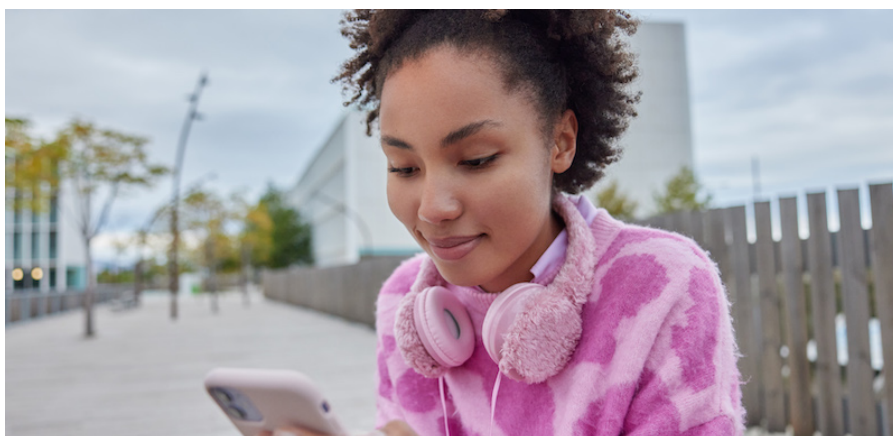


JMIR AI | Mobile Artificial Intelligence–Powered Acceptance Commitment Therapy Tool

On February 28, 2023 |

Tagged acceptance, adolescents, automated, chatbots, commitment, conversational agents, Engagement, intervention, mental health, mobile mental health, psychological, psychology, self-help, self-management, smartphone, support, therapy, well-being

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JMIR Publications published [“Adolescents’ Well-being While Using a Mobile Artificial Intelligence–Powered Acceptance Commitment Therapy Tool: Evidence From a Longitudinal Study”](#) in their journal [JMIR AI](#), which showed the potential for using mobile-based conversational agents to deliver engaging and effective Acceptance Commitment Therapy interventions for adolescents. Smartphone-based conversational agents can provide



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psychologically driven interventions and support, which can increase psychological well-being over time.

The objective of the study was to test the potential of an automated conversational agent named Kai.ai to deliver a self-help program based on Acceptance Commitment Therapy tools for adolescents, aimed to increase their well-being. A total of 10,387 adolescents aged 14-18 years who used Kai.ai on one of the top messaging apps participated in this study. The World Health Organization Well-being Index questionnaire assessed users' well-being levels between 2 and 5 times during the study.

Users engaged with the conversational agent for an average of 45.39 days. The average well-being score at the first time point was 39.28, indicating that users experienced reduced well-being. Latent growth curve modeling indicated, however, that participants' well-being significantly increased over time.

Dr Dana Vertsberger from [Stanford University](#) said, *"Adolescence is a developmental period that is filled with changes: changes to one's body, in one's social environment, and even to one's mind. It is also a crucial period for mental, social, and emotional well-being, which is characterized with an increased risk to develop mental health problems, such as anxiety, depression, substance abuse, and eating disorders."* This period is therefore crucial for prevention and treatment, emphasizing the need for accessible and customized mental health tools aimed at decreasing adolescents' ill-being and increasing their well-being.

The few longitudinal studies that have focused on adolescents' well-being tend to find a decrease in well-being over time. Studies on adult populations suggest that different interventions can improve well-being,

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compared to control groups who did not receive interventions or were in delayed intervention groups. Mental mHealth interventions are either aimed at complementing traditional mental health treatments or providing mental health support to those who are unable to receive quality mental health services—for example, due to long waiting lists—and have been found to be beneficial to adult populations.

In this study, the authors tracked adolescents' well-being scores and followed their well-being during a time in which they used a digital artificial intelligence–powered personal companion designed to promote well-being and mental health.

The research team concluded in their [JMIR Publications Research Output](#), *“These initial results demonstrate the potential of a text-based conversational companion as a cost-effective and accessible tool to improve adolescents' well-being. Due to the great economic cost for poor well-being and mental health and the decrease in the accessibility of various support systems, partly due to the COVID-19 pandemic, developing efficient interventions should be considered a societal priority. Future studies should test if any of the process-oriented features of Kai.ai are beneficial for improving users' well-being or if the recognized increase in well-being represents a regression to the mean.”*

###

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