

Short Communication

Infodemic and its Impact on the Mental Health of Researchers and Health Professionals: The COVID-19 Pandemic Aftermath

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deborah.hilton@gmail.comSubmission: 7th July, 2024
First revision: 2nd September, 2024
Second revision: 22nd September, 2024
Accepted: 9th October, 2024

DOI: 10.51846/jucmd.v4i1.3328



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Abstract

Before the pandemic, research focused on measuring stress and workload in the workplace. However, during the pandemic, the mental health of researchers, clinicians, policy makers, and the public, became a significant topic. The COVID-19 pandemic not only triggered a global health crisis but also unleashed an “infodemic”—an overwhelming flood of information significantly impacting the mental health of researchers and health professionals. This short communication is an attempt to explore how mental health issues were often overlooked during the global pandemic. Addressing mental health issues for researchers and health workers globally is crucial. As we continue to deal with COVID-19 challenges, understanding the large amount of existing information and the future impact on mental health will be important and interesting to track in the coming years.

Keywords: COVID-19, Health Professionals, Mental Health, Researchers, Pandemic.

Introduction

The mental health and well-being of researchers, clinicians, health professionals, policymakers and the public during the pandemic and afterwards was a significant concern and will continue to be in the future. The COVID-19 pandemic also triggered a global health crisis.¹ This led to an “infodemic”—an overwhelming surge of scientific information.² Unlike previous infectious disease outbreaks, such as the Spanish flu, where information was scarce, the COVID-19 pandemic has been marked by a vast and rapidly expanding body of scientific literature, policy documents, and media reports.³ The unprecedented volume of publications, guidelines, and research outputs during the COVID-19 pandemic has placed an extraordinary burden on those responsible for synthesizing and applying this knowledge, and hence as a result has the potential to have detrimental effects on one’s mental health. In addition to the rise in information, there was also misleading information.⁴

The Infodemic

The rapid dissemination of information during the COVID-19 pandemic had positive and negative effects. On one hand, the swift exchange of scientific findings

and public health guidelines was crucial in managing the spread of the virus.² Not only did the sheer volume of information increase but a misinformation proliferation occurred including conflicting or inaccurate information.⁴ Health professionals were faced with ever changing protocols, guidelines, and treatment recommendations, often based on preliminary data. There was the need to stay informed and there was the necessity to provide accurate patient information. This was leading to stress and possibly even burnout. Researchers, on the other hand, faced an avalanche of scientific literature, some of which was released without rigorous peer review due to the situation’s urgency. The need to rapidly produce and disseminate research findings contributed to a culture of “publish or perish”, further exacerbating mental health challenges. In fact, Suart and colleagues reported increased publication pressure across academic researchers in Canada following the pandemic.⁵

Impact of the Pandemic on Mental Health

This phenomenon significantly impacted the mental health of the community, researchers and healthcare professionals, and there was immense pressure due to the demands of the pandemic. The infodemic’s impact on mental health was profound, particularly among those on the frontlines of the pandemic response. Health professionals were inundated with ever-changing protocols and guidelines, adding to their workload and stress. There were wide and diverse gaps in the knowledge of COVID-19 and there was no linkage globally between studies, authors and institutions.² Medical assistants in Germany reported increased levels of symptoms and signs related to anxiety, depression, stress and burnout that could relate to workload requirements and time burdens leading to worse psychosocial conditions occurred during the COVID pandemic.⁶ The uncertain situation and the responsibility of providing accurate and up-to-date care created a perfect storm of stress. Vindegaard and Benros reported on

the need for social support of health professionals in relation to the potential for mental disorder outbreaks.⁷

Researchers were not immune to these pressures with concerns related to insufficient personal protective equipment and the need for support.⁸ Challenges included delayed ethical clearance, disrupted funding and grant applications, obstacles related to participant availability and the need to pivot towards pandemic-related priorities.⁹ There was a rapid pace of scientific discovery, combined with the need to sift through vast amounts of data. This potentially led to feelings of overwork or being under-equipped. The pressure to contribute to the science relating to the virus, with time pressures and under-resourcing compounded difficulties. Additionally, the competitive nature of academic publication pressure, with pandemic intensification, could be related to misconduct and burnout.⁵

Impact of Misinformation on Mental Health

Misinformation significantly impacted mental health and healthcare decision making. The spread of false or misleading information undermined public trust in science and medicine, resulting in misunderstandings and decreased compliance to guidelines.¹⁰ Health professionals were often left to correct misconceptions and combat misinformation. This added to an already heavy workload. For researchers, the proliferation of misinformation created an additional layer of complexity and burden on those working in these disciplines aside from purely the infodemic. The need to navigate and refute false claims while simultaneously advancing legitimate scientific inquiry created exhaustion. The need to produce reliable research where misinformation was prevalent resulted in frustration and powerlessness. Recommended solutions and strategies for minimising misinformation for the future have been documented.¹¹

Coping Strategies and Support Systems

Several strategies emerge as crucial for both immediate and future crises in addressing the psychological impact of infodemics on health professionals. Communication strategies are the most important. Accurate information that is checked, enhances communication and is vital for minimizing anxiety that can arise from misinformation. Utilising fact checking, reviewing regular reliable updates and adherence to evidence-based guidelines is crucial.¹⁰ Mental health resources including counselling services, forums for discussion and peer support, are crucial to manage the stress associated with pandemics that maybe related to information overload or other factors.¹² Other therapies may also be beneficial such as art or creative activities to help individuals express emotions, manage stress, and improve mental well-being.

Goal setting and prioritisation of necessary tasks, facilitates time management and workload distribution and hence may combat burnout. Micro-breaks have been reported as beneficial for improving overall performance and vigour and

decreasing fatigue.¹³ Promoting a collaborative environment, rather than fostering competition, can reduce the pressures of “publish or perish” and enhance research quality. Finally, educational campaigns to counter misinformation can alleviate the strain on professionals by ensuring the public receives accurate information. These strategies address current challenges and provide a framework for managing the psychological impact of information overload in future pandemics. It must be remembered that while researchers and health professionals are working or adjusting to the COVID-19 pandemic and the impact afterwards, they are also community members, may have families and have a life outside of their work in that they may be involved in social, sport or religious organizations. Research on coping or resilience strategies related to stress, anxiety, burnout and depression that have been conducted in patients or employees also provides useful coping or alleviation information relevant to professionals. A randomized controlled multicentre trial provided evidence that digital home exercise during lockdowns had beneficial effects on mental health when parameters such as sleep quality, anxiety or mental well-being were assessed.¹⁴ E-mental health solutions were also discussed regarding social media platforms, e-learning content, online resources and mobile applications and the usage of mHealth apps.¹⁵

Lessons to be Learned

Any global catastrophe, with its disruptive societal changes, necessitates protective and resilience mechanisms to safeguard mental health. Reflections on and consideration of the experiences of health professionals and researchers are crucial. We must reflect on past experiences in terms of research and lockdowns while looking to the future. Medway and Micik aimed to review the experiences of South Australian COVID-19 quarantine medihotel nurses using van Manen’s phenomenology of practice method. They identified four themes and two of these related to unity on the frontline and feeling disappointed by organizational systems.¹⁶

Despite the challenges faced, valuable lessons were learnt, and key takeaways for the future identified. Future studies will explore the long-term effects and outcomes, including a 2024 publication by Reutter and colleagues titled mental health improvement after the COVID-19 pandemic in individuals with psychological distress.¹⁷ In the future, there is also a requirement to objectively measure suicide rates, self-harm, and other mental disorders.¹⁸ During the pandemic, many people turned to religion for comfort and explanation. Bentzen’s rough estimate suggests that by April 1, 2020, over half of the world’s population had prayed for an end to the coronavirus, indicating a rise in global religiosity.¹⁹ While this isn’t the main topic, it’s worth noting that there needs to be more research on the effectiveness of religious practices in coping with crises given the dearth of scientific justification for religion. If over 50% of the world’s population prayed, as mentioned, securing funding and conducting studies to evaluate the potential beneficial outcomes or harms maybe

warranted to justify religiosity, but also would be highly challenging, incredibly complex and financially unviable due to the sheer number of people involved.

Conclusion

The infodemic during the COVID-19 pandemic has had a lasting impact on the mental health of researchers and health professionals. The overwhelming influx of information and the spread of misinformation created significant challenges for those working in these fields. The most critical takeaway to address these challenges incorporates a multi-faceted approach, including clear communication, mental health support, and promoting collaboration as opposed to competition. As a result of implementing these strategies, we can better support the mental well-being of those who are critical in responding to global health crises in the future. This paper calls for further research to develop and validate coping strategies that can mitigate the mental health consequences of information overload in future public health crisis. It will be interesting to see the results of follow-up studies conducted over the next decade.

Conflicts of Interest: The author declares no conflict of interest.

Funding Disclosure: none to declare.

Acknowledgement: Ms Catherine West OAM (deceased), who worked as Senior Executive Officer, Australian Society for Medical Research); for her leadership, mentorship & friendship. This contributed greatly to the enhanced mental health and well-being of researchers during the pandemic & her guidance helped in the successful submission of abstracts by me related to this topic, to the Australian Society for Medical Research hybrid conference in November, 2022.

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