



Chatbots Are Not Clinicians: Addressing Misconceptions About Large Language Model Use in Psychiatric Care

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“Psychiatry will be the first specialty replaced by AI [artificial intelligence]. Are you sure it’s worth pursuing?”

Of all the reasons people have used to try and dissuade me from entering psychiatry—financial, cultural, political—this assertion about AI was new. Even more surprising was that this comment came from a fellow medical student.

Over the last year, research about large language models (LLMs), such as ChatGPT, and their applications in mental health has emerged. Namely, studies have indicated that certain LLMs can outperform physicians in interpersonal skills. For example, Elyoseph et al. [1] found that ChatGPT outperformed physicians in emotional awareness evaluations, suggesting that AI can identify and respond to emotional cues more accurately than some human clinicians. Additionally, Ayers et al. [2] reported that when evaluated by independent medical reviewers, ChatGPT was graded as giving 10 times more empathetic responses than physicians when answering patient questions on a social media forum. While this data is intriguing, its potentially detrimental implications, when not carefully understood, have impacted my experience as a trainee and in my personal life.

My classmate’s comment was not isolated. With the advent of AI technologies, family members and peers have suggested LLMs are a superior alternative for seeking therapy and advice on medical management. Their perspective is that LLMs draw upon vast amounts of data to provide a supposedly “objective” approach, whereas traditional psychotherapy, diagnoses, and prescription recommendations can be inconsistent between providers and influenced by individual clinicians’ knowledge and experiences. They argue that LLMs have greater breadth and intelligence, are more affordable and accessible, and eliminate the discomfort some

people feel when discussing personal issues with another human. As a trainee and person of color, I aim to discuss the implications of these ideas, address their limitations, and suggest paths forward.

It is undeniable that ChatGPT was trained on an estimated 300 billion words in its dataset [3]. This is an impressive feat with substantial potential. However, the argument that LLMs, due to their extensive knowledge base, can surpass trained psychiatrists neglects the essence and importance of human collaboration and lived experience. While AI can analyze a case report about a specific intervention, it cannot replicate the behind-the-scenes collaboration and interdisciplinary approach that psychiatrists employ in patient care.

Furthermore, in terms of quality, research has indicated that AI’s training data can reflect the biases present in the sources it was trained on, such as chat forums and personal opinions [4]. Humans, on the other hand, possess self-awareness and the ability to recognize and understand their biases and limitations, a critical aspect of effective psychiatric care.

These limitations extend to cultural humility. AI lacks the ability to navigate the social nuances and cultural contexts that psychiatrists incorporate into their practice. Recently, I was involved in the case of a patient with severe obsessive–compulsive disorder, where the psychiatrist had to understand the patient’s religious context to provide appropriate care. This process involved gathering comprehensive information from multiple sources, like the patient’s family and religious leaders, to create a sense of safety and trust essential for effective treatment. This case represents how the therapeutic process involves longitudinal ongoing dialogue, empathy, and adaptation to the patient’s unique cultural and social context. The inability of AI to replicate these deep, human connections and dynamic interactions underscores a significant limitation in its ability to provide personalized psychiatric care.

In terms of cost, it is true that psychiatric services—including psychotherapy, medical diagnoses, and prescriptions—can be cost-prohibitive for many individuals, particularly those from low-income backgrounds. While this

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may position AI as an attractive alternative, it underscores a larger systemic issue within health care rather than the capabilities of AI itself. Moreover, the more accurate models of LLMs, like ChatGPT, come with a subscription cost, which may still be a barrier for low-income communities. In fact, access to high-quality internet is another significant barrier, particularly in underserved urban and rural areas [5]. This digital divide highlights that rather than reducing disparities, the use of LLMs may actually exacerbate existing inequities.

Finally, having grown up surrounded by my large immediate and extended South Asian family, I am well aware of the stigma and biases against seeking mental health care. Still, the idea that AI can serve as a solution to this discomfort acts as a superficial fix to a deeper societal issue. Relying on AI for psychotherapy perpetuates the notion that mental health issues are shameful and should be kept secret. It is also dangerous, both in terms of diagnoses and therapeutic care.

Specifically, individuals hesitant to visit a psychiatrist might feel comfortable receiving a diagnosis from an LLM. However, there is a risk of an incorrect diagnosis, as AI does not account for the complex scientific, cultural, and anthropological factors integral to psychiatric evaluations. What is more, when it comes to therapeutic care, modifying an AI prompt can make the LLM provide responses users want to hear, which is counterproductive in psychotherapy. Effective therapy often involves confronting uncomfortable truths and realities, a process that can be harmfully avoided via user-led AI chats. Moreover, sharing our emotions with an AI might actually increase feelings of isolation, as it bypasses the development of essential skills required to understand and express emotions to another human being. Over time, this becomes particularly crucial in a patient's treatment course; unlike AI, which offers polished, pre-generated responses, a psychiatrist can challenge their patient to develop solutions and cultivate critical thinking skills that are essential for long-term management of mental health challenges.

Hearing comments about AI replacing psychiatry has been both challenging and enlightening. It makes me

reflect on the essential role of psychiatry, even in the face of advancing LLMs. Moving forward, psychiatric educators should address these concerns through specific trainings, such as didactics on AI's limitations and ethical implications, as well as interactive methods, such as case studies and role-playing exercises. By recognizing and teaching others on the limitations and potential of AI, we can integrate these technologies into psychiatric practice while preserving the irreplaceable value of human clinicians.

Declarations

Disclosures The author states that there is no conflict of interest.

References

1. Elyoseph Z, Hadar-Shoval D, Asraf K, Lvovsky M. ChatGPT outperforms humans in emotional awareness evaluations. *Front Psychol.* 2023;14:1199058.
2. Ayers JW, Poliak A, Dredze M, Leas EC, Zhu Z, Kelley JB, et al. Comparing physician and artificial intelligence chatbot responses to patient questions posted to a public social media forum. *JAMA Intern Med.* 2023;183(6):589–96.
3. Hani D. ChatGPT: everything you need to know about OpenAI's GPT-4 tool. <https://www.sciencefocus.com/future-technology/gpt-3>. Accessed 16 Jan 2024.
4. Omiye JA, Lester JC, Spichak S, Rotemberg V, Daneshjou R. Large language models propagate race-based medicine. *NPJ Digit Med.* 2023;6(1):195.
5. US Government Accountability Office. Closing the digital divide for the millions of Americans without broadband. 1 Feb 2023. <https://www.gao.gov/blog/closing-digital-divide-millions-americans-without-broadband>. Accessed 7 Jul 2024.

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