

Chapter 9

Technology–Facilitated Assessment, Monitoring, Treatment, and Intervention for Mental Health and Behavioral Issues Among Individuals With Special Needs

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ABSTRACT

Children and youth with disabilities are at a high risk of developing mental health and behavioral disorders due to functional limitations in important cognitive, social, emotional, and communication domains. The purpose of this study is to describe the status of current research on technology-based solutions to address mental health and behavioral challenges among individuals with special needs. Several trends were noted. First, there has been an increasing acceptance of telemental health provision. Second, contemporary research has gone far beyond voice calling, texting, emailing, video chatting, or videoconferencing. The authors highlight advanced technologies such as web-based interactive modules, computer games, virtual reality, wearable devices, and artificial intelligence. Third, technology-based solutions have been developed targeting a wide range of mental health and behavioral issues, ranging from anxiety, stress, depression, loneliness, aggression, eating disorder, to PTSD. One population of special needs, autism spectrum disorder, has received an exceptional amount of attention.

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INTRODUCTION

Students' psychological well-being plays a critical role in their academic and social outcomes and successful transition into adulthood, yet there has been a rising trend of school age children' anxiety, depression, and other mental health and behavior issues in recent years (Office of Special Education and Rehabilitative Services, 2020). Children and youth with disabilities are at an even higher risk of developing mental health disorders compared to their peers without disabilities (Inkelas et al., 2007; Cooper et al., 2007; Deb et al., 2001). While those diagnosed as emotionally disturbed may receive special education services, many continue to have poor life outcomes due to functional limitations in important cognitive, social, and communication domains, comorbidity with other debilitating disabilities, and additional challenges brought on by socio-economic stressors associated with disadvantageous family background and difficulties in obtaining adequate support (Wagner et al., 2005). The unrecognized, unmet mental health needs among students with special needs have been noted not only by the researchers but also by the policy makers, "mental health problems are often overlooked and therefore untreated in people with learning disabilities" (National Guideline Alliance, 2016, p. 33). The purpose of this study is to describe the status of current research on technology-based solutions to address mental health challenges among individuals with special needs and to discuss implications for future research.

With the rapid development and wide availability of mobile technologies, there is increasing acceptance of telemental health (TMH), i.e., "provision of behavioral and/or mental health care services using technological modalities in lieu of, or in addition to, traditional face-to-face methods (e.g., provision of therapy using the phone, diagnostic interviewing via videoteleconferencing, use of applications to track mood states, consultations via email)" (<https://www.apa.org/pi/disability/resources/publications/telepsychology>). Orsolini et al. (2021) argued that TMH has the potential to substitute in-person mental health care with enhanced equity access and comparable effectiveness. The authors conducted a thorough review of 56 recent studies of TMH application focusing on youth anxiety, depression, and obsessive-compulsive disorder. While the studies varied in the content, length, frequency and modality of their TMH application, the findings consistently supported the efficacy of TMH care for improving mental health symptoms compared to in-person care.

Researchers and practitioners have strongly advocated the use of TMH for individuals with special needs and their family. According to Waldman et al. (2018), TMH allows convenient and timely provision of assessment and intervention with no geographic restrictions, flexible scheduling, and reduced costs. As such, it can be particularly helpful for those with physical and mobility impairments, in episodic or chronic conditions, or with limited access to needed services. By reducing the

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