

CRITICAL MEDICAL AND SURGICAL NURSING JOURNAL

Vol. 11, No. 1, April 2022

Journal Homepage: https://e-journal.unair.ac.id/CMSNJ



This is an Open Access article distributed under the terms of the Creative Commons Attribution 4.0 International License

Factors Related to Nurses' Moral Distress in the Era of the COVID-19 Pandemic: A Literature Review

Siti Zulaihah¹, Harmayetty Harmayetty², Tiyas Kusumaningrum²

¹ Bachelor Student, Faculty of Nursing, Universitas Airlangga, Surabaya, Indonesia

ABSTRACT

² Faculty of Nursing, Universitas Airlangga, Surabaya, Indonesia

ARTICLE HISTORY

Received: February 8, 2022 Accepted: May 12, 2022 Published: May 17, 2022

KEYWORDS

COVID-19, moral distress, nurse

CORRESPONDING AUTHOR

Harmayetty Harmayetty harmayetty@fkp.unair.ac.id Faculty of Nursing, Universitas Airlangga, Surabaya, Indonesia **Introduction:** The global COVID-19 pandemic posed challenges to healthcare systems and professionals with the potential moral distress. The purpose of this review was to describe the risk factors associated with the moral distress of nurses in the era of the COVID-19 pandemic.

Methods: The search for literature review articles was carried out in three databases (Scopus, Science Direct, and PubMed) with a publication span of 2019-2020. The PRISMA checklist was used to guide this review. Analysis and data tabulation were carried out in the article. Title, abstract, full-text and methodology were assessed to determine study eligibility.

Result: A total of eight studies that fit the inclusion criteria were discussed based on internal and external factors of the risk of moral distress by nurses. Internal factors for the risk of nurses' moral distress include experience, decision making, perceptions of job dissatisfaction, patient care, coping with maladaptive strategies, failure to successfully care for patients, and limitations in take action. External factors for the risk of moral distress for nurses include lack of teamwork, unfavorable work environment and situations, conflicts of interest, excessive work demands, lack of resources, and loss of control over work situations.

Conclusion: The risk factors for nurses' moral distress can be explained based on internal and external factors. The experience of nurses is important in dealing with the COVID-19 pandemic because this pandemic is a new disease and no treatment has yet been found, so other factors are associated with experience.

Cite this as:

Zulaihah, S., Harmayetty, H., & Kusumaningrum, T. (2021). Factors Related to Nurses' Moral Distress in the Era of the COVID-19 Pandemic: A Literature Review. *Crit. Méd. Surgical. Nurs. J*, 11(1), 1-9.

1. INTRODUCTION

The Coronavirus Disease 2019 (COVID-19) pandemic has created new challenges for nurses, leaders, patients, and families. Several ethical priorities have changed because of the pandemic. Nurses are more likely to provide care oriented to the different patient conditions for each confirmed case of COVID-19 (Berlinger et al, 2020). Moral distress is a problem that nurses often experience, which is defined as painful feelings and/or psychological imbalances that occur when a nurse is aware of the morally appropriate action required in a situation but is unable to do so because of institutional constraints (Javotsky, 2003). 2015). If it is associated with the pandemic period, moral distress often occurs in nurses related to the risks faced while providing care services. Berlinger et al, (2020) stated that some nurses in the UK feel 'always' experience moral distress regarding the care of patients with confirmed COVID-19. Moral distress is known to manifest as anger, feelings of guilt, loss of self-esteem, nightmares, suffering, resentment/anger, sadness, anxiety, resignation, and helplessness (Wilson, Cutcliffe, Armitage, & Eaton, 2020). So far, the exact cause of moral distress is not known (Ladin et al., 2018). Factors related to the moral distress of nurses have not been explained.

Data from the World Health Organization (WHO), (2020) shows that 42% - 48% of health workers involved in COVID-19 treatment experience moral distress, namely the inability to make decisions to provide care or go home and do not carry out their responsibilities. Research conducted by Morley et al., (2020) showed that 4 out of 5 nurses who worked in the COVID-19 treatment room at a hospital in New York experienced moral distress or more than 80% of nurses. Zhang, et al., (2020) stated that 70% of nurses working in hospitals in Wuhan experienced moral distress due to the large number of health workers who became victims of the Sars Cov-2 virus attack. Some of them even gave up and did not carry out their duties as health workers and chose to stav at home. Pashar et al., (2020) reported that in Indonesia the incidence of moral distress in nurses reached 62% based on data from hospitals that serve the care of patients with confirmed COVID-19

19. Most of them are afraid of being infected from patients and having an impact on their families at home and the rest is because most of the nurses who take part in handling COVID-19 are volunteers, so they feel they don't have enough skills in treating patients with COVID-19.

The special isolation treatment room is a room that treats patients with COVID-19 cases with different symptoms, even those that are aggravated by the critical condition experienced by the patient, so nurses often have difficulty making decisions for action (Duff, 2020). Jameton et al, (2020) state that moral distress occurs when a person knows the ethically right action to take but feels powerless to take that action. A negative feeling that arises when a person knows the right course of action. Takes but is unable to act due to constraints or constraints of the workplace environment, time, and authority. The burden faced by medical personnel in caring for patients in the pandemic era is the feeling of anxiety about being infected and dying, being separated from family and witnessing traumatic scenes including work patients, a chronically overburdened environment, despair due to the loss of patient lives in large numbers, lacking reinforcements and replacements, and burnout must be experienced by medical personnel in treating patients with COVID-19. Some other concerns include worrying about making family anxious, worrying about bringing the virus home, worrying about a lack of personal protective equipment (PPE), or worrying about not able to handle patients (Forozeiya, being Vanderspank-wright, Bourbonnais, Moreau, & Wright, 2019). When nurses experience moral distress, most of them will consult a nursing counselor and choose to increase their knowledge regarding the problems they currently face (Lu, Wang, Lin, & Li, 2020).

Sources of moral pressure may vary but are associated with disagreements in patient care plans, not being involved in decision making, restraint of health care resources, inadequate staffing, futile continuation of patient care, poor communication, and limited patient autonomy. In the study of Morley et al., (2020) it was found that the forms of moral distress were anger, hopelessness, and fatigue. Contextual factors that may include a lack of resources, poor interprofessional communication, or an imbalance of power between various professional groups. Clinical factors, such as unnecessary or futile care, or situations in which the client and family are given false expectations can also contribute to moral distress (Management et al., 2020). Research conducted by Xiaoyan, Yufang, Lifeng, & Congcong, (2016) nurses describe the consequences of moral distress under 3 main effects, namely on oneself (in the form of anger towards oneself, self-doubt, loss of confidence, depression, and burnout). Impact on others (including feelings of anger, bitterness/hatred, cynicism, and fear and hopelessness), and impact on systems (including nurse involvement and avoidance actions, job changes, leaving the job). Recognizing the impact of moral distress on nurses in terms of suffering or suffering experienced by nurses due to moral distress. Suffering leads to resignation, burnout and leaving the job (Morley et al., 2020). The purpose of writing this literature review is to analyze the factors related to the moral distress of nurses in the era of the COVID-19 pandemic based on literature studies in the last 2 years.

2. METHOD

This study uses the Critical Appraisal Skill Program (CASP) as a guide in the assessment of the quality of the studies that will be summarized. The evaluation of the literature review will use the PRISMA checklist to determine the assessment of the studies that have been found and adjusted to the objectives of the literature review (Picture 1). Search literature for the authenticity of this study using articles in English from Scopus, Science direct, and pubmed, Proquest, Google scholar from 2019 to 2020. Search literature using the key words "Moral distress" OR "Psychological distress" OR " Related factor", "Nurse", "COVID-19", "SARS-Cov 2", "Causes", "Nurse Practitioner". The research design taken in this scientific research is Mix methods study, experimental study, survey study, cross sectional study, correlation analysis, comparative analysis, qualitative study, pilot study.

3. RESULT

This literature review study uses 8 articles that have passed screening according to predetermined criteria. The eight articles are in accordance with the problems and specific objectives of the study, namely discussing factors related to the moral distress of nurses in the era of the COVID-19 pandemic, the summary article can be seen in Appendix 1. Eight articles that meet the criteria will be described by including internal and external factors that risk nurses' moral distress.

The research design that is widely used to discuss factors related to nurses' moral distress is crosssectional, namely 5 studies or 62 ,5%. The internal risk factors for nurses' moral distress include experience, decision making, perceptions of job dissatisfaction, patient care, maladaptive coping strategies, failure to successfully treat patients, and limitations in taking action (Lazzari et al., 2019; Azoulay et al., 2020; Eftekhar Ardebili et al., 2020; Jia et al., 2020; Ffrench-O'Carroll et al., 2021; Hines et al., 2021). External factors that risk nurses' moral distress include lack of teamwork, unfavorable work environment and situations, conflicts of interest, excessive work demands, lack of resources, and loss of control over work situations (Azoulav et al., 2020: Eftekhar Ardebili et al., 2020; Hou et al., 2020; Ffrench-O'Carroll et al., 2021; Miljeteig et al., 2021).

In addressing the moral distress of nurses, it can be reviewed based on internal factors and external factors (Gustavsson et al., 2020). The two aspects will be described in table 1. Based on table 1, it can be explained that the risk factors for nurses' moral distress based on internal and external factors. The internal risk factors for nurses' moral distress include experience, decision making, perceptions of job dissatisfaction, patient care, maladaptive coping strategies, failure to successfully treat patients, and limitations in taking action (Lazzari et al., 2019; Azoulay et al., 2020; Eftekhar Ardebili et al., 2020; Jia et al., 2020; Ffrench-O'Carroll et al., 2021; Hines et al., 2021). External factors that risk nurses' moral distress include lack of teamwork, unfavorable work environment and situations, conflicts of interest, excessive work demands, lack of resources, and loss of control over work situations (Azoulay et al., 2020; Eftekhar Ardebili et al., 2020; Hou et al., 2020; Ffrench-O'Carroll et al., 2021; Miljeteig et al., 2021).

4. DISCUSSION

Internal Factor

Experience

The experience of nurses in providing COVID-19 services is still lacking because the COVID-19 pandemic is a new disease faced by the world, so there is still a lot of data and literature discussing COVID-19. Experience related to the work of nurses where there are still many nurses who are voluntary nurses who have no experience in handling patients (Lazzari et al., 2019). According to Pauly et al (2009), nurses with little experience experience higher levels of moral distress in various situations than nurses with a lot of experience. The assumption of the researcher, nurses who are in a certain age range, will not necessarily feel moral distress with the same level. Nurses who are less experienced and do not have the necessary knowledge, will find it difficult to overcome and find solutions to problems and feel unable to fight problems faster, this is because experience is a solution that helps nurses learn to deal with stressful situations and achieve adjustments in





overcoming clinical problems. . According to Radzvin (2011) young nurses experience more moral distress due to lack of experience in making ethical decisions. Meanwhile, according to Oh & Gatsman (2015) older nurses with more experience of moral distress than younger nurses who experience little moral distress. Healthcare workers are being asked to be brave when caring for patients during the pandemic as the scientific community learns more about the risk profile of COVID-19. They are required to weigh the (not fully understood) risks of personal illness and death and be asymptomatic carriers with their responsibilities to patients, society, and their families. This causes a moral dilemma because they feel torn and conflicted when faced with this obligation (Morley, Uk, et al., 2020). The number of nurses who are volunteers who do not have experience in hospital services triggers the high number of nurses' moral distress. This happens because the pandemic requires a lot of nurses, so the government recruits nurses who don't even have experience in treating patients.

Decision-making

Distress experienced by nurses due to differences in decision making. The thing most often experienced by nurses is making decisions in taking actions related to saving patients from critical conditions who experience COVID-19 (Azoulay et al., 2020). According to Sirilla (2014) there is a significant relationship between the level of decision-making ability and moral distress, this is related to nurses' confidence in making decisions. According to Hamric

S. ZULAIHAH ET AL.

Article	Risk Factor			
	Internal	External		
(Lazzari <i>et al.,</i> 2019)	Experience			
(Azoulay <i>et al.</i> , 2020)	Decision making Perception of job dissatisfaction	Lack of teamwork		
(Ffrench-O'Carroll et al., 2021)	patient care, maladaptive coping strategies,	The work environment is not conducive		
(Eftekhar Ardebili <i>et al.,</i> 2020)	failure to successfully treat patients, perceptions of job dissatisfaction	Excessive work demands, lack of work resources and loss of control over work situation,		
(Hines <i>et al.</i> , 2021)	limitations in taking action			
(Hou et al., 2020)		Conflict between interests Patient personality and workflow		
(Jia et al., 2020)	Perception of job dissatisfaction	ratione personancy and worninow		
(Miljeteig <i>et al.</i> , 2021)	. ,	Work environment and situation Less conducive		

(2012) moral distress is influenced by individual doubts in taking action due to lack of knowledge of nurses regarding a case or problem. Nurses are incapable of resisting and must act against their own personality values because the institution forces them into unnecessary or futile care, or situations in which clients and families are given false hopes. Clinical decisions made on the basis of resource scarcity occur when there is a shift to standard crisis care. The need to make such difficult decisions feels inconsistent with the core values of many health care professionals who wish to provide patient-centred care. This shift can be painful and upsetting. The requirement to choose between two equally undesirable moral choices creates a moral dilemma (Morley, Uk, et al., 2020). Institutional and structural limitations have placed nurses in a position where they have to make a series of decisions, shift by shift, minute by minute, that run counter to their training, responsibilities, and, often, personal beliefs (Hossain and Clatty, 2020). The need to repeat triage to consider admitted patients who may have a greater chance of recovery is most likely a cause of moral distress (Morley, Grady, et al., 2020). Nurses who provide COVID-19 services have difficulty in having inadequate knowledge regarding COVID-19 care because COVID-19 is a new disease for which there is no cure.

Perception of job dissatisfaction

Nurse dissatisfaction is a perception associated with the award provided by the government and the hospital concerned in dealing with COVID-19 (Azoulay et al., 2020; Eftekhar Ardebili et al., 2020; Jia et al., 2020). Research conducted by Wu et al (2014) shows that nurses who are dissatisfied with their work will experience moral distress. Ronald (2016) job satisfaction can affect a person's psychology to be better than usual, on the contrary if someone is not satisfied with the job it will be a factor that affects stressful conditions. Distress and job satisfaction can have a reciprocal relationship. Job satisfaction can increase an individual's resistance to stress and the effects of stress and vice versa, the stress experienced by individuals can be a source of dissatisfaction (Zhang et al., 2019). Nurses with volunteer status do not get the same rights in the government's reward system, causing dissatisfaction in working as the vanguard of handling COVID-19.

Patient care

Patient care is complicated and requires complete PPE with the condition of patients with various symptoms, making it difficult for nurses to adapt. The use of PPE for a long period of time is very draining (Ffrench-O'Carroll et al., 2021). The need to keep personal protective equipment (PPE) increases emotional and mental tension in nurses who are always around patients having to bear the burden of risk disproportionately. Sleep nurses are reassured that they are not obligated to provide care if a risk threatens their own safety (eg, adequate PPE is not available). However, this can create morally conflicting pressures for nurses if they feel that taking care of their own safety leads to substandard care (e.g., taking a few extra minutes to put on PPE because the patient has a sudden cardiac arrest) (Morley, Uk, et al. al., 2020). Rapid changes in patient conditions have resulted in nurses having difficulty in maximizing care for COVID-19 patients, so many nurses are experiencing distress due to feeling unable to give their best.

Maladaptive coping strategies

Most of the maladaptive coping performed by nurses such as avoiding work and quitting work (Ffrench-O'Carroll et al., 2021). Some nurses may feel unable to express or discuss their moral perspectives with others, thus experiencing stress and moral tension. This may be because they feel they lack the vocabulary to discuss ethical issues or they work in teams that feel insecure to express their views (Morley, Uk, et al., 2020). When healthcare providers are repeatedly faced with highly complex moral challenges, they are at increased risk of experiencing intense and frequent stress of moral constraints and with that, the intention to leave their position or profession altogether. This is not only concerning because of its impact on the lives of individuals but it will also pose unique challenges in a pandemic situation where individuals with specialized training play an important role in the pandemic response (Emanuel et al., 2020).

Failure to treat patients

The number of cases of death experienced by patients makes nurses feel that they have failed in providing care. This is because there are still many references that have not been collected to treat patients. Patients with co-morbidities or who develop symptoms (perhaps unrelated to COVID-19) may avoid accessing the healthcare system for fear of exposure to the virus, potentially putting them at increased risk. This can cause moral stress for nurses who may feel unreasonably responsible for patient outcomes. Many factors beyond the nurse's control can contribute to the patient's autonomous choice not to seek care (Morley, Uk, et al., 2020). Moral distress occurs when nurses cannot follow their beliefs (Hossain and Clatty, 2020). COVID-19 puts nurses in a situation where they are forced to choose the wellbeing of one patient over another. As a result, nurses are not able to provide fair care to all (Gustavsson et al., 2020)

Limitations in taking action

This limitation is related to infrastructure, namely PPE and medical equipment such as oxygen and its supporters (Hines et al., 2021). Nurses may also experience moral distress due to the inability to perform an in-person physical examination. While providing patient care through virtual technology is nothing new, caregivers may feel frustrated as they adjust to the new skills required to provide virtual care. Also, sharing a life-changing diagnosis or a virtually poor prognosis adds another layer of complexity to a difficult conversation by removing the "touch of care." This can result in feelings of being constrained and forced to provide care that is deemed less than optimal (Morley, Uk, et al., 2020).

External factors

External factors that risk nurses' moral distress include lack of teamwork, unfavorable work environment and situations, conflicts of interest, excessive work demands, lack of resources, and loss of control over work situations (Azoulay et al., 2020; Eftekhar Ardebili et al., 2020; Hou et al., 2020; Ffrench-O'Carroll et al., 2021; Miljeteig et al., 2021).

Lack of teamwork, unfavorable work environment and situation

Teamwork is needed in handling COVID-19 even across sectors and professions. Lack of teamwork will result in miscommunication so that it has an impact on the stress conditions of nurses (Azoulay et al., 2020). Teamwork is a small group of people with complementary skills who are committed to a common goal, performance goals and approach for which they share responsibility. Teamwork is a form of attitude from nurses in working in teams because it makes individuals remind each other, correct, communicate so that opportunities for mistakes can be avoided. Interaction in the team affects the behavior of members in communicating and being open in revealing mistakes that occur. The existence of trust within the team that each team member aims to achieve the common good and find the best solution for each problem is an influential factor for nurses in the team to report service errors that occur (Azoulav et al., 2020). According to Logan et al., (2016), teamwork is an important part of the health care organizational structure to provide quality care. Communication, trust, and leadership are considered fundamental to an effective team. Teamwork is a small group of people with complementary skills who are committed to a common goal, performance goals and approach for which they share responsibility. Cooperation is a form of behavior of nurses in working in teams because it makes individuals remind each other, correct each other, communicate so that the opportunity for mistakes can be avoided. In this case, cooperation is a non-significant factor in the implementation of patient safety by implementing nurses. A team has a common goal to be achieved from the work collectively, not individually. To create effective teamwork, it should be based on the awareness of each group member at work, the existence of a leader who can be used as a role model or example for his team members and the division of roles in each group member. The work environment is related to room facilities such as the absence of negative room pressure and minimal room equipment (Ffrench-O'Carroll et al., 2021)

Conflict of Interest

Conflicts of interest relate to hospital policies that are contrary to the conditions experienced at this time so that nurses are not able to make their own decisions and must follow hospital policies (Eftekhar Ardebili et al., 2020). According to Corley, Elswick, Gorman, & Clor, (2011), moral pressure results from knowing ethically appropriate actions, but not taking these actions, due to several obstacles including lack of time, lack or lack of supervision, hindering medical forces, policy institutional, or legal considerations. This change in practice may feel like a violation of one's professional duties, but at the same time, it requires nurses to protect themselves and their future patients from exposure. These changes to the delivery of care must be balanced so that care remains safe but without unfairly compromising patient care (Morley, Uk, et al., 2020)

Work demands

The intended work demands are complex COVID-19 patient care so that nurses are expected to be able to carry out all activities independently and can assist

patients in their recovery efforts (Eftekhar Ardebili et al., 2020). The work demands that many nurses feel are related to the ability of nurses to provide nursing care to patients who currently have very little knowledge about this disease. Nurses feel that the workload is high because they have to use PPE with poor physical conditions, long time to use PPE, and varied patient conditions so that nurses have difficulty managing the efficiency of their workforce and abilities.

Lack of resources

The need for nursing personnel is high due to the large number of patients being treated and the inability of nurses to provide all nursing services optimally (Ffrench-O'Carroll et al., 2021). This limited number resulted in not all patients receiving proper treatment. Many patients are left behind while waiting for other patients to be treated. The small number of nurses resulted in not optimal health services needed by nurses. Currently, many volunteers are being used by the government to meet the needs of nurses in handling the pandemic. Resources are not only limited to the needs of nurses but also the need for tools and other facilities. For example, PPE is still minimal, so many nurses are exposed to PPE that is not optimal (Ffrench-O'Carroll et al., 2021). This resulted in feeling worried about the transmission that would occur to nurses.

Loss of control over work situation

Poor management will eliminate work control, so nurses work irregularly. A less clear division of tasks is also experienced in this endeavor (Miljeteig et al., 2021). Limiting exposure to COVID-19 has profoundly impacted what health care services and deem 'non-essential'. procedures There are frameworks and guidelines on how to decide whether a service or procedure is 'essential' based on its impact on the patient's activities of daily living. However, the broader impact on patient care and the psychological impact is less clear. Outpatients whose visits are limited to virtual visits or limited face-toface interactions may experience moral dilemmas and the stress of moral uncertainty as they try to balance their obligation to provide reliable, high-quality care with the need to maintain current and social infection prevention. distance prevention (Morley, Uk, et al., 2020). Protocols have been developed to help ensure fair and consistent decisions and with a clear goal of easing the burden of patient care. However, some may experience moral constraint stress if they feel that circumstances and protocols limit their ability to make ethically supported independent decisions and violate their own values (Morley, Uk, et al., 2020). The changing dynamics of work in response to the pandemic brought about profound changes to the work environment of nurses, their defined roles, and the need for social support. This in turn disrupts the usual dynamic between each nurse and the environment creating a stress-inducing job mismatch. To reduce this risk, a multi-pronged approach should

be adopted in which nurses utilize resources and incorporate self-care techniques into their working lives and leaders pay attention to the ethical climate of their units and organizations.

CONCLUSION

Based on the literature review, it can be concluded that the risk factors for nurses' moral distress can be explained based on internal and external factors. Internal risk factors for nurses' moral distress include experience, decision making, perceptions of job dissatisfaction, patient care, maladaptive coping strategies, failure to successfully treat patients, and limitations in acting. While the external factors are the risk of nurses' moral distress related to lack of teamwork, unfavorable work environment and situation, conflict of interest, excessive work demands, lack of resources, and loss of control over the work situation. The experience of nurses is important in dealing with the COVID-19 pandemic because this pandemic is a new disease and no treatment has vet been found, so other factors are related to experience.

REFERENCE

- Adams, L.Y. (2015). Workplace mental health manual for nurse managers. New York: Springer Publishing Company, LLC.
- Adhikari, S. P., Meng, S., Wu, Y.-J., Mao, Y.-P., Ye, R.-X., Wang, Q.-Z., ... Zhou, H. (2020). Epidemiology, causes, clinical manifestation and diagnosis, prevention and control of coronavirus disease (COVID-19) during the early outbreak period: a scopingreview. *Infectious Diseases of Poverty*, 9(1), 29. https://doi.org/10.1186/s40249-020-00646x
- Angeletti, S., Benvenuto, D., Bianchi, M., Giovanetti, M., Pascarella, S., & Ciccozzi, M. (2020). COVID-2019: The role of the nsp2 and nsp3 in its pathogenesis. *Journal of Medical Virology*. https://doi.org/10.1002/jmv.25719
- Chen, H., Guo, J., Wang, C., Luo, F., Yu, X., Zhang, W., ... Zhang, Y. (2020). Clinical characteristics and intrauterine vertical transmission potential of COVID-19 infection in nine pregnant women: a retrospective review of medical records. *The Lancet*, 395(10226), 809–815. https://doi.org/10.1016/S0140-6736(20)30360-3
- Duff, E. (2020). Global health emergency declared by WHO. *Midwifery*, *83*(PG-102668), 102668. https://doi.org/https://doi.org/10.1016/j.midw. 2020.102668
- Forozeiya, D., Vanderspank-wright, B., Bourbonnais,
 F. F., Moreau, D., & Wright, D. K. (2019). Intensive
 & Critical Care Nursing Coping with moral distress
 The experiences of intensive care nurses : An interpretive descriptive study. Intensive & Critical Care Nursing, 53, 23–29. https://doi.org/10.1016/j.iccn.2019.03.002

CRITICAL MEDICAL AND SURGICAL NURSING JOURNAL

- Gao, Y., Li, T., Han, M., Li, X., Wu, D., Xu, Y., ... Wang, L. (2020). Diagnostic Utility of Clinical Laboratory Data Determinations for Patients with the Severe COVID-19. *Journal of Medical Virology*. https://doi.org/10.1002/jmv.25770
- Guo, Y.-R., Cao, Q.-D., Hong, Z.-S., Tan, Y.-Y., Chen, S.-D., Jin, H.-J., ... Yan, Y. (2020). The origin, transmission and clinical therapies on coronavirus disease 2019 (COVID-19) outbreak – an update on the status. *Military Medical Research*, 7(1). https://doi.org/10.1186/s40779-020-00240-0
- Jia, H. (2020). Diagnosing COVID-19. CHEMICAL & ENGINEERING NEWS.
- Kannan, S., Shaik Syed Ali, P., Sheeza, A., & Hemalatha, K. (2020a). COVID-19 (Novel Coronavirus 2019) recent trends. *European Review for Medical and Pharmacological Sciences*, 24(4), 2006–2011. https://doi.org/10.26355/eurrev_202002_20378
- Kannan, S., Shaik Syed Ali, P., Sheeza, A., & Hemalatha,
 K. (2020b). COVID-19 (Novel Coronavirus 2019) recent trends. *European Review for Medical and Pharmacological Sciences*, 24(4), 2006–2011.
 https://doi.org/10.26355/eurrev_202002_20378
- Kemenkes RI. (2020). Pedoman Kesiapsiagaan Menghadapi Coronavirus Disesase (COVID-19). Pedoman kesiapan menghadapi COVID-19. Jakarta: Kementrian Kesehatan RI.
- Kumar, S., Poonam, & Rathi, B. (2020). Coronavirus Disease COVID-19: A New Threat to Public Health. *Current Topics in Medicinal Chemistry*, (PG-), 10.2174/1568026620999200305144319. https://doi.org/10.2174/156802662099920030 5144319
- Ladin, K., Pandya, R., Kannam, A., Loke, R., Oskoui, T., Perrone, R. D., ... Wong, J. B. (2018). Discussing Conservative Management with Older Patients With CKD: An Interview Study of Nephrologists. *American Journal of Kidney Diseases*, *71*(5), 627– 635. https://doi.org/10.1053/j.ajkd.2017.11.011
- Lamb, L. E., Bartolone, S. N., Ward, E., & Chancellor, M.
 B. (2020). Rapid Detection of Novel Coronavirus (COVID-19) by Reverse Transcription-Loop-Mediated Isothermal Amplification. *MedRxiv*, 2020.02.19.20025155.

https://doi.org/10.1101/2020.02.19.20025155

Lei, L., Jian-ya, G., Hu, W., Zhang, X., Gua, L., Liu, C., ... Xiao, J. (2020). Clinical characteristics of 51 patients discharged from hospital with COVID-19 in Chongqing , China. *MedRxiv*, 2020.02.20.20025536.

https://doi.org/10.1101/2020.02.20.20025536

- Li, X., Geng, M., Peng, Y., Meng, L., & Lu, S. (2020). Molecular immune pathogenesis and diagnosis of COVID-19. *Journal of Pharmaceutical Analysis*. https://doi.org/10.1016/J.JPHA.2020.03.001
- Lu, W., Wang, H., Lin, Y., & Li, L. (2020). Psychological status of medical workforce during the COVID-19 pandemic: A cross-sectional study, *288*(March), 1– 5.

https://doi.org/10.1016/j.psychres.2020.112936

- Lu, X., Ming, C., Wen, Z., Qiu, L., Xu, S., Chen, T., ... Gong, N. (2020). Clinical analysis of 2019 coronavirus disease (COVID-19) on one case with livingrelated kidney transplantation. *Chinese Journal of Organ Transplantation*, 41(0 PG-6–6), E006–E006.
- Management, B., Berhie, A. Y., Tezera, Z. B., & Azagew, A. W. (2020). *Moral distress* and Its Associated Factors Among Nurses in Northwest Amhara Regional State Referral Hospitals, Northwest Ethiopia.
- Morley, G., Uk, R. N., Sese, D., Horsburgh, C. C., June, P., & Workers, H. C. (2020). Addressing caregiver *moral distress* during the COVID-19 pandemic, 1– 5. https://doi.org/10.3949/ccjm.87a.ccc047
- PDPI. (2020). PNEUMONIA COVID-19 DIAGNOSIS & PENATALAKSANAAN DI INDONESIA.
- Rodriguez-Morales, A. J., Gallego, V., Escalera-Antezana, J. P., Méndez, C. A., Zambrano, L. I., Franco-Paredes, C., ... Cimerman, S. (2020). COVID-19 in Latin America: The implications of the first confirmed case in Brazil. *Travel Medicine and Infectious Disease*. https://doi.org/10.1016/j.tmaid.2020.101613
- Rothan, H. A., & Byrareddy, S. N. (2020). The epidemiology and pathogenesis of coronavirus disease (COVID-19) outbreak. *Journal of Autoimmunity*.

https://doi.org/10.1016/j.jaut.2020.102433

- Sun, K., Chen, J., & Viboud, C. (2020). Early epidemiological analysis of the coronavirus disease 2019 outbreak based on crowdsourced data: a population-level observational study. *The Lancet Digital Health.* https://doi.org/10.1016/S2589-7500(20)30026-1
- Tian, S., Hu, N., Lou, J., Chen, K., Kang, X., Xiang, Z., ... Zhang, J. (2020). Characteristics of COVID-19 infection in Beijing. *Journal of Infection*. https://doi.org/10.1016/j.jinf.2020.02.018
- Wang, J., Liu, J., Wang, Y., Liu, W., Chen, X., Sun, C., ... Ruan, L. (2020). [Dynamic changes of chest CT imaging in patients with corona virus disease-19 (COVID-19)]. Zhejiang Da Xue Xue Bao. Yi Xue Ban = Journal of Zhejiang University. Medical Sciences, 49(1), 0.
- WHO. (2020). Events as they happen. Rolling updates on coronavirus disease (COVID-19).
- Wilson, M. A., Cutcliffe, J. R., Armitage, C. N. H., & Eaton,
 K. N. (2020). *Moral distress* in the critical care air transport nurse, 8(1), 33-44.
 https://doi.org/10.1016/j.outlook.2019.07.003
- Xiaoyan, W., Yufang, Z., Lifeng, C., & Congcong, S. (2016). *Moral distress* and its influencing factors : A cross- sectional study in China, 1–11.
- Zhang, J. jin, Dong, X., Cao, Y. yuan, Yuan, Y. dong, Yang, Y. bin, Yan, Y. qin, ... Gao, Y. dong. (2020). Clinical characteristics of 140 patients infected with SARS-CoV-2 in Wuhan, China. *Allergy: European Journal of Allergy and Clinical Immunology*. https://doi.org/10.1111/all.14238
- Zhang, S. X., Wang, Y., Rauch, A., & Wei, F. (2020). Unprecedented disruption of lives and work :

S. ZULAIHAH ET AL.

Health, distress and life satisfaction of working adults in China one month into the COVID-19 outbreak. *Psychiatry Research, 288*(March), 112958.

https://doi.org/10.1016/j.psychres.2020.112958

Zhu, W., Wang, J., He, X., Qin, Y., Yang, S., Hu, X., ... Zhou, S. (2020). The differential diagnosis of pulmonary infiltrates in cancer patients during the outbreak of the 2019 novel coronavirus disease. *Chinese Journal of Oncology*, 42(0 PG-8–8), E008–E008.

A	bb	en	di	x	1

No	Study	Journal and Tittle	Study Design	Sample	Variable	Result	
1	(Lazzari et al., 2019)	Nursing Ethics Moral distress in correctional nurses: A national survey	cross sectional	461 of nurses	Moral distress	Experience in correctional nursing and associated with moral distres	
2	(Azoulay et al., 2020)	Annals of Intensive Care Symptoms of burnout in intensive care unit specialists facing the COVID-19	cross- sectional	101 of nurses	Symptoms of burnout	Moral pressure from suboptimal decision making, difficulties in involving relatives, and perceptions of inappropriate care can be the basis for the development of a psychological burden on ICU specialists. Moral distress associated with patient care, maladaptive coping strategies, work environment.	
3	(Ffrench- O'Carroll et al., 2021)	outbreak British Journal of Anaesthesia Psychological impact of COVID-19 on staff working in paediatric and adult critical care	cross- sectional	408 healthcare	psychological impact		
Årdebi	(Eftekhar Ardebili et al., 2020)	Amrican Journal of Infection Control Healthcare providers	qualitative study	97 healthcare	Experience of hcare working during a pandemic	Excessive work demands accompanied by a lack of work resources and loss of control over the work situation, failure to	
5	(Hines et al., 2021)	experience of working during the COVID-19 pandemic: A qualitative study Environmental Research and Public Health	prospective, longitudinal survey	96 healthcare	Moral injury, distress, and resilience	new work shuarbin, failure to successfully caring for the patie and the sense of providing wast care in this context can increase moral distress. Moral distress related to limitations in taking action	
		Trends in Moral Injury, Distress, and Resilience Factors among Healthcare Workers at the Beginning of the COVID-19 Pandemic	5				
6	(Hou et al., 2020)	Journal of Emergency Nursing Preparedness of Our Emergency Department	qualitative	12 nurse	Preparedness	Moral distress associated with conflict between patient self- interest and workflow	
7	(Jia et al., 2020)	During the Coronavirus Nursing Ethics Nurses' ethical challenges caring for people with COVID-19: A qualitative study	qualitatie	18 nurse	Nurse ethical challenges	Seeing pain in patients causes moral distress for nurses who feel unable to provide the necessary support to patients	
8	(Miljeteig et al., 2021)	Nursing Ethics Priority-setting dilemmas, moral distress and support experienced by nurses and physicians in the early phase of the COVID-19 pandemic in Norway	cross- sectional	1606 nurse	moral distress, support experience	Moral distress is related to the work environment and situation.	