas, T., Giannakoulis, V. G., Papoutsi, E., & Katsaounou, P. (2020). Prevalence of depression, anxiety, and insomnia among healthcare workers during the COVID-19 pandemic: A systematic review and meta-analysis. *Brain, Behavior, and Immunity*, *88*(8), 901-7. https://doi.org/10.1016/j.bbi.2020.05.026

Phakdeechanuan, K., Songwathana, P., & Sae-Sia, W. (2015). Thai nurses' learning needs regarding disaster nursing: High needs. *Nurse Media Journal of Nursing*, *5*(2), 56-66. https://doi.org/10.14710/nmjn.v5i2.10529

Shanafelt, T., Ripp, J., & Trockel, M. (2020). Understanding and addressing sources of anxiety among health care professionals during the COVID-19 pandemic. *The Journal Of The American Medical Association*, *323*(21), 2133-2134. https://doi.org/10.1001/jama.2020.5893

Tan, B. Y. Q., Chew, N. W. S., Lee, G. K. H., Jing, M., Goh, Y., Yeo, L. L. L., Zhang, K., Chin, H.-K., Ahmad, A., Khan, F. A., Shanmugam, G. N., Chan, B. P. L., Suny, S., Chandra, B., Ong, J. J. Y., Paliwal, P. R., Hong, L. Y. H., Sagayanathan, R., Chen, J. T., & Sharma, V. K. (2020). Psychological Impact of the COVID-19 Pandemic on Health Care Workers in Singapore. *Annals of Internal Medicine*, *173*(4), 317-320. https://doi.org/10.7326/M20-1083

Wong, E. L. Y., Wong, S. Y. S., Lee, N., Cheung, A., & Griffiths, S. (2011). Healthcare worker's duty concerns of working in the isolation ward during the novel H1N1 pandemic. *Journal of Clinical Nursing*, *21*, 1466–1475. https://doi.org/10.1111/j.1365-2702.2011.03783.x

World Health Organization (WHO). (2020). Coronavirus disease 2019 (COVID-19): Situation report - 77. https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports