Faculty of Humanities and Social Sciences

AI-Powered CBT: Investigating the Perceived Impact of Voice-Based Generative AI on Reframing Anxious Thoughts

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DOUGLAS COLLEGE

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Abstract

This mixed-methods study examined the perceived effectiveness and user experience of a voice-delivered cognitive behavioural therapy (CBT) exercise using ChatGPT, with the aim of evaluating its potential as a scalable and accessible mental health support tool. Quantitative data from pre- and post-intervention measures of the Thought Control Questionnaire (Wells & Davies, 1994) revealed significant improvements in adaptive thought control strategies (social control, reappraisal) and decreases in maladaptive strategies (worry, punishment). Qualitative data, analyzed through inductive thematic analysis of open-ended responses, revealed participants' recognition of the intervention's human-like responses, immediacy, and insight. Ethical concerns in mental health care are critical, and in this study, all artificial intelligence (AI) outputs were rated as neutral and appropriate, with 92% of participants feeling neutral or safe while engaging with the exercise. System- and user-level limitations were identified, including interruptions during user input and unfamiliarity with the platform's features and capabilities. Findings support generative AI as a promising adjunct to traditional therapy in expanding access to psychoeducational tools. Future research should explore longitudinal effects, address additional ethical considerations, and evaluate outcomes across diverse populations to ensure equitable and effective use.

Author keywords

cognitive behavioural therapy, generative artificial intelligence, ChatGPT

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