

ORIGINAL RESEARCH

Moral distress and alcohol use among nurses during COVID-19

Lauren E. Childers¹, Erica J. Lewis^{*1}, Jill M. Delawder², Matthew A. Jones³

¹School of Nursing, James Madison University, United States

²Sentara RMH Medical Center, United States

³Northwest Emergent Solutions, United States

Received: January 30, 2023

Accepted: March 27, 2023

Online Published: April 26, 2023

DOI: 10.5430/jnep.v13n8p29

URL: <https://doi.org/10.5430/jnep.v13n8p29>

ABSTRACT

The COVID-19 pandemic has brought rapid changes, increased stress, and ethical challenges to nurses across the globe. These factors may place nurses at increased risk for developing moral distress and vulnerability to alcohol use. The primary objective of this report was to determine if time with patients diagnosed with COVID-19 increased nurse risk for moral distress and unhealthy alcohol use among nurses in a community hospital during the COVID-19 pandemic. An online survey, consisting of demographic questions, the Measure of Moral Distress in Healthcare Professional tool, the Alcohol Use Disorder Identification Tool, and a single item asking about the amount of time caring for COVID-19 patients was sent to inpatient and emergency department nurses and 57 nurses completed the survey. Nurses were found to be experiencing various levels of moral distress. One-third of the nurses reported an intention to leave their position due to moral distress. One-third of nurses reported risky alcohol use, while 5.3% reported harmful alcohol use. Time spent with COVID patients predicted moral distress and time spent with COVID patients predicted level of alcohol dependence. Moral distress was not a predictor of risky alcohol use. Given the literature on the crescendo effect of moral distress and the nature of alcohol use disorder, the lasting effects on nurses during the COVID-19 pandemic will be important to the profession for years to come. Nursing leadership must commit to implementing resources to help prevent and care for nurses who experience moral distress and alcohol use disorder.

Key Words: Moral distress, Burnout, Nurse alcohol use, COVID-19

1. INTRODUCTION

Nurse moral distress has been a concern in healthcare for decades. Moral distress was defined by Andrew Jameton^[1] in 1984, when he described it as “when one knows the right thing to do, but institutional constraints make it nearly impossible to pursue the right course of action” (p. 6). Examples of these constraints include increased patient-to-nurse ratios, limited personal protective equipment, shortages of equipment and treatments, providing care perceived as futile, patients dying without family, and compromised standards of care.^[2] Moral distress can result in nurses feeling frustrated, angry, fatigued, stressed, embarrassed, and hurt.^[3] To

process these emotions, nurses turn to coping mechanisms. Common coping strategies include venting or debriefing with peers, compartmentalizing their emotions, divesting in their work, changing assignments, jobs, and consuming alcohol.^[3] Moral distress is a potential in high-stress situations and can have a negative impact.

Similarly concerning is alcohol misuse among nurses. Chronic stress was noted as a significant contributing factor in alcohol misuse and ultimately developing related disorders such as addiction, alcohol and substance use disorder.^[4] Healthcare professionals are not immune to substance use

*Correspondence: Erica J. Lewis; Email: Lewisj@jmu.edu; Address: School of Nursing, James Madison University, United States.

and have similar rates of misuse as the general population; however, their responsibilities and role in the community can create a significant risk to a community.^[5] In times of high stress, leaders in the healthcare field must be vigilant for potential substance misuse. Although all substance misuse is important, the use of alcohol specifically is the primary focus of this report given prior findings that alcohol use can be a coping mechanism for moral distress.^[3] We use the term substance when the original source combined information about alcohol with information about other substance use.

2. BACKGROUND

2.1 Moral distress

Moral distress results when a nurse must act against what they believe to be the most ethically right choice. This distress can also result from a perceived violation of one's core values.^[6] The forces that prevent a nurse from acting according to the manner that they see fit are called constraints.^[7] Examples of constraints include dealing with end-of-life decisions, futile care, lack of personnel, working with families, being overextended, unfair or misunderstood policies, continuous changes, and lack of supplies. Nurses may be unaware of the constraints as evidence supports the idea that nurses are more aware of the symptoms of moral distress, rather than the causes.^[8] Moreover, it has been observed that a moral residue results after instances of high moral distress, thus the effects of instances of moral distress compound over time in a phenomenon called the "crescendo effect".^[9] If moral distress is not properly processed, it can harm the nurse, patients, and healthcare agencies.

Moral distress constraints are present in the current COVID-19 pandemic.^[10] Examples of nurses being affected by constraints during COVID-19 include nurses delaying potentially lifesaving interventions to don personal protective equipment (PPE), reusing PPE against previously accepted standards, a limited time allowed in rooms to provide care, experiencing patients dying alone (unable to be surrounded by loved ones), and dealing with rapidly changing, at times confusing, policies.^[2] Limited resources have limited nurses' ability to care for their patients how they would in a non-pandemic time. Continued reallocation of resources, including PPE, staffing, and time, has increased nurses' ethical concerns.^[11] Patients are also facing isolation during a challenging illness and sometimes death. Patients are separated from their families and nurses are forced to care for patients "behind the dehumanizing veil of plastic gowns and respirators masks" (para. 19).^[11]

Nurse symptoms of moral distress can negatively affect patient quality of care, specifically, moral distress and related burnout can lead to excessive turnover, increased healthcare

costs, and decreased productivity and morale.^[12,13] Burnout may be caused by the compounding effects of moral distress over time resulting from a lack of fulfillment or satisfaction with one's current job. Symptoms include emotional exhaustion, sadness, fatigue, physical ailments, depersonalization, and reduction in personal accomplishment.^[14] Decreased nurse engagement may reduce nurses time with the patient and the nurse's concentration during patient care, resulting in quality-of-care issues.^[15] This potential alteration in quality of care causes burnout and moral distress to be concerning for the nursing profession. In addition, the crescendo effect describes how repeated instances of moral distress leave a residue that builds up over time, increasing the nurse's risk for developing increasingly high levels of moral distress.^[9] This suggests that any effects of moral distress during the COVID-19 pandemic may linger for some time.

2.2 Alcohol use

The American Nurses Association (ANA)^[16] estimates that between 6%-8% of nurse's struggle with substance use to a level that may impair their ability to care for patients. Others estimate substance use in nursing is closer to 10% of nurses.^[17] This can equate to 1 in 10 nurses struggling with substance use disorder at any given time on a unit. The top four risk factors for nurses to abuse substances in the workplace are access, attitude, stress, and a lack of education.^[18]

Though research is limited, it appears that the COVID-19 pandemic is exacerbating stress-related alcohol and substance use in the United States in the general population. In the Centers for Disease Control and Prevention's (CDC) Morbidity and Mortality Weekly Report, 13% of adults started using, or increased their alcohol and substance use.^[19] Adults continued to report increased stress and anxiety due to the pandemic.

The risk of pandemic-related alcohol and substance use may be particularly high for nurses, which puts patients at risk. COVID-19 has placed additional constraints on nursing. According to a survey of nursing leaders across the United States, the top challenges during this pandemic are communicating, implementing, and changing policies, surge staffing and training, and emotional health and wellbeing of staff.^[20] This increased stress from constant change increases a nurse's risk for developing moral distress and alcohol and substance use. A pandemic-era survey of New York City healthcare workers found that 57% of workers experienced acute stress, 48% depressive, and 33% anxiety symptoms; nurses and advanced practice providers reported higher rates than other healthcare professionals.^[21] This survey highlights the impact of COVID-19 on nurses' mental health. According to the National Council of State Boards of

Nursing (NCSBN),^[18] the top four risk factors for nurses to develop substance use are “access, attitude, stress, and lack of education (about substance use in healthcare providers)” (p. 17). There are important implications for nurse alcohol misuse and patient safety. A nurse under the influence may have “impaired judgment, slower reaction time, divert prescribed drugs. . . neglect of patients, and make a variety of other errors” (p. 8).^[18]

The issues of nurse moral distress and alcohol use may be related. Healthcare providers with high rates of burnout also reported symptoms of post-traumatic stress disorder and substance use.^[13] Providers may use the substances in an ineffective attempt to cope with burnout and post-traumatic stress disorder symptoms. Whittaker et al.^[22] found that 58% of nurses admitted to using alcohol as a means for self-medicating to cope with moral distress or burnout. The issues of moral distress, burnout, and alcohol misuse may be complexly intertwined.

The following methods were used to meet the researchers aims. The primary aim was to determine if time with patients diagnosed with COVID-19 increased nurse risk for moral distress and unhealthy alcohol use among nurses in a community hospital during the COVID-19 pandemic. A secondary aim was to describe levels of moral distress, alcohol use, and time spent caring for patients diagnosed with COVID-19 during the Spring of 2021.

3. METHODS

The Institutional Review Board at the participating institution and the primary investigators educational institution each approved this project. The moral distress instrument was used with permission of the developers.

3.1 Sample

A total of 363 nurses were emailed the survey. All in-patient nurses and emergency department nurses were recruited to participate in this study. Inclusion criteria included: registered nurses (RN), licensed practical nurses (LPN), advanced practice registered nurses (APRN), employed in an in-patient unit or the Emergency Department. Nurses who work in the Behavioral Health Unit were excluded because of the significant differences in that practice setting. The setting was a community hospital in rural Virginia.

3.2 Measures

Basic demographic information was collected. Participants were asked to identify an age range, sex, gender identity, licensure, role, and length of shifts in hours. They were asked about their primary work unit and any secondary units. Participants were asked to estimate the average weekly time spent

caring for COVID-19 patients over the last three months using the following ranges: None of the time, Some of the time, Most of the time, All of the time.

The Measure of Moral Distress for Healthcare Professionals (MMD-HP) was used. It is a 27-item survey that utilizes a dual 5-point Likert scale (0-4) to assess the frequency and severity of an experience in terms of moral distress for a participant.^[23] The reliability is supported by a Cronbach's Alpha of 0.93 and the construct validity with an inverse correlation with the perceived ethical climate ($r = -0.55, p < .001$).^[23]

The alcohol use disorders identification test (AUDIT) is a 10-item scale used to assess alcohol dependence.^[24] The range of the potential scores is 0-40 points. Levels of use include low risk, risky, harmful, and severe.

3.3 Analysis

Analysis was completed in SPSS.^[25] Descriptive statistics were used to describe the demographics of the sample and outcome variables. Time spent with covid patients was collapsed to “sometimes” and “most of the time” for inference testing and assumption testing was completed. An independent samples *t* test was used to test for differences in alcohol dependence and moral distress based on time spent caring for patients experiencing covid. An ordinary least squares regression model followed to better understand the relationships among the predictor and outcome variables.

4. RESULTS

4.1 Demographics

A total of 57 nurses completed the survey. If unit educators gave all eligible nurses the survey, then the response rate was 15.7% overall. When broken down into unit categories, the critical care unit and progressive care units had individual response rates of 59.0% and 36.2%, respectively.

Participant demographics are described below and summarized in Table 1. The sample can be summarized as largely below the age of 40, female, and a registered nurse who participated in direct patient care. Most of the nurses worked 12 hour shifts on a critical care, progressive care, or medical/surgical unit.

4.2 Outcomes of interest

4.2.1 COVID-19 care hours

All 57 participants had cared for patients diagnosed with COVID-19. Regarding current work, one participant did not care for COVID-19 patients. Most nurses cared for patients with COVID-19 some of the time (28, 49.1%) or most of the time (25, 43.9%). A few participants (3, 5.3%) cared for patients with a COVID-19 diagnosis all of the time.

4.2.2 Moral distress – MMD-HP

The mean moral distress was 188.1. Among people who reported any moral distress, the bottom third ranged from 69-147. The middle third scored 150-200. The high third’s scores ranged from 206-369. A total of 36 (63.2%) nurses indicated that at some point they have considered leaving their

position due to moral distress but did not leave. Ten nurses (17.9%) indicated they have never considered leaving or left a position and 10 (17.9%) indicated they have previously left a position due to moral distress. A third of participating nurses (19, 33.9%) were considering leaving their current position due to moral distress.

Table 1. Participant demographics

Variable	Range	n	Percent
Age	22-29	25	43.9
	30-39	19	33.3
	40-49	6	10.5
	50-59	4	7.0
	60-69	2	3.5
	70+	1	1.8
Sex	Female	52	91.2
	Male	3	5.3
	Preferred not to answer	1	1.8
	Missing	1	1.8
Gender Identity	Female	52	91.2
	Male	3	5.3
	Transgender, nonbinary/non-conforming	0	0
	Prefer not to answer	2	3.6
Licensure	RNs	55	96.5
	APRN	2	3.5
Role	Direct care	55	96.5
	Administrative role	1	1.8
	Did not answer	1	1.8
Length of Shift in Hours	0-4	1	1.8
	8-11	6	10.5
	12	28	47.4
	Greater than 12	16	28.1
Primary Unit	Critical Care Unit	23	40.4
	Progressive Care Unit	17	29.8
	Medical/surgical units	13	22.8
	Other	2	3.5
Secondary Unit	Progressive Care Unit	8	14
Average Number of Patients Cared for in a Shift	0	1	1.8
	1	1	1.8
	1.5	1	1.8
	2	21	36.8
	3	3	5.3
	3.5	2	3.5
	4	14	24.6
	6	12	21.1
	12	1	1.8

Participants wrote-in root causes of moral distress they felt were not covered in the structured scale questions. Six nurses responded to the open ended question adding to the root causes of moral distress. Nurses described floating to other units, family of COVID-19 positive patients not being able to see loved ones, poor communication, and feeling unable to support coworkers also created morally distressing situations. The top morally distressing factors were about continuing aggressive treatments that the nurse perceived not to be in the patients best interest, and for those who were likely to die regardless of treatment, pressures and costs as a barrier

to optimal care, a lack of support or action from leadership about patient care challenges, and compromised care due to insufficient resources (see Table 2 for a list of the most and least distressing root causes among nurses in this sample). Nurses in this sample generally experienced less moral distress from root causes related to team behaviors such as power hierarchies, poor colleague performance, and being bullied by colleagues. Notably, moral distress scores are calculated by taking the frequency of the experience multiplied by the level of distress for each item before calculating the total score.

Table 2. Most and least distressing factors causing moral distress in nurses

Variable	Mean	SD
Most Distressing		
Follow the family's insistence to continue aggressive treatment even though I believe it is not in the best interest of the patient.	11.91	4.04
Continue to provide aggressive treatment for a person who is most likely to die regardless of this treatment when no one will make a decision to withdraw it.	10.76	4.30
Be unable to provide optimal care due to pressures from administrators or insurers to reduce costs	9.98	5.61
Experience compromised patient care due to lack of resources/equipment/bed capacity.	9.94	4.40
Experience lack of administrative action or support for a problem that is compromising patient care.	9.35	4.94
Least Distressing		
Work within power hierarchies in teams, units, and my institution that compromise patient care.	4.60	3.67
Feel pressured to ignore situations in which patients have not been given adequate information to ensure informed consent.	4.27	3.60
Witness a violation of a standard of practice or a code of ethics and not feel sufficiently supported to report the violation.	3.71	2.96
Be pressured to avoid taking action when I learn that a physician, nurse, or other team colleague has made a medical error and does not report it.	3.18	2.29
Feel unsafe/bullied amongst my own colleagues.	2.54	2.35

4.2.3 Alcohol use - AUDIT

The mean audit score was 3.41. Thirty-four (59.6%) nurses' scores placed them in the low-risk category. Being low risk means that there is no or little risk for negative impact in their life or dependence to develop in regard to their alcohol use. A third (19, 33.3%) of the participants engaged in risky alcohol use. Risky use indicates some risk of negative impacts to their life but not for long-term impacts or serious consequences. Few participants (3, 5.3%) engaged in harmful alcohol use behaviors. Harmful use indicates that there has been a negative impact with consequences from their alcohol use. Zero nurses scored in the severe range.

4.3 COVID-19 as a predictor

Time spent with COVID patients was collapsed to "sometimes" and "most of the time" for inference testing because there were very few participants who cared for patients ex-

periencing COVID none or the time ($n = 1$) or all of the time ($n = 3$). An independent sample t test was conducted to test for differences in alcohol risk between time spent with COVID patients. The level of alcohol risk was higher for those who attended to COVID patients most or all the time ($M = 4.7$, $SD = 3.2$, $n = 26$) compared to those who attended to COVID patients sometimes ($M = 2.4$, $SD = 2.8$, $n = 27$), $t(51) = -2.75$, $p = .008$. Cohen's α point estimate of .755 indicates a moderate to large effect.

An independent samples t test was conducted to test for differences in moral distress between time spent with COVID patients. The level of moral distress was higher for those who attended to COVID patients most or all the time ($M = 222.9$, $SD = 57.0$, $n = 27$) compared to those who attended to COVID patients sometimes ($M = 154.9$, $SD = 57.7$, $n = 27$), $t(52) = -4.36$, $p < .001$. Cohen's α point estimate was 1.19 indicating a large effect.

Table 3. Summary of participant outcomes

Variable		n	%
Ever cared for patients with COVID-19		57	100
Time spent caring for patients with COVID-19 in the past 3 months	None of the time	1	1.8
	Some of the time	28	49.1
	Most of the time	25	43.9
	All of the time	3	5.3
Ever considered leaving a position due to moral distress	No, I have never considered leaving or left a position	10	17.5
	Yes, I considered leaving, but did not leave	36	63.1
	Yes, I have left a position	10	17.5
Are you considering leaving your position now due to moral distress?	Missing	1	1.8
	Yes	19	33.3
	No	37	64.9
Alcohol Use	Low	34	59.6
	Risky	19	33.3
	Harmful	3	5.3
	Severe	0	0
	Mean	SD	Min-Max
Moral distress	188.1	66.0	69 -369
Alcohol use	3.4	3.2	0-12

Although time spent with COVID patients does predict moral distress and time spent with COVID patients predicts level of alcohol dependence, moral distress is not a predictor of alcohol dependence. When time spent with COVID patients

and moral distress are entered into an ordinary least squares regression model together, time with COVID patients is the only significant predictor.

Table 4. Comparison of alcohol abuse scores

Time spent with COVID patients	Sometimes		Most/all the time		p	Cohen's d
	M	SD	M	SD		
AUDIT Score	2.4	2.8	4.7	3.2	.008	.755
Moral distress score	154.9	57.7	222.9	57.0	< .001	1.19

5. DISCUSSION

Before the COVID-19 pandemic, moral distress was a documented problem in healthcare.^[23] With increased unknowns and stress on nurses during the COVID-19 pandemic, the concern for moral distress has been elevated during this time.^[20,21,26] In the reported study, units that experienced the highest number of COVID-19 admissions, critical care unit and progressive care unit, had the highest participation rate. This may indicate that the surveyed topics most resonated with nurses from these units.

The results of this survey indicate a concerning level of moral distress during COVID-19 in the sample population. Previously published survey results of nurse moral distress reported a mean level of 112.3,^[23] whereas mean moral distress

was notably higher for this sample at 188.1. However, results of this survey differed from another measure of intensive care nurse moral distress during the COVID-19 pandemic who reported a mean moral distress of 116.52.^[27] The lower results were from a sample of nurses in Greece and the higher of United States nurses, which may indicate that nurses in different countries were differently distressed. These differences may have been caused by other factors in the nurse samples, thus more research is needed to fully understand the effect of the COVID-19 pandemic on nurse moral distress.

Another survey of moral distress for United States intensive care nurses indicated that nurses related increase moral distress levels to the short and/or reuse of PPE, ineffective communication, lack of staffing, lack of family presence, and

fear of transmission.^[28] Lake and colleagues used a different scale which does not allow for comparison of total moral distress between the two studies. However, the reported survey identified some similar root causes to moral distress as Lake and colleagues and thus some agreement is seen.

Moral distress and burnout have been found to be related in regards to the COVID-19 pandemic. Guttormson et al.,^[29] found that intensive care nurses who experienced moderate moral distress also reported moderate levels of burnout. This has led to higher levels of nurses reporting they are looking to either leave their current position or the profession as a whole. These findings were similar to our with high levels of moral distress being reflected in those thinking about or actively pursuing a new position or profession. In our sample, 33.3% of nurses were considering leaving their position due to moral distress.

The specific rates of alcohol misuse among nurses are unknown. The American Addiction Centers^[5] estimates that 10% of nurses will misuse drugs or alcohol at some point in their career. Moreover, although it appears nurses overall consume less alcohol than the general population, they may participate in more binge drinking.^[5] Another study found that substance misuse, addiction, and abuse ranged from 14%-20% among nurses.^[30] Overall alcohol use during the pandemic has increased for the general population.^[19]

This study found that 22 (38.6%) of nurses were participating in risky or harmful alcohol behaviors and time spent with COVID-19 patients predicted the level of risk for alcohol misuse. This sample's rates demonstrate a marked increase from even the high-end estimates of nursing substance use in the general population prior to the pandemic. It is also higher than another survey of nurse alcohol use during the pandemic, Melnyk et al.^[31] found that 11.4% of a sample of surveyed nurses reported moderate to heavy drinking during the pandemic which is similar to pre-pandemic estimates.^[30] Yet, more than one third of the nurses in Melnyk's survey did report increased alcohol intake as a result of the pandemic.^[31] An additional study by Hennein and Lowe^[32] sought information on the overall well-being of health care workers during the pandemic. It found that of the 1,132 workers surveyed, over 40% presented with probably alcohol use disorder.

It would be ideal to compare the rates in this survey to prior rates from this sample, but that information is unknown. What is known is that there is risky alcohol use in this sample. There is potential for negative patient, nurse, and systemic outcomes because of the volume of elevated alcohol use. A survey of nurse wellness that included questions about nurse alcohol use found that nurse alcohol use was healthier

during the COVID-19 pandemic (albeit with no statistical significance) in workplaces that the nurse perceived to be supportive.^[31] Efforts to create supportive workplaces are needed. More research is needed to determine whether there is a problem of increased alcohol use among nurses in general during the COVID-19 pandemic, the related effects on patient care, and how to mitigate the risk to patients and nurses from alcohol misuse. Moral distress is not a predictor of alcohol dependence in this sample. This may be related to the small sample size or could indicate that another moderating factor is more relevant.

This study measured nurses' time caring for patients experiencing COVID-19 during Spring 2021. A single item about the number of COVID-19 hours was created for this research, and there is no other study in the literature that measures nurse time in caring for COVID-19 patients this way. Another study that looked at the time a nurse spent caring for patients with COVID-19 used a measure of hours per week and reported that most nurses in that sample spent two hours each week caring for patients with COVID-19.^[33] By comparison, in this study, nearly all nurses (93%) felt they had cared for COVID-19-positive patients some or most of the time. This was potentially influenced by the high number of nurses in the sample from critical care and progressive care units. There may also be important variations in time caring for COVID-19 patients by geographic area, and differences in measurement make comparisons difficult. Thus, this study adds some beginning ideas to the scientific literature about the volume of time nurses perceive they spent specifically caring for COVID-19 patients in Spring 2021. Although the qualifiers of "some" and "most" of the time lack specificity, it is logical to conclude that for nurses in this sample work changed during the pandemic and that some nurses spent time caring for COVID-19 patients as part of their routine work-life now. More research is needed to know if this was the experience of other nurses during the COVID-19 pandemic and, more importantly, to understand the lingering outcomes of this change to nurses' work.

Limitations

This study is not without limitations. First was the limited response rate. The principal investigator did not distribute the recruitment emails, so how many nurses were asked to complete the survey is unknown. If all eligible nurses (363) were asked to participate, then 57 participants are low. Also, there is no baseline data to compare pre-COVID-19 levels of moral distress and alcohol use in this sample. An additional limitation is that the MMD-HP is a relatively new scale. Thus, there are no definitive levels that indicate moral distress.

6. CONCLUSION

6.1 Implications

This study demonstrates that there are nurses experiencing moral distress during the COVID-19 pandemic. This moral distress has the potential to negatively impact patient care through increased burnout and turnover, and decreased engagement.^[13,15,34] As the pandemic continues, nursing leaders will need to be aware of the potential development of moral distress within nursing staff. Based on these findings, several interventions are recommended.

6.2 Recommendations

- 1) Train leadership in identifying early signs of moral distress and alcohol use
- 2) Create unit leadership tool kits with resources to help address and process moral distress and alcohol use

- 3) Foster a facility environment that values open communication regarding moral distress and alcohol use
- 4) Promote environments that nurses find to be supportive

The COVID-19 pandemic is reshaping our world and making significant changes to our healthcare system. Given the predictive relationships found in this study and the literature on the crescendo effect of moral distress, the nature of alcohol misuse; the lasting effects on nurses during the COVID-19 pandemic will be important to the profession for years to come. Nursing leadership needs to focus on decreasing factors leading to moral distress and providing care and resources for nurses with moral distress and potentially risky alcohol use.

CONFLICTS OF INTEREST DISCLOSURE

The authors declare that there is no conflict of interest.

REFERENCES

- [1] Jameton A. Nursing practice: the ethical issues (1st ed.). New Jersey: Prentice-Hall; 1984.
- [2] Altman M. Facing moral distress during the COVID-19 crisis. American Association of Critical Care Nurses. 2020 Apr - [cited 2023 January 24]. Available from: <https://www.aacn.org/blog/facing-moral-distress-during-the-covid-19-crisis>
- [3] Henrich NJ, Dodek PM, Gladstone E, et al. Consequences of moral distress in the intensive care unit: a qualitative study. *Am J Crit Care*. 2017; 26(4): e48–57. PMID:28668926 <https://doi.org/10.4037/ajcc2017786>
- [4] Sinha R. Chronic stress, drug use, and vulnerability to addiction. *Annals of the New York Academy of Sciences*. 2008; 1141(3): 105–30. PMID:18991954 <https://doi.org/10.1196/annals.1441.030>
- [5] American Addiction Centers. How substance abuse in medical professionals impacts patients. 2021 Jan - [cited 2023 January 24]. Available from: <https://americanaddictioncenters.org/medical-professionals/substance-abuse-medical-professionals-impacts-patients>
- [6] Forozeiyi D, Wright B, Bourbonnais F, et al. Coping with moral distress - the experiences of intensive care nurses: an interpretive descriptive study. *Intensive Crit Care Nurs*. 2019 Aug; 53(1): 23–29. PMID:30948283 <https://doi.org/10.1016/j.iccn.2019.03.002>
- [7] Karakachian A, Colbert A. Nurses' moral distress, burnout, and intention to leave: an integrative review. *Journal of Forensic Nursing*. 2019; 15(3): 133–142. PMID:31436681 <https://doi.org/10.1097/JFN.0000000000000249>
- [8] Hanna DR. Moral distress: the state of science. *Res Theory for Nurs Pract*. 2004; 18(1): 127–93. PMID:15083663 <https://doi.org/10.1891/rtnp.18.1.73.28054>
- [9] Epstein EG, Hamric AB. Moral distress, moral residue, and the crescendo effect. *J Clin Ethic*. 2009; 20(4): 330–42. PMID:20120853 <https://doi.org/10.1086/JCE200920406>
- [10] Jia Y, Chen O, Xiao Z, et al. Nurses' ethical challenges caring for people with COVID-19: a qualitative study. *Nurs Ethics*. 2020 Aug; 28(1): 33–45. PMID:32856534 <https://doi.org/10.1177/0969733020944453>
- [11] Morley G, Grady C, McCarthy J, et al. Covid-19: ethical challenges for nurses. *Hastings Cent Rep*. 2020; 50(3): 35–39. PMID:32410225 <https://doi.org/10.1002/hast.1110>
- [12] Borhani F, Abbaszadeh A, Nakhaee N, et al. The relationship between moral distress, professional stress, and intent to stay in the nursing profession. *Journal of Medical Ethics and History of Medicine*. 2014; 7(4).
- [13] Moss M, Good VS, Gozal D, et al. An official critical care societies collaborative statement. *Critical Care Medicine*. 2016 Jul; 44(7): 1414–21. PMID:27309157 <https://doi.org/10.1097/ccm.0000000000001885>
- [14] Rushton C, Barcheller J, Schroeder K, et al. Burnout and resilience among nurses practicing in high-intensity settings. *Am J Crit Care*. 2015; 25(5): 412–20. PMID:26330434 <https://doi.org/10.4037/ajcc2015291>
- [15] Lawrence LA. Work engagement, moral distress, education level, and critical reflective practice in intensive care nurses. *Nurs Forum*. 2011 Oct; 46(4): 256–268. PMID:22029769 <https://doi.org/10.1111/j.1744-6198.2011.00237.x>
- [16] American Nurses Association. Identifying substance use disorder in nursing. *Nursing Management*. 2015; 46(12): 53–4. PMID:26583341 <https://doi.org/10.1097/01.NUMA.0000473512.38679.ca>
- [17] Kynyk D. Substance use disorders among registered nurses: prevalence, risks and perceptions in a disciplinary jurisdiction. *Journal of Nursing Management*. 2013 Aug; 23(1): 54–64. PMID:23952722 <https://doi.org/10.1111/jonm.12081>
- [18] National Council of State Boards of Nursing. Substance use disorder in nursing resource manual [Internet]. National Council of State Boards of Nursing. Illinois: Author. 2011.
- [19] Czeizler ME, Lane RI, Petrosky E, et al. Mental health, substance use, and suicidal ideation during the COVID-19 pandemic. *MMW*. 2020; 69(32): 1049–57. PMID:32790653 <https://doi.org/10.15585/mmwr.mm6932a1>

- [20] Joslin D, Joslin H. Nursing leadership covid-19 insight survey: key concerns, primary challenges, and expectations for the future. *Nurse Leader*. 2020; 18(6): 527–31. PMID:33078057 <https://doi.org/10.1016/j.mnl.2020.10.002>
- [21] Shechter A, Diaz F, Moise N, et al. Psychological distress, coping behaviors, and preferences for support among New York healthcare workers during the Covid-19 pandemic. *Gen Hosp Psychiatry*. 2020 Sept - Oct; 66: 1–8. PMID:32590254 <https://doi.org/10.1016/j.genhosppsych.2020.06.007>
- [22] Whittaker BA, Gillum DR, Kelly JM. Burnout, moral distress, and job turnover in critical care nurses. *Int J Nurs Stud*. 2018; 3(3): 108. <https://doi.org/10.20849/ijns.v3i3.516>
- [23] Epstein EG, Whitehead PB, Prompahakul C, et al. Enhancing understanding of moral distress: The measure of moral distress for health care professionals. *AJOB Empirical Bioethics*. 2019 Apr; 10(2): 113–124. PMID:31002584 <https://doi.org/10.1080/23294515.2019.1586008>
- [24] World Health Organization. SBIRT forms. SBIRT Oregon. 1982 [cited 2023 Jan 24]. Available from: <http://www.sbirtoregon.org/screening-forms/>
- [25] IBM Corporation. IBM SPSS statistics for Windows (27). 2020. Available from: <https://www.ibm.com/support/pages/downloading-ibm-spss-statistics-27>
- [26] American Association of Critical Care Nurses. Recognizing moral distress and what to do about it. 2020 [cited January 24, 2023]. Available from: <https://www.aacn.org/~media/aacn-website/clincial-resources/moral-distress/recognizing-addressing-moral-distress-quick-reference-guide.pdf>
- [27] Malliarou M, Nikolentzos A, Papadopoulos D, et al. ICU nurse's moral distress as an occupational hazard threatening professional quality of life in the time of pandemic COVID 19. *Materia Sociomed*, 2021 Jun; 33(2): 88. PMID:34483734 <https://doi.org/10.5455/msm.2021.33.88-93>
- [28] Lake ET, Narva AM, Holland S, et al. Hospital nurses' moral distress and mental health during COVID-19. *J Adv Nurs*. 2021 Aug. PMID:34402538 <https://doi.org/10.1111/jan.15013>
- [29] Guttormson JL, Calkins K, McAndrew N, et al. Critical care nurse burnout, moral distress, and mental health during the COVID-19 pandemic: a United States survey. *Heart & Lung*. 2022 Apr; (55): 127-33. PMID:35561589 <https://doi.org/10.1016/j.hrtlng.2022.04.015>
- [30] Monroe T, Kenaga H. Don't ask don't tell: substance abuse and addiction among nurses. *J Clin Nurs*. 2010; 20(3-4): 504–09. PMID:21040041 <https://doi.org/10.1111/j.1365-2702.2010.03518.x>
- [31] Melnyk BM, Hsieh AP, Tan A, et al. Associations among nurses' mental/physical health, lifestyle behaviors, shift length, and workplace wellness support during COVID-19: important implications for health care systems. *Nurs Admin Q*. 2022; 46(1): 5–18. PMID:34551423 <https://doi.org/10.1097/NAQ.0000000000000499>
- [32] Hennein R, Lowe S. A hybrid inductive-abductive analysis of health workers' experiences and wellbeing during the COVID-19 pandemic in the United States. *PLOS ONE*. 2020; 15(10): e0240646. PMID:33104711 <https://doi.org/10.1371/journal.pone.0240646>
- [33] Li R, Chen Y, Lv J, et al. Anxiety and related factors in frontline clinical nurses fighting covid-19 in wuhan. *Medicine*, 2020; 99(30): e21413. PMID:32791757 <https://doi.org/10.1097/md.000000000000021413>
- [34] Cimiotti JP, Aiken LH, Sloane DM, et al. Nurse staffing, burnout, and health care-associated infection. *Am J of Infect Control*. 2012; 40(6): 486–90. PMID:22854376 <https://doi.org/10.1016/j.ajic.2012.02.029>