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Generative AI-Assisted Clinical Interviewing of Mental Health

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Abstract

The standard assessment of mental health typically involves clinical interviews conducted by highly trained clinicians. This approach faces significant challenges, including high costs, overburdened clinical workloads, variability in clinician expertise, and a lack of standardization. Recent progress in large language models presents an opportunity to address these limitations by simulating clinician-led interviews, however, the validation of such AI-driven clinical interviews remains sparse. We developed and evaluated an AI assistant designed to conduct clinical interviews (N = 303). Another AI assistant task was analyzing the interview transcripts to generate diagnostic insights based on DSM-5 criteria and to provide comprehensive justifications for its assessments. The results showed that the general AI-powered clinical interview correlated with self-reported, clinician-diagnosed mental disorders that were non-significantly different, and had significantly lower co-dependencies, compared to state-of-the-art rating scales. These findings suggest that AI-powered clinical interviews can offer an accurate, cost-effective, and standardized approach to diagnosing common mental disorders.