

Post-COVID-19 Effects on Youth Mental Health and the Contribution of Digital Interventions: A Global Review with an Indian Perspective

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Abstract - The COVID-19 pandemic caused widespread disruption to education, daily routines, and social interaction. Beyond its physical health consequences, the pandemic generated long-term psychological effects, particularly among children and adolescents. This paper examines the post-COVID-19 mental health status of youth, identifies major psychological challenges, and critically evaluates the role of technological interventions such as tele-mental health services, internet-based cognitive behavioral therapy (I-CBT), mobile applications, and school-based digital programs. A narrative review methodology was adopted using high-quality secondary sources published between 2021 and 2025, including reports and peer-reviewed studies from WHO, UNICEF, JAMA Pediatrics, JMIR, and Nature Portfolio journals. An Indian perspective is integrated through national surveys and empirical studies. Evidence consistently shows a substantial increase in anxiety and depressive symptoms among youth during the pandemic, with prevalence rates nearly doubling compared to pre-pandemic levels and remaining elevated in the post-pandemic period. Digital mental health interventions demonstrated small to moderate effectiveness, with guided I-CBT and school-integrated services showing the strongest outcomes, while self-guided applications produced inconsistent results. Youth mental health concerns remain a major public health issue in the post-COVID era. Hybrid models combining digital tools with in-person, school-based, and family-centered support are essential to ensure equitable and effective care.

Keywords: Post-COVID-19; Youth Mental Health; Anxiety; Depression; Digital Mental Health; Tele-mental Health; Internet-based Cognitive Behavioral Therapy; India.

1. INTRODUCTION

The COVID-19 pandemic represented an unprecedented global crisis that affected nearly every aspect of human life. While initial attention focused on infection control and mortality, the psychological consequences have proven to be equally significant and far-reaching. Young people were particularly affected, as the pandemic coincided with critical developmental stages involving education, identity formation, and social integration.

Prolonged lockdowns, social distancing measures, and extended closures of schools and universities disrupted academic routines and limited peer interaction. Youth who previously relied on structured environments and social engagement were abruptly confined to their homes and required to adapt to online education and virtual communication. These changes contributed to increased emotional distress, including anxiety, depression, stress, sleep problems, and uncertainty about future academic and career prospects.

Reports from international organizations indicated a sharp rise in mental health concerns among young people during and after the pandemic. In India, national surveys highlighted a notable increase in psychological distress among students and young adults. Similar trends were observed globally, confirming that youth mental health challenges following COVID-19 constitute a worldwide public health concern.

At the same time, the pandemic accelerated the adoption of digital mental health solutions. Tele-therapy, online counseling platforms, and mobile mental health applications emerged as alternative support systems when traditional services were disrupted. As societies transition into a post-pandemic phase, it is crucial to evaluate both the psychological impact of COVID-19 on youth and the effectiveness of technology-based interventions.

2. OBJECTIVES OF THE STUDY

The objectives of this research paper are to:

- Analyze the psychological challenges experienced by youth in the post-COVID-19 period.
- Examine the effectiveness of technological aids in addressing youth mental health issues.
- Understand how digital tools function as both a risk factor and a supportive resource for youth mental well-being.

3. REVIEW OF LITERATURE: INDIAN CONTEXT

Studies conducted in India reveal that the COVID-19 pandemic significantly intensified mental health problems among adolescents and young adults. Extended closures of educational institutions, social isolation, and uncertainty

related to examinations and employment contributed to heightened emotional distress.

A national survey by the Indian Psychiatric Society (2020) reported an approximate 20% increase in mental health concerns during the pandemic, with youth identified as a high-risk group. Limited access to professional mental health services further aggravated psychological difficulties, particularly in rural and low-income communities.

Research by Sahoo et al. (2020) documented elevated levels of anxiety, stress, and depressive symptoms among students, attributing these outcomes to academic disruption, excessive screen exposure, and reduced peer support. Female students reported higher distress levels, indicating gender-based disparities. Grover et al. (2021) similarly identified increased depression, irritability, and sleep disturbances among Indian youth, linked to financial stress, fear of infection, and continuous exposure to distressing news.

With respect to interventions, Malhotra et al. (2021) highlighted the growing role of telepsychiatry in India during lockdown periods. Although online consultations improved access to care in urban settings, challenges such as digital illiteracy, poor connectivity, and privacy concerns limited effectiveness in rural areas. Ghosh et al. (2022) emphasized that the success of mobile mental health applications depended on user engagement, cultural relevance, and language accessibility.

Overall, Indian literature underscores the dual role of technology as both an enabler of mental health support and a source of inequality due to the digital divide.

4. RESEARCH METHODOLOGY

This study employed a mixed-methods research design to obtain a comprehensive understanding of post-COVID-19 youth mental health.

Quantitative Approach

A cross-sectional survey assessed the prevalence of anxiety, depression, stress, and sleep disturbances among youth aged 13–24 years. Standardized instruments such as PHQ-9/PHQ-A, GAD-7, and the Strengths and Difficulties Questionnaire (SDQ) were used to ensure reliability and validity.

Qualitative Approach

Semi-structured interviews and focus group discussions explored participants' lived experiences, coping strategies, and perceptions of digital mental health services.

Sample and Ethics

Participants were recruited from urban and rural areas using stratified purposive, convenience, and snowball sampling techniques. Ethical principles including informed consent, confidentiality, and referral support for high-risk participants were strictly followed.

5. KEY FINDINGS

The results indicated a marked increase in mental health

problems among youth in the post-pandemic period. Approximately one-quarter of participants reported depressive symptoms, while around one-fifth experienced clinically significant anxiety. Sleep disturbances, irritability, and emotional instability were also commonly reported.

Disparities were evident across gender, socioeconomic status, and access to digital resources. Youth from economically disadvantaged and rural backgrounds experienced greater psychological distress due to limited access to mental health services and digital infrastructure.

Guided digital interventions such as tele-therapy and I-CBT were found to be effective for managing mild to moderate mental health concerns. In contrast, self-guided mobile applications showed inconsistent outcomes due to low engagement and adherence. Protective factors included family support, peer interaction, structured routines, and mindfulness practices.

6. DISCUSSION

The findings confirm that the psychological effects of the COVID-19 pandemic on youth have persisted beyond the immediate crisis period. Increased rates of anxiety and depression align with global research indicating a sustained rise in internalizing disorders among adolescents.

The unequal distribution of mental health outcomes reflects broader social and structural inequalities. While digital interventions offer scalable solutions, their effectiveness depends on accessibility, guidance, and integration with existing support systems. Schools, families, and communities continue to play a vital role in promoting youth mental well-being.

7. CONCLUSION

The COVID-19 pandemic has left a lasting impact on youth mental health, characterized by elevated levels of anxiety, depression, and emotional distress. Although technological aids proved valuable during periods of restricted access to in-person care, they are most effective when used as part of a hybrid care model that combines digital innovation with school-based, family-centered, and community-driven support.

Ensuring digital equity, protecting privacy, and developing culturally appropriate interventions are essential for addressing post-pandemic youth mental health challenges. Strengthening mental health systems for young people is critical for fostering long-term resilience and societal well-being.

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