

Metaverse and Public Health: Mini Review

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The concept of the Metaverse, an immersive virtual reality and internet iteration, has garnered significant attention as a way to transcend physical limitations and create a dream-like world. This article explores the role of the Metaverse in healthcare, focusing on its applications in training, collaboration, communication, telemedicine, wellness promotion, and public health campaigns. The ability to create immersive virtual environments enables researchers to study disease outbreaks, develop prevention strategies, and educate healthcare professionals globally. Virtual health clinics and telemedicine platforms in the Metaverse can provide essential healthcare access to underserved areas, while virtual wellness programs promote health and well-being on a global scale. Furthermore, the Metaverse offers a unique platform for interactive public health campaigns, leveraging its immersive nature to engage users and advocate for positive behavior change. However, challenges such as data privacy, security, mental health implications, and the cost of technology adoption must be addressed. Despite these challenges, the Metaverse holds tremendous potential in transforming public health practices. Public health professionals and policymakers must stay informed about these developments and ensure the maximization of benefits while mitigating risks. As technology evolves, innovative applications of the Metaverse are expected to continue shaping the future of healthcare and public health.

KEYWORDS: Metaverse, Public Health, Telemedicine

INTRODUCTION

The consistent human urge to defy reality is eternal. Human beings have always tried to surpass their ancestors in terms of gaining knowledge and widening the horizons for mankind. Metaverse, as many believe is the iteration of virtual reality and the internet. Metaverse is a way to transcend into a real dream-like world, providing users with experiences one can never even think of pursuing in the physical world. Colloquially, Metaverse is a 3D network of virtual worlds that focuses primarily on social and economic connections. Along with the Internet of Things, cloud augmented reality and quantum computing, computing this Fortnite fantasy of Metaverse has stepped into the healthcare world as well. While such technologies are made useful in all spheres of life, they have an extra elaborated role in healthcare training and practices. Augmented reality technologies have been frequently used in teaching modules, medical training and hands-on practices of surgical procedures that help in learning complex procedures with precision.¹

COLLABORATION AND COMMUNICATION ON A GLOBAL SCALE

One of the primary benefits of the Metaverse is its ability to facilitate collaboration and communication on a global scale. The ability to create immersive virtual environments that simulate real-world scenarios opens up new avenues for public health research and education. For example, the Metaverse could be used to create simulations of disease outbreaks, allowing researchers to study the spread of infections and develop more effective prevention strategies.

VIRTUAL HEALTH CLINICS AND TELEMEDICINE PLATFORMS

The Metaverse can also be used to promote health and wellness, particularly in areas where access to healthcare is limited. Virtual health clinics and telemedicine platforms could be established in the Metaverse, providing access to medical professionals and resources to people in remote or underserved areas. Similarly, the Metaverse could be used to create virtual wellness programs, such as fitness classes and meditation sessions, that can be accessed from anywhere in the world.

PROMOTING PUBLIC HEALTH CAMPAIGNS AND ADVOCACY

Moreover, the Metaverse can provide a platform for public health campaigns and advocacy. Social media has already proven to be a powerful tool in mobilizing public opinion and promoting social change. In the Metaverse, organizations can create interactive campaigns that engage users in a more immersive and personalized way. For example, a virtual reality simulation of the effects of smoking could be used to

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CHALLENGES IN IMPLEMENTING THE **METAVERSE**

However, the Metaverse is not without its challenges. As with any emerging technology, there are concerns about data privacy, security, and the potential for abuse. Given the immersive nature of the Metaverse, there is also a risk of addiction and other negative effects on mental health. Additionally, the technology required to create immersive virtual environments is still relatively new and expensive, which may limit the widespread adoption of the Metaverse in public health.

CONCLUSION: A TRANSFORMATIVE ROLE IN PUBLIC HEALTH

Despite these challenges, the potential benefits of the Metaverse in public health are significant. As technology continues to evolve, it is likely that we will see more and more innovative applications of the Metaverse in healthcare and public health. As such, it is essential that public health professionals and policymakers keep abreast of these developments and work to ensure that the potential benefits are maximized while minimizing the risks.

In conclusion, the Metaverse has the potential to play a transformative role in public health. From research and education to health promotion and advocacy, the Metaverse offers a range of innovative solutions to some of the most pressing challenges facing global health today. As we continue to explore the possibilities of this emerging technology, it is vital that we remain mindful of the potential risks and work collaboratively to ensure that the benefits are realized for all.

REFERENCES

1. Abbas F. The Dawn of the metaverse in healthcare. Omnia health. (Online Article). Available from: https://insights.omnia-health.com/technology/dawnmetaversehealthcare?utm source=AdWords&utm medium=Paid +Search&utm_campaign=AEL23OMA-RK-Insights-

Dynamic&utm term=%7Bkeyword%7D&utm content =Healthcare+technology&gclid=CiwKCAjwx eiBhBGEi wA15qLN5OlopAI4005YACRzxlvIdlwI2n2E3fTeP5UbrO h6GGf2tgJSX2g1BoCzCoQAvD BwE [Last Accessed on 15th May, 2023]

2. Bhattacharya S, Varshney S, Tripathi S. Harnessing public health with "metaverse" technology. Frontiers in Health Public 2022. https://doi.org/10.3389/fpubh.2022.1030574

3. Blumenthal D, Tavenner M. The "meaningful use" regulation for electronic health records. New England Journal of Medicine 2010;363(6):501-4.

4.Baker SA, Morrison DM, Carter WB, Verdon MS. Using the theory of reasoned action (TRA) to understand the decision to use condoms in an STD clinic population. Health Educ Q. 1996 Nov;23(4):528-42. https://doi.org/10.1177/109019819602300411.

5. Lupton D. Health promotion in the digital era: a critical commentary, Health Promotion International 2015;30(1):174-83.

https://doi.org/10.1093/heapro/dau091

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