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## Chatbots in psychiatry: Can treatment gap be lessened for psychiatric disorders in India

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India is on the verge of a mental health epidemic. The National Mental Health Survey by the National Institute of Mental Health and Neurosciences reported an overall weighted prevalence for any mental health morbidity at 13.7%. The overall treatment gap for mental disorders ranged from 70% to 92% across various disorders.[1] As per the norms of developed countries, the ideal number of psychiatrists, psychologists, psychiatric social workers, and mental health nurses is 1/10,000. However, the current figures in India are as follows: psychiatrists – 0.2/100,000, psychologists – 0.03/100,000, psychiatric social workers – 0.03/100,000, and mental health nurses – 0.05/100,000 population.[2] Considering the shortage of mental health professionals, it will take various innovative approaches to bridge this huge gap.

In this scenario, digital interfaces are emerging as viable alternatives for reducing this gap and making psychiatric diagnosis and treatment accessible and affordable. Stigma associated with psychiatric disorders is also a hindrance for seeking effective treatment. College students and young adults often lack time or are hesitant to seek a therapist for their mental health needs. Artificial intelligence (AI) has made its foray into medical science several years back, and it has made its presence felt in mental health also. Suicide prediction and prevention, identification of predictors for treatment response, and identifying which particular drug is best suited for a particular patient are some of the areas where AI has been found to be useful in psychiatry.

A chatbot is a software which uses AI to simulate a conversation which can be done on various platforms such as messaging or voice chat. Some of the chatbots are fully automated and some use human interface also. Woebot is a fully automated conversational agent developed by Woebot Labs in San Francisco. It treats depression and anxiety using digital version of time-tested cognitive behavior therapy. In a feasibility study which compared 34 college students undergoing therapy with Woebot and 36 students who were a part of information-only control group, it was found that after 2 weeks, participants in Woebot group had a significant decrease in depression scores as measured by PHQ-9.[3]

Other chatbots such as Ellie almost serve as a virtual therapist as it can detect subtleties in facial expressions, rates of speech, or length of pauses and responds accordingly. It also provides an option to meet an actual therapist.

The ability of chatbots to provide companionship, support, and therapy can lessen the load on therapists. It emerges as an option for people who have problem with accessibility and affordability both in terms of time, distance, and finances.

However, several concerns are being raised in this matter. Confidentiality is the foremost concern. Other concerns are universality of application, lack of standardization and monitoring, overdependence on the bots, and missing of severe mental disorders. We need to develop chatbots more “suited” to our culture and have a regulatory and evaluating process in place to enjoy the benefit of this technological advancement.

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