

## ORIGINAL ARTICLE

# The Psychological Experience of Frontline Nurses Amid The COVID-19 Pandemic

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## ABSTRACT

**Introduction:** Frontline nurses caring for COVID-19 patients are easy to get viral infections because they are often exposed to infected patients. As the virus continues to spread, frontline nurses were faced with situations that can affect psychological readiness. This study was to explore the psychological aspects of frontline nurses caring for COVID-19 patients. **Methods:** In-depth interviews were conducted with 16 frontline nurses providing care for COVID-19 patients at a referral hospital in Surabaya from August to October 2020. Interviews were conducted face-to-face or by telephone and analyzed with Colaizzi. **Results:** The results show that there are 3 main psychological themes for frontline nurses who treat COVID-19 patients. First, the emotions that appear in the beginning stages consist of fear and anxiety about being infected and anxiety about the poor of knowledge about the disease and lack of information regarding the patient's condition are challenges that must be solved in the long term. Second, positive emotions appear progressively after negative emotions along with the ability to get used to the existing situation. Third, we find that nurses being able to take lessons and important values by increasing alertness, always being grateful, and thinking positively. **Conclusion:** We conclude that during the pandemic, the positive and negative emotions of frontline nurses are indirectly internalized into one. Frontline nurses are able to take lessons and interpret their primary roles. Along with good emotional control, frontline nurses are able to take lessons and important values from the pandemic events they are facing.

**Keywords:** COVID-19, Health worker, Health services, Psychological experience

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## INTRODUCTION

Corona Virus Disease (COVID-19) is a new, single-strained virus enveloped in ribonucleic acid that was first discovered in Wuhan, China in December 2019 and is highly contagious, with more than double the strength of the seasonal flu. (1–3). The clinical picture that appears at the beginning of the infection is an upper respiratory tract infection with mild symptoms, accompanied by fever (82%) and cough (81%), until acute respiratory distress syndrome (ARDS) and sepsis occur. However, due to this viral infection, it can be deadly if it attacks the elderly group who have comorbid

diseases such as hypertension, heart failure, and diabetes (4). Currently, there is no specific drug to cure this disease. Treatment primarily includes antiviral therapy, isolation, medication to relieve symptoms experienced, and close monitoring of disease progression (5).

More than 2.2 million new cases and 39,000 COVID-19 deaths have been reported across six WHO regions (6). Until August 27, 2021, In Indonesia, it is estimated that the total number of confirmed cases of COVID-19 is 4 million cases (7). There are 21 provinces that have reported the Delta variant, and the proportion of positive test results is more than 20% in 33 of the 34 provinces. One of the provinces with a high mortality rate in East Java Province (8). This condition directly increases the burden on health facilities and hospitals in handling patients with COVID-19 in Indonesia, especially in East Java Province.

Health workers as the frontline who deal directly with victims of the COVID-19 pandemic have serious occupational health risks because they are often exposed to infected individuals. During the pandemic, health workers who treat COVID-19 patients feel afraid, anxious and worried about contracting the virus so that it can have an impact on themselves and their families, especially not a few of their colleagues who are infected. (9), then, currently, there are still many asymptomatic patients and no cure for COVID-19 has yet been found (10). It is estimated that three thousand health workers have been infected with COVID-19 in China and around 22 have died (11).

Problems regarding the psychological experience of front-line nurses in dealing with COVID-19 patients cannot be fully captured through a questionnaire approach as usual, but require a means that provides opportunities for front-line nurses to be able to tell in detail the work process and their experiences in the field. By using this qualitative method, it aims to gain an understanding of experience and find hidden information that has not been revealed from health workers (12). Currently, more research is being carried out towards the prevalence of the disease (13), clinical conditions, diagnosis towards COVID-19, and treatment of disease (4). However, there are still not many studies related to the psychological experience of front-line nurses in Indonesia, especially in East Java Province. Some of the findings show the number of serious psychological problems in medical personnel and how responsive efforts are to provide psychological care (14). Currently COVID-19 is listed as a new disease with treatment in each country with a different medical system and culture, it is important to understand the psychological experience of the front-line nurses who treat COVID-19 patients, especially in referral hospitals in East Java Province in particular.

**MATERIALS AND METHODS**

**Study design**

This study uses a phenomenological qualitative that allows researchers to explore in depth the psychological experiences of front-line nurses who treat COVID-19 patients, especially in referral hospitals in East Java Province in particular. Phenomenological studies are used to provide an overview and understanding of the psychological aspects of front-line nurses from their perspective. This approach helps in extracting memories and revealing psychological experiences (15) while treating covid patients.

**Sampling and participants**

Using the snowball purposive sampling method, we selected 16 frontline nurses who were tasked with treating COVID patients from March – August 2020 at the COVID Referral Hospital in Surabaya, Indonesia. The inclusion criteria for this study were 1) Nurses who are currently/have treated patients with confirmed or

suspected COVID-19; 2) Nurses are able to communicate well using Indonesian; and 3) Willing to be interviewed twice during the research period. Researchers contacted 18 possible participants; two of them did not respond. Recruitment of participants was stopped after the data was deemed saturated and no new information was obtained. The demographic data of the participants are presented in table I.

**Table I. Characteristics of participants (n = 16)**

Characteristic	n (%)
Gender	
Male	5 (31.3)
Female	11 (68.7)
Age (years)	
25-30	2 (12.4)
31-35	10 (62.6)
36-40	1 (6.2)
41-45	3 (18.8)
Education	
Diploma's degree	1 (6.3)
Bachelor's degree	11 (68.7)
Master's degree	4 (25.0)
Marital status	
Married	13 (81.2)
Unmarried	3 (18.8)
Work setting	
Intensive care unit for Covid	5 (31.3)
High care unit for Covid	5 (31.3)
Emergency unit for covid	4 (25.0)
Poli covid	2 (12.4)
Working experience (years)	
6-10	10 (62.6)
11-15	2 (12.4)
16-20	4 (25.0)

**Data collection**

The study was conducted from June-August 2020. Before making initial contact with potential participants, the researchers contacted representatives from front-line nurses who served in the COVID 19 room at the hospital to recommend suitable participants. Furthermore, after each interview, each participant recommended another front-line nurse. Participants who are willing to be interviewed then fill in the demographic data through the filling form provided online by including the desired date for the interview. Furthermore, the researchers sent information for consent and informed consent sheets to prospective participants, followed by coordinating the planning of the interview schedule. The interviewers are two master of nursing lecturers who have experience in qualitative studies. All interviews were conducted in

Indonesian by telephone, zoom call, whatsapp video and call. All interviews were recorded in audio only and audio-visual form. The researcher communicated with the participants twice to do the following: interviews; and to validate the transcripts of the interviews verbatim. Researchers also made observations and made field notes based on interviews recorded through audio-visuals.

The semi-structured interview was developed to allow participants to “recount and reveal their psychological experiences at work” in caring for COVID-19 patients. Interview questions were developed by the research team and tested with two representatives of front-line nurses who served in the COVID-19 room. Interview questions and demographic questionnaire consist of basic information about participants. Examples of questions asked include the following: “How did you feel when you were given the task of caring for a COVID-19 patient?”, “Please tell me about your experience when you were caring for a COVID-19 patient?”, “What lessons or important values did you feel during treating COVID-19 patients.

### **Data analysis**

Data were analyzed and interpreted using the Colaizzi method. This qualitative method is also for the process of clarifying data with the help of participants, making it possible to change the results (15). The results of the interviews were written in verbatim form, then the research team read three times the verbatim that had been made. In each quote from the participant's statement, the researcher adds a certain code, relating it to the meaning of the interpretation of events and situations. Once identified, each quote meaning is categorized. Next, each theme makes a complete discussion in the form of a narrative. After merging all study themes, the whole structure of the phenomenon “The Psychological Experience of Frontline Nurses Amid The COVID-19 Pandemic” has been extracted. Thereafter, the researcher sought an expert researcher who reviewed the findings in terms of richness and completeness to provide sufficient description and to confirm. There were two expert colleagues outside the researcher, to help validate the themes, discuss different perspectives based on the transcripts and highlight possible researcher biases that could affect data interpretation. A reduction of findings was done in which redundant, misused or overestimated descriptions were eradicated from the overall structure to emphasize on the fundamental structure. Researchers validate the results with participants, participants are allowed to read word for word and the meaning is validated. The final stage consists of enriching the results by utilizing the information gathered during the validation process. A further discussion process is needed if it turns out that different findings emerge which are carried out until an absolute agreement is reached.

### **Ethical consideration**

Ethics approval and research permission were obtained prior to the recruitment of participants from Airlangga University Hospital ethics committee with certificate number 160/KEP/2020. Prior to the interview, the prospective participant had to sign an informed consent as a participant without coercion and incitement and then be coded to maintain anonymity. The data is stored in a standard locked cabinet and all electronic copies are accompanied by a password that only the research team can access.

### **Rigour and trustworthiness**

As reported by Guba and Lincoln that in qualitative studies to replace reliability and validity, the term “trustworthy” is used. Credibility, transferability, dependability, and confirmability are elements used for a trust. Credibility is a belief that comes from results that reflect reality; transferability indicates that the findings can be used in other contexts; dependence traces on whether the research can be replicated; and confirmability shows that the results are obtained from the participants and the bias is not from the researcher (16). The researcher validated by returning to the participants and asking participants to re-read the analysis of the interview data to avoid discrepancies, so that if there were discrepancies in the interview results, they could be replaced according to the participants' experiences. In this study, the researcher does not dominate the conversation when collecting data but follows what the participants said. The questions uttered flow according to the answers from the participants, so that researcher does not require to direct the participants' answers following the wishes of the researcher. The researcher also has provided an explanation regarding the criteria for the nurse to be interviewed, the number of participants involved, the data collection method used, the frequency and duration of each data collection session, and the length of time for data collection. Researchers explained the settings for data collection and listed the problems or obstacles faced in conducting research as a part of the dependability aspect. Researchers use reflection diaries to express ideas, thoughts, and feelings regarding health workers who treat COVID-19 patients during the research process.

### **Translation**

In qualitative research, another important part is translation (17). The data that has been obtained is then translated into English to be understood by global readers. In this study, the translation process was carried out using the following strategies: identifying topics relevant to the research; word by word continued to be translated into English including field notes trying to be interpreted; then back-translation of word for word, field notes, and their meanings into Indonesian; if there are differences between the two versions, further examination and discussion should be carried out. In this study, the researcher collaborated with two translators

to carry out the translation process. The first translator translates literally word for word, including field notes into English, then the second translator translates it back into Indonesian (18). If there are differences, a discussion process will be carried out until a final agreement is reached between the researchers.

**RESULT**

The participants were 16 frontline nurses, 5 male nurses, and 11 female nurses (table 1) with an average age of 31-35 years. Most of the frontline nurses (31.3%) work in the ICU and HCU rooms, this is because the hospital where the research was conducted is a COVID referral hospital, so the patients received are mostly Covid patients with moderate and severe symptoms. Covid patients with mild symptoms are placed in regular inpatient rooms. Guidelines for determining patient and room criteria are carried out in accordance with guidelines issued by Keputusan Menteri Kesehatan Republik Indonesia, 2020. On average, frontline nurses (81.2%) were married and had less than 10 years of working experience (62.6%).

We explored in depth the psychological experiences of frontline nurses in treating COVID-19 patients and came up with three themes which are summarized below. Sentence quotes for each theme are listed in Table II.

**Table II. Themes identified through interviews with Frontline Nurses**

Theme	Subtheme	Quotations
I. A large number of negative emotions in the early stages when initially given the task of treating covid patients	i. Fear of being infected and if infected afraid of infecting those around you	<p>“When I first entered, I was afraid that I would infect my family”</p> <p>I’m afraid for sure, it’s a coincidence because we don’t know if we are classified as asymptomatic people. It looks healthy, it turns out to be contagious to other people.”</p> <p>“Yes, I’m afraid, especially if there are colleagues who are infected and die, that’s what I feel afraid of”</p> <p>“There is a feeling of fear because we ourselves have a family”</p> <p>“At first I was afraid of infection when I first took care of it”</p>
	ii. Anxiety caused by lack of knowledge about the disease and lack of information related to the patient’s condition	<p>“Because we don’t know what kind of transmission Covid is, we will be anxious at first”</p>

CONTINUE

**Table II. Themes identified through interviews with Frontline Nurses (CONT.)**

Theme	Subtheme	Quotations
		<p>“Moreover, those who come to the ER have not yet known their laboratory results, and when they enter the room, it turns out that the patient is positive”</p> <p>“Yes, because this is a lung infection, it is not known how to respond to this virus, it is not clear whether it is transmitted by airborne or droplet transmission, because of that uncertainty, of course, there are also a few doubts and concerns”</p> <p>“we feel very little knowledge”</p> <p>“I am worried about how to cope with this limited understanding of the disease”</p>
	iii. Fatigue and helplessness caused by high-intensity work and self-protection	<p>“It turns out that one by one my friends were exposed, at that time we started to go down again”</p> <p>“tired for sure.. because the patient is not decreasing, it is increasing continuously”</p> <p>“If you are tired now, when will this pandemic end”</p> <p>“It’s more psychic because more medical personnel are affected by Covid, now more medical personnel are dying”</p>
II. Positive emotions that appear progressively after negative emotions	i. The feeling of being able to get used to the existing situation	<p>“But over time after dealing directly, I’ve started to be able to adjust it”</p> <p>“If now because you are used to it every day, then just live it”</p> <p>“Over time we can learn to prepare ourselves”</p> <p>“We also increase other positive activities, including maintaining health is the main thing”</p>
	ii. The desire and self-confidence arises to be able to provide the best for patients	<p>“I think it will all be the same that there will be unpreparedness but over time we can learn to prepare ourselves for example by reading a lot”</p>

CONTINUE

**Table II. Themes identified through interviews with Frontline Nurses (CONT.)**

Theme	Subtheme	Quotations
		"we try our best to serve"
		"Yes, we have to be ready, no matter what, it's our duty, whatever we accept. We have to give the best treatment if that's me "
		"The important thing is that we have tried our best, we are doing what we can for the sake of service"
	iii. Confidence to change habits and live healthily	"So now you wash your hands more often, they are cleaner, you can shower 4 times a day. Washing can be 2 times"
		"So that's what makes us aware of healthy behavior towards ourselves and our environment"
		"We have to take care of our health....there are many ways, one of which is exercise"
		"more aware of the risk of transmission, so it is necessary to wear a mask and improve nutrition"
III. Able to take lessons and important values	i. Increase alertness	"We are more careful, slower, more alert when on duty"
		"We are becoming more aware of the transmission, especially"
		"We have begun to be aware of the problem and the problem so that we know who our enemy is"
	ii. Always be thankful	"We are more grateful"
		"Grateful to be given health until now, I can still breathe without feeling suffocated so I'm very grateful"
		"Grateful in the sense that health has been given can still treat these covid patients"
	iii. Positive thinking with the pandemic	"I am positive thinking, the important thing is that I am healthy and not infected"
		"until it becomes a pandemic, it means it's a new science"
		"Yes.. proud to be able to treat covid patients"
		"Nurses are urgently needed now, so we are at the forefront"

**Theme 1. There is a large number of negative emotions at the beginning stage when given the responsibility of caring for covid patients**

All nurses experienced a large number of negative emotions at the beginning stage when they were initially given the task of caring for Covid patients. Especially when the initial period of getting a job as a frontline nurse, some of whom only get training online quickly. On average, the frontline nurses are afraid of being infected and afraid of infecting those around them (n=12), mainly because the infection process is sometimes asymptomatic and is at risk of infecting the surroundings. In addition, several colleagues who were infected have died. Another form of negative emotion is anxiety caused by lack of knowledge about the disease and lack of information related to the patient's condition (n = 13). Participants expressed anxiety because they did not know the mechanism of transmission of the virus, many patients did not receive the results of their laboratory tests during treatment and were anxious in overcoming existing problems.

Participants experience fatigue and helplessness caused by high-intensity work and require self-protection (n=11), this was due to the large number of colleagues who were exposed, some were even not helped and the number of COVID-19 patients continued to grow, so the question arose when pandemic can end.

**Theme 2. Positive emotions appear progressively after negative emotions**

All frontline nurses support positive emotions that emerge progressively after negative emotions. Participants had a feeling of being able to get used to the existing situation (n=15), when they had provided long-term care, they became accustomed to it so that they were able to adapt more to the situation. Participants also tried to provide the best service for patients even unpreparedness but over time we can learn to prepare ourselves for example by reading a lot (n=14), for giving optimal patient care. Participants also believed to change habits and live a healthy life (n=12) by implementing strict health protocols, improving nutrition, and exercising.

**Theme 3. Able to take lessons and important values**

All participants were able to take lessons and important values from treating COVID-19 patients. Participants revealed that they were more aware of the transmission of COVID-19 (n=12) so that they were more careful at work and aware of patient problems, especially the transmission mechanism. Participants also expressed their feeling of gratitude (n=14) for their current condition. Even during a difficult situation, he is always given health and can do activities well. This is reinforced by participants who always think positively about the current pandemic (n=13). Participants expressed their pride in being able to treat COVID-19 sufferers, being someone who patients can rely on when they are sick and still feel healthy until now.

## DISCUSSION

This study explores in depth the psychological experiences of front-line nurses in treating COVID-19 patients in various COVID-19 special care rooms at referral hospitals. There are 3 major themes obtained in this study, namely the number of negative emotions in the beginning stages when taking responsibility for caring for Covid patients, positive emotions that appear progressively after negative emotions, and being able to take important lessons and values from events that occur.

The limited knowledge about the COVID-19 disease causes a large number of negative feelings such as anxiety, fear, and helplessness found in several studies (20). In this study, it was seen that nurses' negative emotions in the form of fear and anxiety were more pronounced when they were initially asked to treat patients with COVID-19. Nurses need to get psychological intervention screening immediately after receiving the task of providing professional, flexible, and sustainable epidemic disease services (21) to improve emotional assistance and improve the mental health of nurses (22). This study also found that the accumulation of current worrying situations and high work intensity resulted in nurses experiencing fatigue and helplessness. In addition, it is important to build a psychological resilience support system such as support for adequate protective equipment, accurate allocation of the necessary personnel, training related to the management of new diseases, and interpersonal support among nurses to facilitate adaptation regarding roles and duties as nurses(23,24).

Psychological trauma that occurs in health workers can be caused by a pandemic outbreak in many studies (25). On the other hand, in this study it was found that the pressure experienced by most nurses slowly led to the achievement of psychological adaptation. Nurses try to make peace with the existing situation and look for sources of positive strength by trying to always provide the best nursing care to patients and always maintain a healthier lifestyle based on the findings in the study of Shih et al (26). Nurses continue to uphold professional ethics in a pandemic situation with a full sense of responsibility (27) in line with previous research that by increasing the value of identity and pride in their profession is a form of active participation of nurses to provide the best service (26). Based on the reality they face guide and inspire nurses to realize psychological growth towards positive emotions during the pandemic in the form of psychological adjustments.

An important finding that the process of adaptation to the situation led nurses to continue to provide the best service appeared gradually after negative emotions developed into positive emotions, this is different from other studies which only explain the feelings of stress experienced due to negative psychology experienced (25,28). In

addition, similar findings to the study were also found in several studies (29,30). In this study it was found that psychological experience when negative emotions that arose in the early given the assignment to treat patients with COVID-19 can be removed and restored by the emergence of positive emotions. Adaptation to the situation has a protective effect on psychological trauma under stress and as a rehabilitation effort against post-traumatic stress disorder conditions(31–33). Therefore, it is very important efforts to stimulate the emergence of positive emotions for the psychological well-being of nurses as part of the full psychological support of nurses in pandemic situations.

In the end, the COVID-19 pandemic situation was able to make nurses take lessons and important values from the event by increasing self-awareness, increasing nurses' gratitude, and positive thinking with the pandemic. Given the enormity of the task ahead, we must capitalize on negative psychological states and use them as a force to encourage constructive progress rather than abandon turning them into destructive suffering, helplessness, and fear (34,35). When nurses witness the suffering of others, the gratitude for the health that nurses get helps nurses show empathy and provide assistance (36).

This study was a qualitative study through in-depth interviews in collecting data on the psychological experience of nurses twice during the research period. This leads to a deep understanding of psychological experiences, resulting in comprehensive and authentic data. In contrast to several studies related to the tendency of negative psychological experiences experienced by nurses, our findings lead to a tendency for a number of positive emotions to be able to reconcile and eventually reduce negative emotions, in the end there is psychological adaptation and nurses are able to take the meaning and value of lessons from the pandemic situation. There are six strategies in an effort to increase self-capacity according to Wei et al. (2020) namely: getting sources of energy support, maintaining mutual trust and a pleasant atmosphere between colleagues, increasing emotional well-being, changing the meaning of stressful events, applying a positive attitude full of gratitude, and being able to explore sources of uniqueness and strength (37).

Some of the weaknesses that exist in our study include the first is the small sample size due to a characteristic of qualitative studies. Second, all participants are frontline nurses. Based on the results of this study, efforts are needed to explore experiences from other health workers and administrators in health services who handle COVID-19 patients. Third, the duration of our research is quite short which supports exploring short-term experiences. Further consideration is needed to explore the long-term experience in the future for frontline health workers.

## CONCLUSION

The findings about the psychological experiences of frontline nurses that we have carried out have given deep comprehensive meaning as long as nurses provide nursing care to COVID-19 patients. The main thing we learned was that during the COVID-19 pandemic, frontline nurses experienced negative emotions in the initial phase and sometime after accepting new responsibilities for caring for COVID-19 patients, which unknowingly accompanied the emergence of positive emotions. Dominant negative emotions appear at the beginning and positive emotions appear simultaneously or gradually over time. Along with good emotional control, frontline nurses are able to take lessons and interpret the pandemic events they are facing assertively. Frontline nurses learn about awareness of the risk of COVID-19 transmission so they can be more careful in providing care. Nurses also express gratitude even though in difficult circumstances, they always given health and can do well. This research can be used as a basic effort to produce advanced forms of psychological support needed by nurses.

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