ORIGINAL ARTICLE

The Psychological Experience of Nurses Caring for COVID-19 Patients in a Public Hospital, Padang, Indonesia

Esthika Ariany Maisa¹, Gusti Sumarsih², Aqsa Multi Nugrahaini³

¹ Basic Nursing Department, Faculty of Nursing, Universitas Andalas, 25163, Pauh, Padang, West Sumatera, Indonesia.

² Community and Health Nursing Department, Faculty of Nursing, Universitas Andalas, 25163, Pauh, Padang, West Sumatera, Indonesia.

³ Bachelor Nursing Study Program, Faculty of Nursing, Universitas Andalas, 25163, Pauh, Padang, West Sumatera, Indonesia.

ABSTRACT

Introduction: In early 2020, the world was shocked by the emergence of a disease caused by the Coronavirus, commonly called COVID-19. During this period, nurses have a higher risk of contracting the disease and developing psychological disorders because they are among the health workers with the most frequent contact with patients. Therefore, this study aims to explore and describe the psychological experience of nurses caring for COVID-19 patients. **Methods:** This study was carried out using a qualitative method with a phenomenological approach. The participants were selected through purposive sampling, which include 8 nurses who had treated COVID-19 patients in a negative pressure room at the hospital. Information was collected using in-depth interviews and the recordings were copied into verbatim transcripts and analyzed using Colaizzi's technique. **Results:** The results highlighted 3 themes, namely Stress as the First Response to the COVID-19 Pandemic, Positive Psychological Experiences, and Changing Negative Experiences to Positive After Adapting to the Work Environment. **Conclusion:** This study showed that nurses need to be aware and share personal psychological experiences with colleagues to overcome similar situations.

Keywords: COVID-19, nurses, psychological experience

Corresponding Author:

Esthika Ariany Maisa, M.Kep Email: maisathika@nrs.unand.ac.id Tel: +628116692787

INTRODUCTION

In early 2020, the world was shocked by the emergence of Coronavirus Disease (COVID-19), causing panic across nations (1). Based on WHO data, the total number of cases worldwide is 108 million, where 61.3 million are recovering and 2.41 million deaths (2). According to the Task Force for the Acceleration and Handling of COVID-19 in Indonesia, the first 2 cases were reported to WHO on March 2, 2020. Meanwhile, in February 2021, the total number of cases was 1.2 million, where 1 million were declared cured, and 33,367 cases were reported dead (3).

The COVID-19 pandemic has several impacts, which include physical health disorders, economic and social inequality, mental disorders in education, religion, as well as health services (4). The healthcare system is faced with the balance between achieving a pandemic response and providing the essential routine health services needed in the community (5).

Nurses are health workers who are at higher risk of contracting COVID-19 because of their frequent, direct involvement, and contact with patients for 24 hours. Moreover, the risk of contracting the disease can cause fear and reluctance to contact caring for patients. This will affect nurses' appearance when caring for patients or be a reason to leave their jobs (6). In Indonesia, the number of nurses infected with COVID-19 in September 2020 was more than 3000 (3).

Based on a previous report, the factors affecting the mental health of healthcare professionals in the United Kingdom during this current pandemic include feelings of not being supported adequately by 19.22%, inadequate facilities by 32.29%, there is a condition of PPE shortage of 64.60%, the absence of adequate guidance is 19.99%, and the lack of proper training is 53.07% (7). In a quantitative study in China, it was discovered that nurses who provided healthcare services to COVID-19 patients felt depressed. This was majorly caused by anxiety, with a frequency of 39.91% out of 180 participants (8).

Moreover, possible mental health-related reactions include changes in concentration, irritability, anxiety,

insomnia, reduced productivity, and interpersonal conflict (9). These mental health problems also affect nursing professionals' attention, understanding, decision-making, and ability (10). Research conducted to explore psychological stress in ICU nurses during the COVID-19 pandemic obtained results from 85 respondents, where 59% of nurses experienced a decrease in appetite or indigestion, 55% experienced fatigue, 45% had difficulty sleeping, 28% were nervous, 26% cried frequently, and 2% thought about suicide (11).

An investigation on 3 nurses who cared for COVID-19 patients showed that each participant had different views and experiences. However, all participants were anxious and afraid of being infected when treating COVID-19 patients. One participant stated that a coworker resigned because of being assigned to the COVID-19 isolation room. Based on the description of the phenomenon above, it can be discovered that knowing and understanding the psychological experience of nurses while caring for patients with COVID-19 is important. This is because psychological conditions can affect the performance of nurses and how to survive in carrying out their duties.

There were limited results that explained and described the psychological experiences of nurses who cared for COVID-19 patients. This makes it necessary to examine nurses' experiences more deeply, because an individual's perspective is different, subjective, and influenced by the person's memory. Therefore, this study aims to explore the meaning of the psychological experiences of nurses when caring for patients with COVID-19 using the qualitative approach.

MATERIALS AND METHODS

A qualitative method with a phenomenological approach was used to explore the psychological experiences of nurses caring for COVID-19 patients. A total of 8 nurses who treated COVID-19 patients at the COVID-19 Referral Center Hospital in West Sumatra, Indonesia, and consented to participate were involved in this study. They were selected through the snowball method (chain referral sampling), which was carried out sequentially from one participant to another. The next prospective participant was selected based on information appointed, or proposed by the previous respondent who has been interviewed.

All participants were interviewed in-depth face-toface outside working hours for approximately 30-50 minutes. Participants were asked about their feelings when assigned to the COVID-19 isolation room, how they felt caring for patients and possible changes in their psychological condition when performing the assigned duties.

Data analysis was carried out by listening to interview recordings and each participant's statement was copied into a transcript and analyzed using the Colaizzi technique. The analysis begins with the reading transcript repeatedly to have a general understanding of the entire content, followed by extracting the critical statements as well as formulating their meaning into the order of categories, subthemes, and themes. The results are integrated into a complete description of the studied phenomenon. Finally, to ensure the validity of the data, a credibility test was carried out using the peer debriefing method among colleagues with relevant knowledge and expertise. Data collection was carried out for 3 weeks, from May to June 2021. This study has been declared ethically appropriate after an ethical review by the health research ethics committee in Dr. M. Djamil Padang Hospital, Indonesia.

RESULT

Characteristics of the participants include education with a range of vocational to professional nurses. Furthermore, there are 6 women and 2 men with an age range of 26-38 years and the length of work as nurses ranged from 3 to 11 years as presented in Table I.

Table I: Demographic Characteristics (n=8)

7 Male	Professional	4
6 Female	Vocational	3
5 Male	Professional	8
9 Female	Vocational	4
8 Female	Professional	3
7 Female	Vocational	3
1 Female	Professional	5
8 Female	Professional	11
	6 Female 5 Male 9 Female 8 Female 7 Female 1 Female	 Female Vocational Male Professional Female Vocational Female Professional Female Vocational Female Professional Female Professional

This study discovere three themes, namely stress as the first response to the COVID-19 pandemic, positive psychological experiences when treating patients, as well as changing negative experiences into positive ones after adapting to the work environment as summarized in Table II.

Stress as the first response to the COVID-19 pandemic Based on interviews with participants on the psychological experience of nurses in treating patients, stress is the first response to the COVID-19 pandemic with three sub-themes, namely stress response, stressor, and coping strategies.

Table II: Themes and Subthemes Analysis (n=8)

Category	Subtheme	Theme
Sleeping disturbed (P1, P5, P6)	Stress response	Stress as the
Feel unpeaceful (P1, P4, P5, P8)		first response to the COVID-19 pandemic
Negative experiences from colleagues (P1)	Stressors	pundenne
Fear of family worries (P1, P4)		
Status as employees (P1)		
Feared of transmitting (P1, P3, P5, P6, P8)		
Negative views of the environ- ment (P1, P3, P5)		
Room constraints (P1, P4)		
Hotel facilities (P1, P3, P8)	Coping strat-	
Positive efforts and thinking (P3, P5, P6)	egies to deal with stress	
Positive experiences from colleagues (P4, P5)		
Complying SOPs and health protocols (P6)		
Training before entering the negative pressure room (P2, P4, P5)		
Internal motivation (P1, P2, P6, P7, P8)		
External as a coping strategy to deal with stress in the first response to the COVID-19 pandemic (P1, P2, P3, P4, P5, P6, P7, P8).		
Self-will (P2, P8)	Positive	Positive psychological experience
Gratitude (P7, P8)	feelings facing the COVID-19	
Proud (P1, P2, P5, P7)	pandemic	
Comfort (P2, P3, P4, P5, P8)		
Safe with PPE and SOPs (P2, P3, P5, P7, P8)		
Being attracted by the cloths (P2)	Coping mech- anism for posi-	
Short and easy work (P1, P2, P5, P7, P8)	tive emotions	
Positive thinking to God (P7)		
No seniority (P2, P5)		
More acquaintances and knowledge (P1, P2)		
Knowing the real situation (P1, P3, P6)	Growth under pressure	Changing negative ex-
Become common (P1, P2, P3, P4, P5, P6, P7)		periences into positive ones after adapting to the work environment

Stress response

In this study, it was discovered that participants felt stressed, three participants perceived their sleep was disturbed, and four respondents felt unpeaceful. This is supported by several statements from the participants: "... so your sleep is also disturbed, sleep time is getting longer, 1-2 hours late, ... it's easy to get tired because

you are sleepless." (P5)

"... the stress is not like a person who is crying, just thinking about it." (P1)

Stressor

It was discovered that participants had different stressors, and there were six categories. One participant had negative experiences from colleagues, two nurses experienced fear of family worries, one was worried about status as employees, five respondents had feared transmitting, three got negative views of the environment, and two have room constraints, which is a stressor as the first response to the COVID-19 pandemic. This is confirmed by several statements stated by participants, which include

"... I got stories from seniors that in this red zone, the PPE is not optimal and so on." (P1)

"...because it's the first time I've used a hazmat, right, it was initially stuffy, I felt dizzy." (P4)

"... I'm afraid they (parents) are also worried." (P4)

"... so I'm afraid that people at home will be infected." (P3)

"... that's what people say,... people already look scared when they're close to them, that's cynical, that's how they look at you" (P5)

"... I'm just afraid if I look at myself like that, I'm afraid I can't take care of myself." (P4)

"... afraid of being infected, when I met this person, he was positive for the deadly virus." (P5)

Coping strategies to deal with stress

The results showed that participants had coping strategies to deal with stress, where there were seven categories, namely three participants used hotel facilities, three respondents used positive efforts and thinking, two respondents had sharing experiences with each other, one complied with SOPs and health protocols, and three people got it from training before entering the negative pressure room. Furthermore, five respondents had the internal motivation and all of the participants used external means as a coping strategy to deal with stress in the first response to the COVID-19 pandemic. This is supported by several statements according to participants.

"... but finally the hospital at that time provided a way out, the task in COVID was to at a hotel, at the end that made me calmer." (P1)

"... so it's just an effort,... even if we die on this road, it's like we are still fighting, we are martyred." (P3)

"... from their explanation, you concluded that it wasn't as scary as you thought." (P4)

"... Allah protects us, obey the working SOPs and health protocols in daily life." (P6)

"...before you came down here, you were given training from the Infection Prevention and Control team."(P4) "... you have to keep going with what you have." (P1)

Positive psychological experience

There are two sub-themes, which include positive

feelings about facing the COVID-19 pandemic and sources of positive emotions.

Positive feelings facing the COVID-19 pandemic

The participants had positive feelings about facing the COVID-19 pandemic. This is divided into five categories, where two participants had self-will and felt gratitude, four felt proud, five respondents experienced comfort, and another five participants felt safe with PPE and SOPs. Moreover, this result is supported by the statements made by participants as stated below

"..., I'm just grateful to be given a golden opportunity." (P7)

"... there is a feeling of pride because not everyone can take care of it like that, for example, many people resign, right?" (P1)

"... happy, ... just excited, ... more comfortable." (P2)

Coping mechanism for positive emotions

The results showed that five participants had a background of feeling positive emotions. These were divided into five categories, where one participant was attracted by the nurse's clothes, five respondents experienced short and easy work, one had positive thinking about God, and two felt no seniority, more acquaintances, and knowledge. This is supported by the statements of some participants as stated below:

"... in the past,... you saw people wearing hazmat clothes,... how come those people are wearing clothes like that, how does it feels, you want to feel it too." (P2) "... our work is clear, our working hours are shorter." (P5)

"..., just think positive with Allah." (P7)

"... if it's above that, the seniority is high, if there are no seniors here, seniors or juniors still have a share to enter the patient." (P2)

"..., so many friends, acquaintances, ... got new skills." (P1)

Changing negative experiences into positive ones after adapting to the work environment

Based on interviews with participants on the psychological experience of nurses in treating COVID-19, it was discovered that there is a change in knowledge from negative psychological experiences to positive after adapting to a work environment with one sub-theme, namely growth under pressure. A total of 3 participants felt relieved after knowing the actual situation and 7 respondents experienced comfort after feeling used to work done.

"...because I've been through it myself how to treat positive patients, not from other people's stories." (P6) "... but now it's just the same as another room." (P4)

DISCUSSION

Stress as the first response to the COVID-19 pandemic Several psychological disorders such as stress have been reported and published during the COVID-19 pandemic. Stress is the body's reaction/response to psychosocial stressors/mental stress/life burdens (12). In this study, at the beginning of the pandemic, stress was the nurse's first response. This is in line with another investigation, which said that nurses in intensive care rooms are more stressed than usual because of COVID-19 patients (13).

According to the theory, there are two aspects/of the stress response, namely the physical and psychological. The physical element is the impact of stress, which decreases a person's condition when stressed, thereby leading to pain such as sleep disorders. Meanwhile, the psychological aspect includes emotional symptoms such as sadness, fear, and others (14).

This study showed the reaction or stress response experienced by nurses when they felt mental stress due to sleep disorders. A previous report stated that there are stress-related reactions experienced by health workers in hospitals, including changes in concentration, irritability, insomnia, and reduced productivity (15). Furthermore, nurses had difficulty sleeping and felt helpless because of self- and families worries, some often cry (11).

Triggers/sources of stress can be classified into several groups, including psychological and social stressors (16). In this study, the sources of stress by nurses caring for COVID-19 patients included negative experiences from colleagues, fear of worrying family members, maintaining status as employees, fear of transmitting, receiving negative views from the environment, fear of contracting, and limited knowledge about the actual condition. Similarly, another source includes extreme stress, fear of illness, and trauma from witnessing COVID-19 patients die alone (17). It was also discovered that (18) nurses experience concerns about transmitting the disease to their family members and the fear of contracting the virus.

Based on this study, some nurses moved from the social environment because the community stigmatized them for disease transmission. This is in line with another report, which stated that nurses prefer social isolation, feel guilty, and live in dormitories that limit their contact with the outside world (10).

Furthermore, getting motivation internally and externally is another experience that can enhance the psychological behavior of healthcare workers. This is because nurses felt the conflict between fear and conscience, and perceived danger, but perform their duties with good quality. Therefore, feeling safe and receiving support or motivation can improve the quality of the performance of nurses' duties (19).

Good knowledge of COVID-19 was discovered in most participants, which was obtained from the training before entering the room under negative pressure. Most participants were able to explain the disease COVID-19, therefore, the stress levels were moderate/ low. This is related to the level of formal education of the participants, which is relatively high. According to a previous study, it was discovered that the level of knowledge and education can influence a person's behavior (20).

Nurses in this study used strategies such as hotel facilities, staying committed, and positive thinking, asking for positive experiences from colleagues who had been down, sincere, and complying with SOPs, and health protocols, while others prefer social isolation (10). However, a different result was reported in another investigation, where nurses mostly used negative coping strategies such as hostile confrontation and self-blame (21).

The results showed that nurses felt stressed when assigned to a negative pressure room, which is a normal reaction to a pandemic. Therefore, reducing the stress by providing hotel or lodging facilities from the hospital to avoid direct contact with loved ones. It can also be minimized by continuous provision of training and a positive picture of how to work in the workplace, negative pressure room, and give motivation to nurses (22).

During this study, most nurses stated that the stress of the pandemic was only found at the beginning of their duties to care for COVID-19 patients. It did not last long until this investigation was carried out because nurses had adapted to their work environment, and this is further explained in theme 3.

Positive psychological experience

Several investigations have shown that pandemic outbreaks can cause psychological trauma for nurses. However, in this study, it was discovered that there were nurses with positive attitudes and strengths, which include being grateful, proud, comfortable, and safe with PPE, and SOPs. Nurses who provided intensive and continuous healthcare in the last epidemic experienced the highest work and mental stress levels compared to other nursing staff (23). Other reports also discovered high levels of psychological distress among nurses during outbreaks (24).

Based on previous results, nurses more likely selected to work four hours per shift daily during the COVID-19 pandemic (25). This made some of the participants in this study interested in working in a negative pressure room. Therefore, not all nurses had negative psychological experiences when on duty in negative pressure rooms. According to the participants, they knew that the working time was short and the work evident in the negative pressure room, there was no seniority, therefore, the nurses felt comfortable at work. In the negative pressure room, it was discovered that nurses felt grateful for getting new acquaintances and more knowledge.

Changing negative experiences into positive ones after adapting to the work environment

The results showed that nurses changed their negative experiences into positive attitudes and tried to stay positive, which is in line with a previous study (26). In the COVID-19 process, nurses defined the fight against the pandemic as a phenomenon that supports positive experiences and growth (27). The results showed that most nurses who worked in negative pressure rooms after adapting to the environment did not have negative psychological responses to treating COVID-19 patients. They do not think wrong about their actions once it complies with the existing SOP. A long working period will give nurses more experience, therefore, they have mastered the current threats, mitigating, or reducing the risk of negative psychological responses in providing care (28).

It was discovered that coping styles, cognitive evaluation, and social support are stress mediators. Adaptation and social support also play an intermediary role in psychological rehabilitation under the stress of the epidemic, which encourages nurses to use their psychology to actively or passively make adjustments (27). The changes experienced by nurses in this study were spontaneous, which occurred due to circumstances that can provide a different response to unexpected events. Moreover, emotions, positive and negative, usually drive attitude change because it is more complex than behavior change (29).

CONCLUSION

This study showed that stress is the first response of nurses to the COVID-19 pandemic, which is in various forms, levels, sources, and different coping styles. There were negative psychological experiences at the beginning of treating COVID-19 patients in fear of contracting and feeling difficulties using PPE. These results are different from previous investigations on the psychological experiences of other COVID-19 nurses, where there were changes from negative to positive experiences due to good adaptation to the work environment. It was also discovered that nurses have become accustomed to working in the isolation room. Moreover, nurses need to be aware and share personal psychological experiences with colleagues to overcome negative prevalence. For further studies, an investigation of nurses' resilience capabilities in treating COVID-19 patients is recommended to better understand adaptability to similar conditions.

ACKNOWLEDGEMENTS

The authors are grateful to participants and all nursing professionals who served during the COVID-19 pandemic and those who supported this study.

REFERENCES

- 1. Diinah, D., & Rahman, S. Gambaran Tingkat Kecemasan Perawat Saat Pandemi Covid 19 Di Negara Berkembang Dan Negara Maju: a Literatur Review. Dinamika Kesehatan: Jurnal Kebidanan Dan Keperawatan, 2020; 11(1), 37–48. https://doi. org/10.33859/dksm.v11i1.555
- 2. WHO. Coronavirus Disease 2019 (COVID-19) Situation Report. [Internet]. 2020. Retrieved 2021 Dec 9 from https://www.who.int/emergencies/ diseases/novel-coronavirus-2019
- 3. Gugus Tugas Percepatan Penanganan, C.-1. Peta Sebaran COVID-19. [Internet]. 2021. Retrieved 2021 Dec 1 from https://covid19.go.id/petasebaran5.
- 4. Wang, Z., Qiang, W., & Ke, H.A Handbook of 2019-nCoV Pneumonia Control and Prevention. Hubei Science and Technology Press, 2020; 1–108.
- Kementrian Kesehatan Republik Indonesia. Pedoman Pencegahan dan Pengendalian Coronavirus Disease (COVID-19). Germas. 2020; 0–115.
- 6. Utama, T. A., & Dianty, F. E. Pengalaman Perawat Dalam Memberikan Asuhan Keperawatan Pada Pasien Terinfeksi Covid – 19, 2020; 1(2), 13–19.
- Iqbal, M. R., & Chaudhuri, A. COVID-19: Results of a national survey of United Kingdom healthcare professionals' perceptions of current management strategy – A cross-sectional questionnaire study. International Journal of Surgery, 2020; 79(May), 156–161. https://doi.org/10.1016/j. ijsu.2020.05.042
- 8. Mm, Y. M., Nurse, C., Deng, L., Nurse, H., Zhang, L., Nurse, H., ... Mm, H. Work stress among Chinese nurses to support Wuhan in fighting against the COVID-19 epidemic, 2020; (March), 1002–1009. https://doi.org/10.1111/jonm.13014
- Kang, L., Li, Y., Hu, S., Chen, M., Yang, C., Yang, B. X., ... Liu, Z. The mental health of medical workers in Wuhan, China dealing with the 2019 novel coronavirus. The Lancet Psychiatry, 2020; 7(3), e14. https://doi.org/10.1016/S2215-0366(20)30047-X
- 11. Shen, X., Zou, X., Zhong, X., Yan, J., & Li, L. Psychological stress of ICU nurses in the time of COVID-19, 2020; 2–4.
- 12. Priyoto. Teori Sikap dan Perilaku dalam Kesehatan. Jakarta: Salemba Medika. 2014
- 13. Li, Q., Guan, X., Wu, P., Wang, X., Zhou, L., Tong, Y., ... Feng, Z. Early Transmission Dynamics in Wuhan, China, of Novel Coronavirus–

Infected Pneumonia. New England Journal of Medicine, 2020; 382(13), 1199–1207. https://doi.org/10.1056/nejmoa2001316

- 14. Sarafino, E. Health psychology: Biopsychosocial interaction. USA: John Willey and sons. 1998
- Rosyanti, L., & Hadi, I. Dampak Psikologis dalam Memberikan Perawatan dan Layanan Kesehatan Pasien COVID-19 pada Tenaga Profesional Kesehatan. Health Information : Jurnal Penelitian, 2020; 12(1), 107–130. https://doi.org/10.36990/ hijp.vi.191
- 16. Yusuf, S. Psikologis perkembangan anak & remaja. Bandung: PT. Remaja Rosdakarya. 2004
- 17. Winurini, S. Permasalahan kesehatan mental akibat pandemi COVID-19, 2020; 12(15).
- Galehdar, N., Kamran, A., Toulabi, T., & Heydari, H. Exploring nurses ' experiences of psychological distress during care of patients with COVID-19 : a qualitative study, 2020; 1–9.
- 19. Belakang, A., Tulsky, J., & Arnold, R. Keterampilan komunikasi di usia COVID-19. Ann Intern Med. 2020
- 20. Tzeng, H., & Yin, C. Nurses/ Fears and Professional Obligations Concerning Possible Human to Human Avian Flu. Nursing Ethics. 2006
- 21. Maunder, R., Lancee, W., Balderson, K., Bennett, J., Borgundvaag, B., Evans, S., & Wasylenki, D. Efek psikologis dan pekerjaan jangka panjang dari penyediaan perawatan kesehatan rumah sakit selama wabah SARS, 2006; 12(12), 1924–1932.
- 22. Rathnayake, S., Dasanayake, D., Maithreepala, S.D., Ekanayake, R., & Basnayake, P.L. Nurses' perspectives of taking care of patients with Coronavirus disease 2019: A Phenomenological study. Plos One, 2021. https://doi.org/10.1371/ journal.pone.0257064
- 23. Eghbali, M., Negarandeh, R., & Froutan, R. COVID-19 epidemi: tanggalan tingkat rumah sakit, praktek keperawatan, 2020; 7(2).
- 24. Du, J., Dong, L., Wang, T., Yuan, C., Fu, R., Zhang, L., & Dkk. Gejala psikologis di antara petugas kesehatan garis depan selama wabah COVID-19 di Wuhan. Gen Hosp Psychiatry. 2020
- 25. Liu, T., Hu, J., Min, K., Lin, L., Zhong, H., Xiao, J., ... Huang, Q. Transmission Dynamics of 2019 Novel Coronavirus (2019-nCoV). Malaysian Palm Oil Council (MPOC), 2020; 21(1), 1–9. [Internet] Retrieved 2021 Dec 10 from http://mpoc.org.my/ malaysian-palm-oil-industry/
- 26. Lee, S., Juang, Y., Su, Y., Lee, H., & Lin, Y. Menghadapi SARS: dampak psikologis pada perawat tim SARS dan layanan psikiatri di rumah sakit umum Taiwan, 2005; 27(5).
- Sun, N., Wei, L., Shi, S., Jiao, D., Song, R., Ma, L., ... Wang, H. A qualitative study on the psychological experience of caregivers of COVID-19 patients. American Journal of Infection Control, 2020; 48(6), 592–598. https://doi.org/10.1016/j. ajic.2020.03.018

- 28. Nursalam. Manajemen Keperawatan : Aplikasi dan Praktek Keperawatan Profesional. Jakarta: Salemba Medika. 2019
- 29. Kozier. Fundamental of nursing concept and procedure. California: Anderson Wesley Publishing Co. 1997