Occupational Therapy Student Research

Occupational Therapy Program

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App-licable Techology

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App-licable Technology

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Purpose

Autism Spectrum Disorder (ASD) has seen an increase in prevalence in the United States presenting in 1 in 59 children. ASD presents with an array of symptoms that impact various aspects of life including but not limited to, social interaction, attention, and behavioral modulation (Voss et al., 2019). Meristem is a transitional program for individuals ages 18-28 that prepares young adults on the transition of adulthood while coping with the various symptoms of ASD. At our fieldwork site, our collective mission has been to focus on sensory and mood self-regulation to improve the individual's independence during situations. Technology can play a vital role in helping achieve this goal through the utilization of personal device applications.

Mindfulness Apps

Emerging technology via apps such as Calm and Headspace provide short duration mindful prompts that young adults can utilize. The Calm application is available in English, German, French, Spanish, Korean, Portuguese, and Japanese (Calm, 2022). Through the use of meditative and calming applications, students of various ability levels can have access. Interfaces within these applications provide options with written and visual descriptors relating to feeling, mood, environment, time of day and other contextual factors. With verbal, written, and visual prompts, students can be empowered to identify their current state. Through their choices these applications can recommend different activities to assist young adults in self identifying and communicating feelings as well as independently engage in activities that can support their process of recentering.

Impact

- Occupational impact
  - Mood regulation
  - Concentration
  - Motivation
- Social Impact
  - Engagement
  - Self-awareness
- Community Implications
  - Self-regulation
  - Easily accessible
  - Cost effective
  - Ease of use
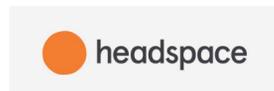
Low-Cost & High-Cost Options

- The application of mindfulness APP's for self-regulation in young adults diagnosed with autism spectrum disorder (ASD).
- Cost of project or tool
- Low-cost and high-cost mindfulness options.

Low-Cost Options

Low Cost (not an app, but free access videos on social media outlets)
- YouTube, Pinterest, Instagram Reels, Tik-Tok
  - Not as customizable, but provides helpful techniques
  - Consumers would have to search for what they need and need to know what they are experiencing in order to search.
- Apps with in-app purchases that offer wider options for mindfulness and customization

Aura
- Free to use every 2 hours for one 3-minute meditation session
- Upgrade to a premium subscription $59.99 USD/yr

High-Cost Options

Payable apps, Calm and Headspace have research article tabs

Headspace
- $34.99 USD/yr
- $6.49 USD/mo

Calm
- Family Plan $99.99USD/year
  - Six premium accounts
- Free version available for daily meditations
- Free Youtube version for music, stories, and meditations
- Paying for a service that tailors techniques and exercises to the user based on surveys, etc.

Discussion

In order to foster the use of assistive technology for individuals with ASD, particularly centered around improving self-regulating skills to achieve independence, there must be an active demonstration of these types of applications being applied to organizations like Meristem. Conducive to making this more applicable and generalizable to this population, it is important to consider social determinants of health such as economic stability. Having access to applications geared towards mindfulness and positive coping strategies is only feasible if an individual has the technology to support it such as a phone, tablet, computer, etc. Considering future developments in the self-care room at our fieldwork site, it would be beneficial if it included a device specific to that room with applications already on it for easy access for student use. This would increase usability of the recommended applications to manage feelings and behaviors to increase self-regulation skills in this population as the general population that currently uses this tool are those who are not diagnosed with ASD. For dissemination purposes, occupational therapy students can educate faculty and staff at Meristem on the evidence supporting assistive technology to improve outcomes for their target population. Additionally, faculty and staff can spread awareness to students on the use of the room and its materials such as the applications on the device for that room to cope with stressors and regulate emotions and behaviors.

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