

Ethical Challenges and Coping Strategies about Issues Related to the Healthcare System and Social Issues during the COVID-19 Pandemic: A Narrative Review

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Abstract

Background and Objective: Since December 2019, the widespread outbreak of COVID-19 has led to a major public health issue worldwide. With the spread of the COVID-19 pandemic, a series of ethically challenging issues arose that put pressure on healthcare systems around the world. This narrative review aims to comprehensively review the literature focusing on ethical challenges and coping strategies about issues related to the healthcare system and social issues during the COVID-19 pandemic.

Material and Methods: This narrative review was conducted via international databases including PubMed/MEDLINE, Web of Science, and Scopus using keywords extracted from medical subject headings such as "COVID-19", "2019-nCoV disease", "2019 novel coronavirus infection", "Ethics", "Bioethical Issues", "Morals", "Coping Skills", "Coping Skill", "Coping Strategies", and "Coping Strategy" from December 2019 to January 2022.

Results: In general, ethical issues during the COVID-19 pandemic can be divided into two categories: 1) issues related to the healthcare system and 2) social issues. Issues related to the healthcare system can be divided into two categories: 1) lack of resources, equipment and facilities, and manpower, and 2) problems in patient care such as triage and informed consent. Social issues can be divided into four categories: 1) community engagement, 2) crisis management capacity in remote rural communities, 3) discrimination and health equity, and 4) vaccination. Coping with ethical challenges in crises such as COVID-19 requires changing health empowerment policies and strategies based on evidence-based research. On the other hand, overcome on these challenges requires interdisciplinary collaboration and fast efficient decisions.

Conclusion: Overall, the present study introduced ethical challenges and coping strategies during the COVID 19 pandemic. The experience gained from this pandemic can be considered by managers and policymakers of health care systems for coping with ethical challenges.

Keywords: Ethics [[MeSH](#)]; Health personnel [[MeSH](#)]; COVID-19 [[MeSH](#)]

Highlights

- With the spread of the COVID-19 pandemic, a series of ethically challenging issues arose that put pressure on healthcare systems around the world.
- Ethical issues can be divided into two categories: 1) issues related to the healthcare system and 2) social issues.
- Coping with ethical challenges in crises such as COVID-19 requires changing health empowerment policies and strategies based on evidence-based research.
- Overcome on ethical challenges requires interdisciplinary collaboration and fast efficient decisions.

Introduction

Since December 2019, the widespread outbreak of COVID-19 has led to a major public health issue worldwide (1-5). According to the World Health Organization, a total of 352,796,704 confirmed cases of COVID-19 had been identified worldwide by January 23, 2022, out of which 5,600,434 died (6). With the spread of the COVID-19 pandemic, a series of ethically challenging issues arose that put pressure on healthcare systems around the world. The most common causes of ethical concern among health care workers (HCWs) include heavy workload, poor communication and coordination among HCWs, inconsistent care plans, lack of attention to HCWs' independence, and involvement in end-of-life decision-making (7, 8). With the spread of the COVID-19 pandemic, many patients were admitted for care and treatment. Inadequate medical equipment and Personal Protective Equipment (PPE), and lack of manpower posed many ethical challenges for HCWs (1). These challenges created ethical conflicts, which governments took steps to address at various levels of economic, social, and health outcomes (9-11). HCWs, especially nurses and physicians, were faced with situations requiring timely clinical decision-making for patient triage and the

use of resources such as mechanical ventilation (12-14). However, organizations used preexisting professional ethical guidelines or emergency guidelines developed during previous natural disasters or emergencies. Due to the different pattern of this pandemic with previous pandemics, it is necessary to make different ethical decision-making than other previous pandemics. Obviously, the COVID-19 pandemic created a wide range of ethical conflicts that required careful consideration. However, these ethical conflicts are often overlooked (15-18).

Therefore, this narrative review aims to comprehensively review the literature focusing on ethical challenges and coping strategies about issues related to the healthcare system and social issues during the COVID-19 pandemic.

Materials and Methods

This narrative review was conducted based on the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement (19). This narrative review was conducted via international databases including PubMed/MEDLINE, Web of Science, and Scopus using keywords extracted from medical subject headings such as "COVID-19", "2019-nCoV disease", "2019 novel coronavirus infection", "Ethics", "Bioethical Issues", "Morals", "Coping Skills", "Coping Skill", "Coping Strategies", and "Coping Strategy" from December 2019 to January 2022. For example, the search strategy was in PubMed/MEDLINE database including ((“COVID-19”) OR (“2019-nCoV disease”) OR (“2019 novel coronavirus infection”)) AND ((“Ethics”) OR (“Bioethical Issues”) OR (“Morals”) OR (“Coping Skills”) OR (“Coping Skill”) OR (“Coping Strategies”) OR (“Coping Strategy”)). Keywords were combined via Boolean operators (AND/OR). English-language published studies related to the purpose of the present review were included. The search was performed by two authors independently. Gray literature search was not included in the review due to the uncertainty surrounding such a novel disease condition and the exponential amount of speculation that characterized the pandemic's

early stages. Lists of references from eligible studies were evaluated manually to achieve maximum search comprehensiveness. Manage the data were conducted using the EndNote X8 software. After removing the duplicates, two researchers independently evaluated the title, abstract, and full text of the articles based on the predefined inclusion/exclusion criteria. A total of

3,854 articles were obtained initially using database searches. Then article titles and abstracts were screened to eliminate duplicate studies, leading to the exclusion of 3,827 articles. Finally, full texts of selected articles were reviewed, and 25 eligible journal articles were finally included in the review from which data were extracted for analysis (Figure 1).

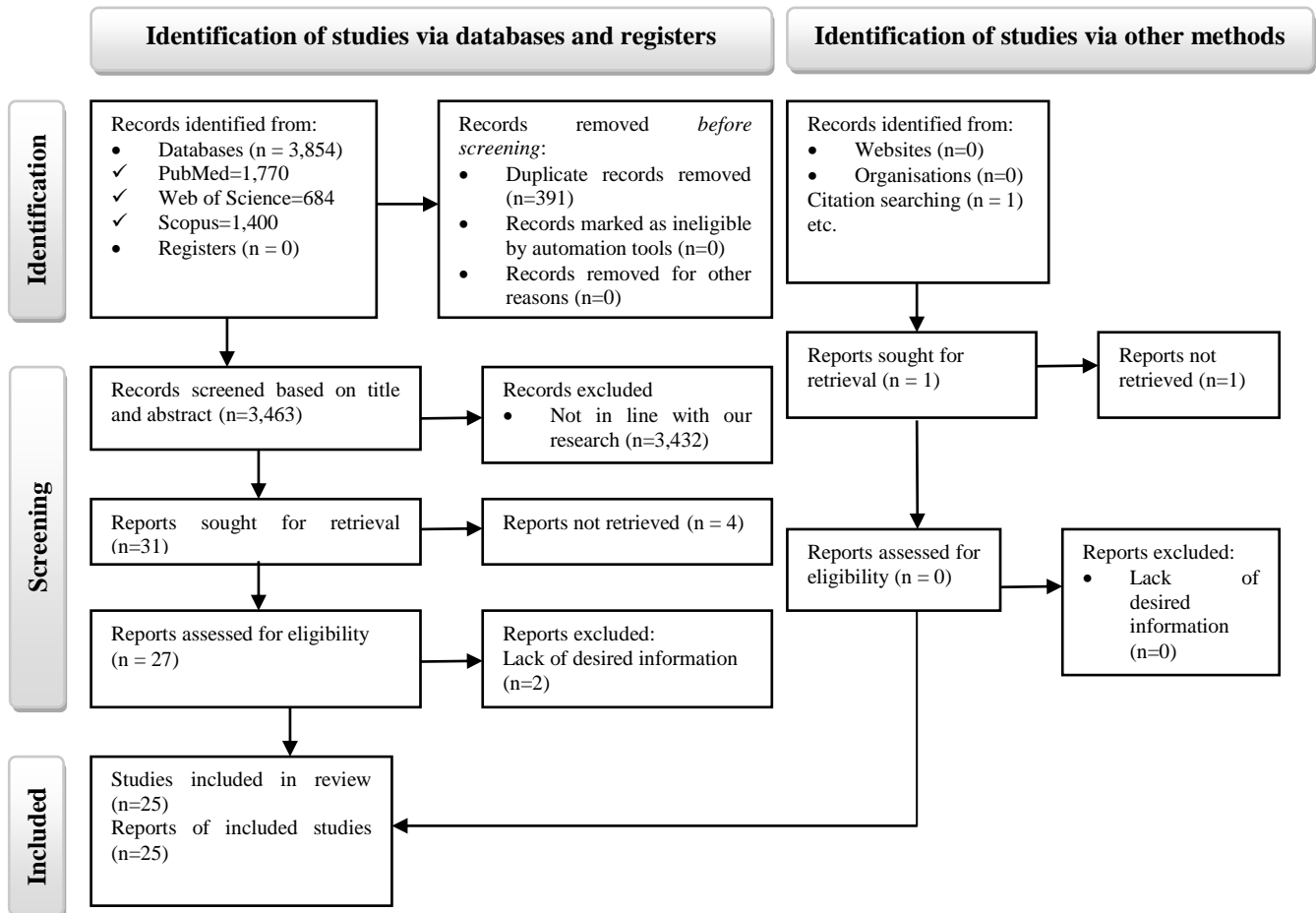


Figure 1. Flow diagram of the study selection process.

Results

The basic characteristics of the included studies in this review were presented in Table 1.

Ethical challenges during the COVID-19 pandemic

In general, ethical issues during the COVID-19 pandemic can be divided into two categories: 1) issues related to the healthcare system and 2) social issues.

1. Issues related to the healthcare system

Issues related to the healthcare system can be divided into two categories: 1) lack of resources, equipment and facilities, and manpower, and 2) problems in patient care such as triage and informed consent.

Table 1. Basic characteristics of the studies included in this review

| Author, Year | Title | Design | Sample Size | Main Findings | Reference |
|------------------------------------|--|------------------|-------------|---|----------------------|
| McGuire <i>et al.</i> , 2020 | Ethical Challenges Arising in the COVID-19 Pandemic: An Overview from the Association of Bioethics Program Directors (ABPD) Task Force | Narrative Review | N/A | Limited resources, how to address informed consent, how people participate, and inequality and racial discrimination were among the challenges. | (20) |
| Emanuel <i>et al.</i> , 2020 | Fair Allocation of Scarce Medical Resources in the Time of Covid-19 | Opinion | N/A | Lack of human resources, equipment, and inadequate hospital beds were among the challenges. | (21) |
| Mascha <i>et al.</i> , 2020 | Staffing With Disease-Based Epidemiologic Indices May Reduce Shortage of Intensive Care Unit Staff During the COVID-19 Pandemic | Original | 48 | Staff shortages, job stress, fear of the coronavirus, and death were among the challenges. | (22) |
| Chan <i>et al.</i> , 2020 | Code Blue During the COVID-19 Pandemic | Opinion | N/A | The severe shortage of Personal protective equipment | (23) |
| Mahendradhata <i>et al.</i> , 2021 | The Capacity of the Indonesian Healthcare System to Respond to COVID-19 | Opinion | N/A | Limited admission capacity, lack of resources, and lack of proper management of medical waste | (24) |
| Biddison <i>et al.</i> , 2019 | Too Many Patients. A Framework to Guide Statewide Allocation of Scarce Mechanical Ventilation During Disasters | Original | 6 | Lack of mechanical ventilation and poor health status of patients, while many patients have been hospitalized, are among the challenges. | (25) |
| Cook <i>et al.</i> , 2008 | Ethics and Rural Healthcare: What Really Happens? What Might Help? | Opinion | N/A | Cause of insufficient human resources and equipment in rural regions | (26) |
| Quinn <i>et al.</i> , 2014 | Health Inequalities and Infectious Disease Epidemics: A Challenge for Global Health Security | Opinion | N/A | Lack of access to adequate health resources such as vaccines and inadequate public education about the Pandemic | (27) |
| Ramos <i>et al.</i> , 2021 | Pandemics of COVID-19 and racism: how HBCUs are coping | Opinion | N/A | Discrimination and inequality of resource distribution during the epidemic | (28) |
| Holman <i>et al.</i> , 2021 | Risk factors for COVID-19-related mortality in people with type 1 and type 2 diabetes in England: a population-based cohort study | Original | 3,138,410 | Mortality was higher in patients with type 1 and type 2 diabetes than in patients without diabetes. | (29) |
| Fakih <i>et al.</i> , 2022 | COVID-19 hospital prevalence as a risk factor for mortality: an observational study of a multistate cohort of 62 hospitals | Original | 38,104 | Mortality in COVID_19 patients decreased over time compared to the onset of the epidemic. | (30) |
| O'Driscoll <i>et al.</i> , 2020 | Age-specific mortality and immunity patterns of SARS-CoV-2 | Meta-analysis | N/A | The mortality pattern in COVID_19 patients increase with age. | (31) |
| Kiem <i>et al.</i> , 2021 | A modelling study investigating short and medium-term challenges for COVID-19 vaccination: From prioritisation to the relaxation of measures | Original | N/A | Prioritization of vaccines based on age and vaccination of children was one of the solutions | (32) |

| | | | | | |
|--|--|------------------------|--------|--|----------------------|
| Wouters et al., 2021 | Challenges in ensuring global access to COVID-19 vaccines: production, affordability, allocation, and deployment | Opinion | N/A | Establish public communication strategies for better public acceptance of the vaccine | (33) |
| Skjefte et al., 2021 | COVID-19 vaccine acceptance among pregnant women and mothers of young children: results of a survey in 16 countries | cross-sectional survey | 17,871 | Confidence in the safety of vaccines, following the instructions for using masks, and public awareness of the disease, were the predictors of vaccine adherence in the public. | (34) |
| Bubar et al., 2021 | Model-informed COVID-19 vaccine prioritization strategies by age and serostatus | cross-sectional survey | N/A | Strategies such as speeding up the vaccination process, proper public education about vaccines and disease, and adherence to the mask can be effective. | (35) |
| Sandmann et al., 2021 | The potential health and economic value of SARS-CoV-2 vaccination alongside physical distancing in the UK: a transmission model-based future scenario analysis and economic evaluation | Original | N/A | Adequate resources and timely vaccination can be effective in reducing ethical challenges. | (36) |
| Lapolla et al., 2021 | Vaccination against COVID-19 infection: the need of evidence for diabetic and obese pregnant women | Opinion | N/A | Paying attention to contraindications to vaccination and negative consequences for the mother and fetus can be ways to prevent moral challenges. | (37) |
| Powers et al., 2021 | COVID-19 vaccine prioritization for type 1 and type 2 diabetes | Opinion | N/A | Vaccination for high-risk patients, such as diabetics, should be quick and a priority. Developing participatory programs to decide on crisis resolution, attract public participation, and compensate for staff shortages is one of the effective solutions to ethical problems. | (38) |
| Farrell, et al., 2020 | Resource Allocation Strategies and Age-Related Considerations in the COVID-19 Era and Beyond | Opinion | N/A | Allocating sufficient resources to rural areas, preventing discrimination in the distribution of resources, and allocating sufficient human resources to remote areas are effective strategies. | (39) |
| Centers for Disease Control and Prevention, 2020 | Strategies to Mitigate Healthcare Personnel Staffing Shortages | Opinion | N/A | Allocating more reinforcements and produce more personal protective equipment | (40) |
| Javadi-Pashaki et al., 2021 | COVID-19 pandemic: An opportunity to promote e-learning In the nursing profession | Letter to editor | N/A | Employing e-learning in the world to raise the level of knowledge and awareness of nurses in clinical settings to educate patients about the pandemic. | (41) |
| Ogunkola et al., 2020 | Rural communities in Africa should not be forgotten in responses to COVID-19 | Opinion | N/A | Access to deprived services and rural areas for health services and allocation of sufficient resources to these areas | (42) |
| Bagenstos et al., 2020 | May Hospitals Withhold Ventilators from COVID-19 Patients with Pre-Existing Disabilities? Notes on the Law and Ethics of Disability-Based Medical Rationing | Opinion | N/A | Establish laws such as the Affordable Care and deprivation of life-saving treatments to prevent discrimination. | (43) |
| Gur-Arie et al., 2021 | No Jab, No Job? Ethical Issues in Mandatory COVID-19 Vaccination of Healthcare Personnel | Opinion | N/A | Make appropriate decisions regarding the equitable distribution of vaccines, the elimination of discrimination in access to resources, and respect for health care workers | (44) |

1.1. Lack of resources, equipment and facilities, and manpower

Lack of resources, equipment, and manpower can involve Health Care Workers (HCWs) in ethical challenges. HCWs are health advocates and frontlines in the fight against COVID-19. Therefore, adequate resources, especially PPE, must be provided for them. The lack of these resources and equipment, especially at the beginning of a pandemic, puts them in a moral dilemma and challenge between their health, family and patients. For example, some HCWs quit their jobs for fear of infecting their families. Also, in cases of PPE deficiency, prioritizing its use among HCWs including physicians, nurses, emergency medical technicians, pharmacists, social workers, and respiratory therapists is another controversial issue. Undoubtedly, bedside HCWs have a higher priority in using PPE than cashiers (20). However, this is still a challenging and important issue. During the COVID-19 pandemic, many HCWs became infected. This lack of manpower is a major challenge in care. Therefore, it is recommended that the care and treatment of HCWs with COVID-19 be a priority over others (21, 22). Inadequate equipment such as Intensive Care Unit (ICU) beds, mechanical ventilators, and other assistive devices to treat patients is also a major challenge that forces HCWs to choose between patients to save their lives (20). In Italy, the scarcity of medical resources led to the preference of young people for ICU admission and mechanical ventilation over the elderly. Another challenge was Cardiopulmonary Resuscitation (CPR) for COVID-19 patients. The time required for arrival in the patient's room, donating PPE, and securing an invasive airway may delay CPR by up to 10 minutes. This delay in CPR can reduce patient survival by up to 10%. However, the implementation or non-implementation of CPR for the elderly over the age of 80 remains an ethical challenge due to insufficient equipment and manpower (23). In addition, the other two challenges are the improper disposal of medical waste and the lack of adequate support and monitoring to evaluate the quality of health care

services (24). Therefore, the allocation of sufficient resources and equipment in pandemics such as COVID-19 should be based on maximizing the use of limited resources, equitable treatment for different populations, and prioritizing resources as necessary.

1.2. Problems in patient care such as triage and informed consent

Triage of patients with COVID-19 can impose a wide range of negative and distressing thoughts and feelings on HCWs and ultimately lead to moral distress. Despite the importance of individual resilience for HCWs, they should not be forced to make triage decisions alone and without support. Therefore, it is recommended that triage decisions be made by a triage officer or team (22). Given the scarcity of resources, physical distances, and urgency in the treatment of patients, it is a controversial ethical issue to obtain informed consent from COVID-19 patients or their families. The fundamental question is: Are the previous standard protocols applicable to obtaining informed consent during the COVID-19 pandemic? Patients and families may not understand or agree with triage-related decisions such as not having CPR for all patients, if futile. On the other hand, the treatment of COVID-19 patients requires a quick decision. Therefore, there is less time to communicate with patients. Also, another important challenge in this area, which is still controversial, is how to obtain informed consent from unconscious patients with regard to banning people from visiting COVID-19 wards? (20)

2. Social issues

Social issues can be divided into four categories: 1) community engagement, 2) crisis management capacity in remote rural communities, 3) discrimination and health equity, and 4) vaccination.

2.1. Community engagement

The issue of community engagement has long played a key role in public health, and in particular in planning to control pandemics and address issues such as limited resource allocation.

Raising public awareness and understanding of complex issues in people can help develop protocols for responsiveness to ethical challenges when allocating scarce resources. In the state of Maryland, community engagement forums were formed from 2012 to 2014 to discuss and respond to ethical challenges in the triage of limited resources in crisis using deliberative democracy methods. This approach provided an opportunity for the legal community to make effective use of the law to address challenges in specific crises (25). Therefore, the role of community engagement in prevention and treatment during crises should not be overlooked.

2.2. Crisis management capacity in remote rural communities

This is often accompanied by challenges such as difficult access to health care, insufficient manpower in rural compared to urban areas, and scarce resources. On the other hand, many rural health centers do not have access to bioethics specialists and ethics committees (26). This may affect the ethical decisions required during the COVID-19 pandemic. Therefore, such small systems require regional coordination, and financial and political support from larger institutions to provide sufficient resources.

2.3. Discrimination and health equity

Discrimination and inequality are debatable issues in specific geographical, ethnic, racial, and economic groups. These issues are commonly seen in disadvantaged and marginalized communities. Thus, there are always concerns about access to medical centers (especially if there are physical distances), access to tests, lack of insurance, and immigration status in these groups (27). One study found that black residents in Cook County, USA make up only about 23% of the county population. However, 70% of COVID-19 mortality occurred in this population (28). Therefore, health resources should be fairly distributed among different populations in terms of geographical, ethnic, racial, and economic.

2.4. Vaccination

To date, the COVID-19 pandemic has been associated with a large number of hospitalizations and deaths in hospitals (29, 30). Despite strict control measures taken to curb the spread of the disease, it still causes major economic and social disruptions. The progressive roll-out of safe and effective COVID-19 vaccines was a crucial pharmaceutical tool to control this pandemic. However, it has led to challenges such as availability, urgency, and the gradual elimination of associated epidemic time (31, 32). It is important to further clarify how vaccines should be distributed when the number of vaccine doses is limited and one aims to minimize morbidity and mortality of patients and the stress on the HCWs. These issues are very important for countries that are still in the early stages of vaccination (33, 34). For vaccines that reduce disease severity, modeling studies have shown that vaccination strategies with a preference for older individuals may significantly reduce COVID-19 mortality due to strong age dependence for severe infections (35, 36). On the other hand, the consideration of comorbidities such as obesity or diabetes may be relevant in the prioritization scheme, as these are independent risk factors for mortality with an age-dependent effect. Also, lately, some side effects of the vaccine, such as fever, chills, headache, fatigue, lethargy, and pain at the injection site, have caused many people refuse the vaccine despite having it adequately (37, 38).

Coping Strategies for ethical challenges during the COVID-19 pandemic

1. Issues related to the healthcare system

Based on the recommendations of the American Geriatrics Society, forming triage committees for scarce resource allocation and developing clear resource allocation strategies can help address issues related to the scarcity of resources and equipment (39). The Centers for Disease Control and Prevention (CDC) provided contingency capacity strategies to mitigate staffing shortages such as adjusting staff schedules, hiring additional HCWs, rotating HCWs, cancel all non-essential procedures and visits, identify additional HCWs

to work in the facility, and request HCWs to postpone elective time off from work. Crisis capacity strategies recommended to mitigate staffing shortages, such as the use of HCWs of asymptomatic, suspected, or confirmed SARS-CoV-2 infection, and the implementation of regional plans to transfer patients with COVID-19 to treatment facilities with enough manpower (40). Also, implementing non-incineration medical waste treatment technologies, and developing the use of environmentally friendly PPEs are other appropriate strategies that can be developed by governments (24). Furthermore, the implementation of telemedicine should be increased due to the possibility of providing health services in epidemic conditions (41).

2. Social issues

Social issues can be divided into four categories: 1) community engagement, 2) crisis management capacity in remote rural communities, 3) discrimination and health equity, and 4) vaccination.

2.1. Community engagement

Issues related to community engagement can be improved by raising awareness among community members and involving them in prevention programs and preventing the receipt and dissemination of misinformation. In this regard, the purpose and role of participants in pandemic prevention programs must first be identified. Second, these measures must be in a conscious and knowledge-based framework, with a history of demographic composition and current population status. Obviously, more attention should be paid to vulnerable populations and priority should be given to participants (20).

2.2. Crisis management capacity in remote rural communities

Issues related to crisis management capacity in remote rural communities can be improved by developing policies and guidelines to address rural population concerns (20). However, resources and efforts to control the disease in rural areas must be quick and practical. Use innovative approaches to disseminate credible information.

For example, the use of town criers and other tailor-made approaches will increase awareness and attention to preventive steps to COVID-19 pandemic containment (42).

2.3. Discrimination and health equity

Experts and advocates supporting at-risk communities such as people with disabilities should play a more active role in issues related to discrimination and health equity. Also, formulate and enforce strong laws to prevent discrimination and health inequality based on race, color, ethnicity, nationality, age, and gender (20). Also in the United States, there are laws called Affordable Care, Rehabilitation, and Disabled Laws that can serve as a model for other health systems around the world. These laws, which prohibit any discrimination based on race, color, age, sex, nationality, disability, or religion, can prohibit health care providers from discriminating against patients (43).

2.4. Vaccination

Governments and health policymakers need to pay special attention to issues such as the availability and equitable distribution of vaccines to eradicate the COVID-19 pandemic. Also, high-income countries should help low-income countries get public vaccinations (31, 32). Also, another solution is to provide people with a safe vaccine. Because some of the side effects of the vaccine have induced people to distrust the vaccines. On the other hand, giving awareness and reassurance to the people about the benefits of vaccination compared to not injecting it can be another solution to cope with this challenge (44).

Limitations

Despite an extensive search of various databases, not all studies may have been found in this subject area. Lastly, since this review included only studies published in English, there may be issues related to a language barrier and other findings in other major languages that were not accessed and included in the analysis.

Conclusion

Overall, the ethical challenges in the COVID-19 pandemic provide lessons for the future. Coping with ethical challenges in crises such as COVID-19 requires changing health empowerment policies and strategies based on evidence-based research. On the other hand, overcome on these challenges requires interdisciplinary collaboration and fast efficient decisions. Therefore, the present study introduced ethical challenges and coping strategies during the COVID 19 pandemic. The experience gained from this pandemic can be considered by managers and policymakers of health care systems for coping with ethical challenges.

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Declaration of Conflicting Interests

The Author(s) declare(s) that there is no conflict of interest

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