Journal of Medicinal and Chemical Sciences 6 (2023) 71-78

Journal of Medicinal and Chemical Sciences

Journal homepage: http://www.jmchemsci.com/

Review Article

Moral Distress, COVID-19, and Healthcare Workers, a Systematic Review and Meta-Synthesis: Solutions by JUMS Clinical Decision-Making Scheme

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ARTICLE INFO

Article history

Receive: 2022-05-14
Received in revised: 2022-06-19
Accepted: 2022-07-21
Manuscript ID: JMCS-2207-1583
Checked for Plagiarism: **Yes**
Language Editor:
Dr. Fatimah Ramezani
Editor who approved publication:
Dr. Mehrdad Hamidi

DOI:10.26655/JMCHEMSCI.2023.1.9

KEYWORDS

Moral distress
COVID-19
Healthcare workers
Systematic review

ABSTRACT

Background: Although studies are conducted on moral distress during the COVID-19 period, those being conducted by using various methods of moral distress assessment, the majority of which were developed for moral distress conditions befor the arrival of the pandemic, and qualitative studies are better suited to the COVID-19-driven moral and ethical dilemma. For COVID-19 era, we aimed at reviewing qualitative studies on moral distress.
Methods: Based on the PRISMA-P and COREQ criteria, a comprehensive evaluation of qualitative studies looking at moral distress in Hrealthcare workers (HCWs) working with COVID-19 patients was conducted. A combination of relevant terms was searched in the MEDLINE and PsycINFO, EMBASE, SCOPUS, and Web of Science databases. The CASP checklist was used to evaluate the research quality. To synthesize the data, a meta-aggregation method was employed in conjunction with the ConQual methodology.
Results: Nine studies with 644 participants were evaluated. 4 studies were about physicians in Emergency departments or acute care centers, 2 studies were about nursing students, and 3 studies were about the nursing staff. A total number of 11 subthemes were found in cases of moral distress experienced in the emergency department. All themes and subthemes were summarized in 3 themes adapting to categories: of resource constraints, scientific limitation, and personal variables.
Conclusion: New ethical dilemmas have been emerging during the COVID-19 pandemic and we sought systematically categorize these moral distress cases and evaluate compliance of our decision-making rules with such circumstances. Our proposed model of decision-making based on the available protocols of legitimate and acceptable authorities is a way to avoid moral distress in facing limited science in practice.

GRAPHICAL ABSTRACT

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Introduction

Physicians and nurses at the forefront of responses to the COVID-19 pandemic find themselves in unprecedented situations and sometimes need to make very important decisions for patients and their personal lives. Ideally, ethical frameworks and guidelines of each section were prepared in advance and made available for healthcare workers (HCWs) for different levels of practice [1,2]. A form of these tough situations for HCW is moral distress, which is emotional pain and discomfort that a person due to realistic or progressive mental constraints, cannot act per what thinks is correct [3,4]. Negative consequences of moral distress include behavioral and psychological effects (feelings of sadness, shame, and deprivation) and burnout, stress, and leaving the job [5]. Some qualitative research has been conducted to articulate these moral dilemmas in the COVID-19 era in greater depth; however, no integrated review of the outcomes of these investigations is available. We employed a meta-synthesis approach in this study to obtain more focused results for moral distress situations among HCWs working with COVID-19 patients. In the fields of humanities and health, there are numerous approaches for exploring and identifying reality and social phenomena. A qualitative methodology useful for management research is the meta-synthesis method. Meta-synthesis is a relatively recent qualitative approach for integrating qualitative investigations to generate a theoretical model that can explain the findings of several studies on the same topic.

Methods

The protocol of this study was previously published [6], considering the PRISMA-P and Consolidated Criteria for Reporting Qualitative Studies (COREQ) criteria. The archives of MEDLINE and PsycINFO, EMBASE, SCOPUS, and Web of Science were searched utilizing explosions and combinations of key search phrases ([moral distress OR moral injury OR psychological distress OR ethical dilemma] AND [COVID-19 OR SARS-COV-2 OR pandemic] AND [emergency department OR nurse OR physician OR students]) from 2019 to December 2021. Qualitative research involving HCWs who manage COVID-19 patients and have used qualitative data collection and analysis methodologies was included in our study. If the qualitative and quantitative data were studied individually, mixed-method studies were qualified for being included. To focus the study on the ED, studies conducted in ICU or COVID-19 wards were planned to be excluded; whilst a little number of studies had such criteria and we included those, too. Articles written in languages other than English were not included. Initial title screening was done independently by two researchers (NK, NH). After that, the titles and abstracts of the remaining records were scrutinized for studies that could be of interest. Then, to identify papers that match the eligibility requirements, a full-text review was done as shown in Flowchart 1. Included studies were evaluated for 31 items of COREQ checklist and CASP risk of bias tools. Themes were extracted and pooled qualitatively to form the new ones and summarized findings. Data synthesis was conducted based on the ConQual methodology.

Result

The study examined nine studies with a total of 644 individuals. Four studies focused on physicians working in emergency rooms or acute care facilities, two on nursing students, and three on nursing staff as indicated in Table 1. Butler *et al.* tried to find strategies to avoid moral distress. Their themes were: (a) preparing for COVID-19 peaks, (b) adjusting to resource constraints, and (c) overcoming several previously unimaginable impediments to care delivery. They mentioned care delivery restrictions as the necessity to reduce in-person encounters, the quick rate of changes, and the scarcity of scientific data compounded the difficulties of caring for patients and communicating with their families [7].

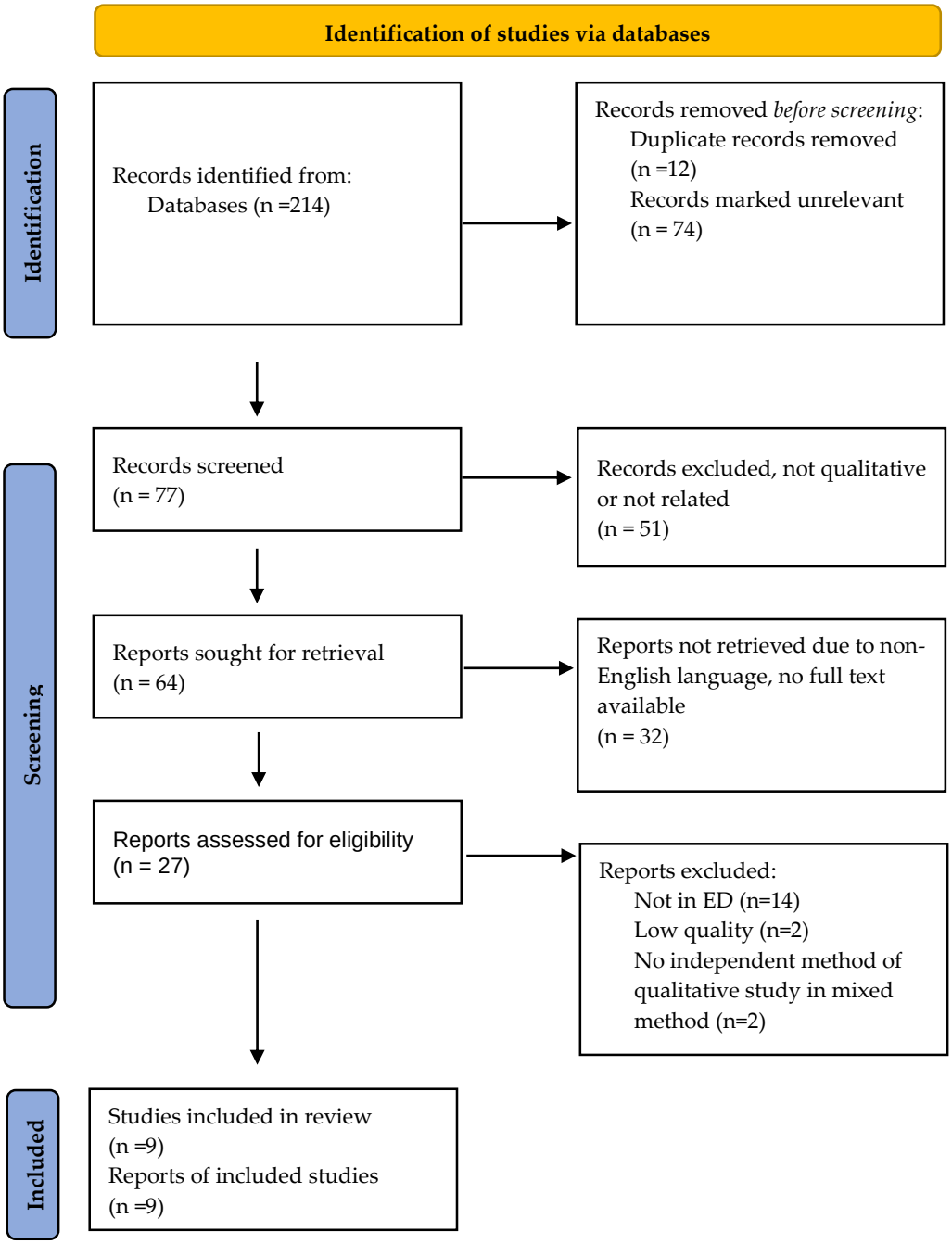
Ditwiler *et al.* summarized their study results for types of ethical distress in facing COVID-19 in themes of ambiguity, the role of the physicain, ethical issues and moral distress, emotions, delivering treatment and working circumstances, and the effect of management and leadership [8].

De Wit *et al.* study revealed that themes of the workforce, patient volumes, work patterns, and

the work environment all influenced physician well-being, as safety, academic, and educational activities, and Personal Protective Equipment (PPE) also did [9].

In the study conducted by Hou *et al.*, moral distress was a subtheme of personal preparedness. They mentioned that as some restrictions got posed on the management of the non-COVID-19 disease, a source of moral distress was born for HCWs [10]. The inability to prioritize the needs of the patients was cited by Roca *et al.* as a source of moral distress [11].

Silverman *et al.* mentioned that (a) lack of knowledge and uncertainty about treatments, (b) high patient volume, (c) fear of infection leading to suboptimal care, (d) adopting a team model of nursing care that resulted in intra-professional tensions and miscommunications, (e) policies to reduce viral transmission (PPE policy) that prevented nurses from fulfilling their caring role, and (f) practicing within crisis were some causes of moral distress [12].



Flowchart 1: PRISMA flowchart of the study selection

Table 1: Characteristics of included studies

Author	Year	Question/Aim	Study design	Sampling	Sample size	Description of sample	Duration of interview	Software
Butler *et al*. [7]	2020	The opinions and experiences of physicians in resource-constrained patient care during the pandemic	Thematic analysis	purposive	61 participants	Age, mean (SD), y: 45.8 (11.1) Men, 36.6%	30-minute to 60-minute	Atlas.ti version 8
Ditwiler *et al*. [8]	2021	Acute care physicians experience	Reflexive-thematic analysis	Purposive	.	-	NA	NA
De Wit *et al*. [9]	2020	Psychological consequences of practicing as a Canadian emergency physician during the initial weeks of COVID-19	mixed	NA	468 ED GPs	Median 41 (interquartile range 35–50)	NA	NA
Hou *et al*. [10]	2020	Preparedness of the emergency department	Colaizzi analysis	Purposeful	12 emergency	Male 3 (25), 30.42 years (SD = 3.64	40 minutes to 60 minutes	NA
Roca *et al.* [11]	2021	Final-year undergraduate nursing students	Constructivist paradigm	Purposeful	21 students	Men 1.6%, Age median of 23 and SD 2.4.	35 min and a maximum of 1 h and 18 min	Atlas.ti version 8
Silverman *et al*. [12]	2021	Causes of moral distress in nurses of acute care units	Semi-structured interviews	Purposeful	31 nurses caring for Covid-19	Most between 20-30 years old	NA	MAXQDA software

Howard *et al*. [13]	2021	Moral distress on nursing students	Jean Watson's theory of human caring and novice to expert	Purposeful	13 ED nursing students	Higher than 18 years	Max 30 minutes	Dedoose
LoGiudice *et al*. [14]	2021	Experiences of nurses	Semi-structured interviews	Convergent	43 nurses 14 in	Mean 40.9 years	NA	NA
Lamiani *et al*. [15]	2021	Emergency and critical care physicians experience moral distress	Semi-structured interviews	Grounded theory	15 emergency	Mean 42 years old	average 51.82 min	NA

In the study performed by Howard *et al.*, themes of compromises in care, mixed messages, personal perspectives, COVID-19 coping, and the gloomy future were proposed for moral distress. Mixed messages referred to COVID-related opinions and ideas of other people that caused the self-conflict of the participant [13].

LoGiudice *et al.* study just mentioned that a nurse stated moral distress as a result of the no-visitor policy as a source of the moral distress [14].

In the study carried out by Lamiani *et al.*, inadequate health resources, accelerated patient triage, fluctuating selection criteria, limited therapeutic/clinical expertise, and patient isolation were all pandemic stressors. Impotence, irritability, and grief were among the emotions associated with moral distress [15].

In the case of moral distress in COVID-19 care, a total of 11 subthemes were discovered. Following the removal of clear and unsubstantiated synthesis conclusions based on the ConQual, all themes and subthemes were grouped into three categories: resource constraints, scientific limitation, and personal variables (see Table 2).

Synthesis of findings

Resource limitation was one of our study themes. While in some studies this has not been properly explained in the concept of moral distress, and the interviewee seems to have shifted it to the problems posed by the COVID-19 pandemic, the lack of human resources, equipment, and treatments in hospitals due to the high volume of patients can be a source of moral distress, which often manifests itself in terms of medical justice that healthcare allocation cannot be done properly. This inequality in treatment allocation has been further the cause of moral distress in other non-COVID-19 diseases. Based on the ConQual, it was unequivocal**.**

Limited knowledge was the second synthesized theme as mentioned by Silverman *et al.*, Butler *et al.,* Howard *et al.,* and Lamiani *et al.* Lack of knowledge in the treatment and clinical course of COVID-19 was one of the themes extracted in this study. The practitioner's skepticism about the treatment provided to patients can cause moral distress. This was exacerbated in COVID-19 by rapidly changing treatment protocols from one drug to another reported by different research works. Based on the ConQual, it was credible.

The third theme was **personal variables** such as fear of getting infected or the PPE policy that might limit the HCWs' ability to care delivery and also decrease personal interactions of HCWs with each other and patients. Based on the ConQual, it was credible**.**

Discussion

This study found that some variables and stressors might contribute to moral distress. We found that personal characteristics, resource limits (subthemes of resource allocation for COVID-19 care and non-COVID-19 care), scientific limitations (subthemes of limitations in treatment protocols), and scientific limitations (subthemes of limitations in treatment protocols) (subthemes of fear of infection, PPE policies, and decreased personal interactions) were the most important factors in this era.

In the case of resource allocation, medical justice in COVID-19 care might lead to moral distress. Justice is one of the most essential concepts in various fields of science and as a value in human history has been considered by most schools and human societies. Uncertainty in the decision-making for admission of some patients due to lack of free beds in hospitals or mechanical ventilation machines is one example reported in the literature [16, 17]. This theme emerges with the lack of a scientific protocol subtheme where there are no definitive protocols for the admission of patients.

To give solutions based on our findings, we would deeply investigate the issue. Medical ethics is a realm on the border between medicine and philosophy, and close collaboration between physicians and philosophers in this field can be of great benefit. Different theorists researching the subject of decision-making have sought to formulate this process [18]. The decision-making analysis of theorists under conditions of uncertainty and moral distress may help explain this, as well as what Jameton introduced moral distress concept [19]. In a cross-cultural adaptation of medical ethics in the Iranian Department of Medical Ethics and Philosophy of Health, the ethical decision-making rules have been developed based on local moral knowledge entitled JUMS clinical decision-making scheme (20)(the name driven by Jahrom Unversity of Medical Sciences).

While dealing with moral distress that requires ethical decision-making, healthcare workers may experience different circumstances based on the medical instructions, usually addressed as guidelines, or background personal ethical principles. We categorized these circumstances in three ways in our later study [20]: *(i)* when the medical practitioner knows that a medical instruction or legal article is matching the case, (*ii*) when the medical practitioner doubts the (*i)* statement, and (*iii*) when there are no instructions available. In case of doubt, it might be due to the subject's unclear nature of medical instructions or the patient's condition differeing from other patients on who guidelines are written [20]. However as defined, the moral distress happens when the practitioner is not able to act per what ought to do [21]. Therefore, difficulty in decision-making in circumstances like (*i)* statement would be moral distress.

Based on the JUMS model, when making an ethical decision, the medical team should initially answer the question: "Is there a medical, or legal protocol, or guideline provision in this case?" If so, the protocol will be the decision-making reference. Thus, while the protocol is raw, like our scientific failure of COVID-19 protocols about hydroxychloroquine treatment [22], as this is the policy-making of the country, or a valuable policymaking agency based on scientific evidence of the time, the practitioners should not be doubtful about performing per protocol.

Conclusion

The findings of the study show that the COVID-19 pandemic has influenced many parts of life, particularly among frontline healthcare professionals. The pandemic has had an impact on the physical and mental health of frontline workers, causing them to feel moral distress like fear, worry, sadness, and stress. This is greatly induced by a lack of knowledge in the management of the disease that contributes to moral distress in the themes we introduced. However, some policies to limit disease spread might cause moral distress that is inescapable as well as the need for using PPE and decreased

interaction of HCWs with each other, patients, and even patients with their families. The resources allocation remains another source of moral distress that should be addressed by getting prepared for peaks of COVID-19 or even any other similar disasters. The proposed decision-making model based on the available protocols of legitimate and acceptable authorities is a way to avoid moral distress in facing limited science in practice.

Acknowledgment

We appreciate Clinical Research Development Unit of Peymanieh Educational and Research and Therapeutic Center of Jahrom University of Medical Sciences for providing facilities for this work.

Funding

This research did not receive any specific grant from fundig agencies in the public, commercial, or non-profit sectors.

Authors' contributions

All authors contributed to data analysis, drafting, and revising of the article, and agreed to be responsible for all the aspects of this work.

Conflict of Interest

There are no conflicts of interest in this study.

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HOW TO CITE THIS ARTICLE

Marzieh Haghbeen, Hossein Hakimelahi, Mansour Tafvizi, Naser Hatami, Navid Kalani, Lotfollah Dezhkam. Moral Distress, COVID-19, and Healthcare Workers, a Systematic Review and Meta-Synthesis: Solutions by JUMS Clinical Decision-making Scheme. *J. Med. Chem. Sci*., 2022, 6(1) 71-78

https://doi.org/10.26655/JMCHEMSCI.2023.1.9

URL: http://www.jmchemsci.com/article_154101.html