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Risk, Vulnerability, Resilience, and Stigma in the Face of the Pandemic in Bioethics Literature From 2020 to 2024

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Bioethics is the argumentative discipline of decisions and actions that reduce conflicts of interest, dilemmas, or asymmetries between the parties involved in biomedical research. The objective of this work was to review and compare the dimensions used by bioethics in the communicative management of the pandemic, namely: risk, vulnerability, resilience, and stigma. A documentary, exploratory, transversal, and retrospective work was carried out with a sample of sources indexed in international repositories, considering the search by keywords and the publication period from 2020 to 2024. The results demonstrate the prevalence of supply, contagion, symptoms, and help against COVID-19.

Keywords: COVID-19, bioethics, stigma, resilience, risk, vulnerability

Introduction

Bioethics, as an analytical discipline of biomedical science, specifically the biomedical science that managed the pandemic of the new SARS CoV-2 coronavirus and the COVID-19 disease, was associated with various categories because such management was inter, multi, and transdisciplinary (Bharti, 2020).

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Biomedical science managed the pandemic because governments declared, in the face of the emergency of an unknown coronavirus, an exceptional situation that could only be guided by the advances of biomedical science (Khan et al., 2022). Such advances were not disseminated, but recommendations to contain or mitigate the pandemic were.

In that sense, the management of the pandemic was essentially a communication strategy, inter multi, and transdisciplinary.

Inter- and multidisciplinary strategies consist of communicating diverse recommendations that at first glance suggest the collaboration of several disciplines, but always around epidemiology (Duan, Bu, & Chen, 2020).

Transdisciplinary strategies, a little more complex, assumed that some indicators of the pandemic will be considered common to the disciplines involved in communicative management (Bologna et al., 2021). This was the case of the variables of risk, vulnerability, resilience, and stigma.

In this way, bioethics, together with epidemiology and other sciences involved in management, used the four categories interchangeably to explain some elements surrounding the pandemic and its impact on the relationships between biomedical and health personnel with respect to the infected, sick, or dead by COVID-19 with family members and close people (Saeed et al., 2020).

The risk category, widely used in the biomedical field, was used to recommend distancing and confinement as measures to reduce the probability of contagion, although in the same communications, the vulnerability category was introduced to recognize comorbidities (Siller & Aydin, 2022).

The resilience category was the least used in the communicative management of the pandemic because at the beginning there was speculation about the impact of the new coronavirus on social and demographic strata (Roelen et al., 2020). In this sense, information was disseminated that groups of older adults were more vulnerable or less resilient to the health crisis.

However, the imprecision of the communicative management of the pandemic soon increased the uncertainty associated with the exceptional situation declared by governments. Furthermore, the saturation of hospitals, the lack of resources, and the increase in infected, sick, and dead people led to the stigmatization of biomedical personnel (Ransing et al., 2020). Users of the public health service attributed carrying the virus to doctors and nurses and stigmatized them as a source of infection.

Bioethics plays a crucial role in risk assessment and management in various aspects of research and healthcare (Mahmud, Zaman, & Islam, 2022). The concept of risk is fundamental to bioethical considerations, as it involves evaluating the possible harms and benefits associated with different interventions. In biomedical research involving human subjects, it is essential to ensure that the risks to participants are proportional to the potential benefits. However, the ethics of risk displacement presents a complex challenge, as transferring risks from one group to another can raise ethical concerns.

One area where the concept of risk is particularly relevant is in health disparities research (Srivastava, 2020). Assessing individual disease risk in underserved populations requires careful consideration of ethical implications and potential harms. Furthermore, bioethics research emphasizes the importance of rethinking the benefits of health research to address vulnerabilities and risks of harm and exploitation, thereby safeguarding autonomy. The application of the dignity of risk in bioethics consultation highlights the tension between ensuring patient safety and respecting individual autonomy. This underscores the importance of balancing risk management with promoting scientific validity and academic freedom in bioethical decision-making.

In an uncertain bioethics, moral risk and human dignity intersect, emphasizing the need to consider the psychological and moral dimensions of risk assessment (Boris, 2022). By integrating empirical research in bioethics with health disparities research, a more complete understanding of risk factors and ethical considerations can inform decision-making and policy development. Overall, bioethics serves as a critical framework for navigating the complexities of risk assessment and management in various healthcare and research settings.

Review of the Relationships Between Bioethics, Risk, Vulnerability, Resilience, and Stigma in the Face of Pandemics in the Literature From 2020 to 2024

Do the relationships between bioethics, risk, vulnerability, resilience, and stigma reported in the literature differ as the pandemic spread from 2020 to 2024?

First: Bioethics as a science that evaluates informed consent increased its observations regarding risk, vulnerability, resilience, and stigma in the face of the pandemic (Ramaci, Barattucci, Ledda, & Rapisarda, 2020). Bioethics as a discipline evaluating autonomy reduced its observations regarding risk, vulnerability, resilience, and stigma in COVID hospitals. Bioethics as an evaluative discipline of justice suspended its observations regarding risk, vulnerability, resilience, and stigma in cases of those infected, sick, and dead from COVID.

Method

Design: Cross-sectional, exploratory, qualitative, and retrospective study.

Sample: A non-random selection of sources indexed in international repositories was carried out, considering the search by keywords in the period from 2020 to 2024.

Instruments: Google Scholar for abstract search, artificial intelligence paper digest for literature review and liger software for abstract analysis.

Procedure: A search will be carried out in Google Scholar by keywords: “Bioethics”, “Risk”, “Vulnerability”, “Resilience”, “Stigma”, and “COVID” in a period from 2020 to 2024.

The summaries were analyzed with artificial intelligence paper digest and processed with Ligre software.

Results

The centrality analysis identifies the hegemony of a node in terms of proximity, intermediation, and influence with respect to others. The results demonstrate the prevalence of supply as the central axis of the research agenda from 2020 to 2024 in the literature consulted.

The clustering analysis determines the profusion node around which the other nodes revolve. The findings demonstrate that contagion is the node around which the other elements inherent to the pandemic surround.

The structuring analysis reveals the beginning and end of the dimensional learning of risk, vulnerability, resilience, and stigma published in the period from 2020 to 2024. The structure shows a beginning in the symptoms of risk and the culmination of the process in help as an indicator of resilience.

The values of centrality, grouping, and structuring suggest the non-rejection of the hypothesis related to the significant differences between the theoretical structure with respect to the observations of the present study.

Discussion

The contribution of this study lies in the establishment of a learning network founded on the nodes of supply, contagion, symptoms, and help as central axes, unifiers, initiators, and illuminators of risk, vulnerability,

resilience, and stigma in the face of the pandemic.

The literature on risk, vulnerability, resilience, stigma, and COVID-19 encompasses a wide range of factors that influence people's well-being during the pandemic. Several studies explore the vulnerabilities and resilience of marginalized populations, including children of sex workers, drug users, widows, and children and youth who provide care (Vasara, Simola, & Olakivi, 2023). These studies emphasize the importance of understanding the risk and protective factors that impact these groups during health crises (Leung et al., 2024).

Research also examines the economic risks associated with COVID-19 and how risk and resilience factors influence mental health outcomes (Aung, Fischer, & Wang, 2022). Additionally, indicators have been developed to assess exposure, vulnerability, and resilience with high resolution (Dwinantoaji & Sumarni, 2020). Various factors, such as reduced income, job insecurity, and lack of social support, have been identified as significant contributors to mental health challenges during the pandemic (Bhattacharya, Banerjee, & Rao, 2020).

The psychological aspects of resilience among healthcare workers and doctors have also been a focus of study (Jain et al., 2023). A resilience training model based on psychotherapeutic principles has been proposed to support hospital healthcare workers (Yu et al., 2023). Furthermore, social support, faith, and resilience have been identified as key protective factors for doctors' mental health (Mukumbang, 2021).

Beyond the healthcare sector, research highlights the vulnerability and resilience of global trade supply chains, as well as the tourism and hospitality workforce during the pandemic (Chae et al., 2021). Studies also explore risk and resilience-based efficiency in supply chains (Burke-Garcia et al., 2021). Moreover, the perceived vulnerability and severity of the pandemic have been found to positively influence professional resilience among workers in the tourism and hospitality sector (Reza-Paul et al., 2022).

Overall, this literature review underscores the importance of understanding risk, vulnerability, resilience, and stigma across diverse populations during the COVID-19 pandemic (Miconi et al., 2021). By identifying these factors and developing targeted interventions, policymakers and health professionals can better support individuals and communities facing challenges during this global health crisis.

In this work, the predominant axes of risk learning, vulnerability, resilience, and stigma around the pandemic were established. It is recommended to extend the study towards the associations or dependency relationships between the four dimensions, as well as the extension of the observation period in order to establish differences before and after the pandemic.

Conclusion

The objective of this work was to compare the theoretical structure of risk, vulnerability, resilience, and stigma in the face of the pandemic. The results demonstrate the prevalence of four axes related to supply, contagion, symptoms, and help. In reference to the theoretical structure, it is recommended to extend the model to dependency or associative relationships in order to anticipate a predominant behavior in the face of the health crisis. The areas of opportunity of the model would be overcome if the model is extended to another period before the pandemic, as well as the number of observations to establish a normal distribution that allows a more robust analysis.

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