

Improving perceptions of emerging technologies can help ease strain on health-care systems

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More attention must be paid to improving perceptions of emerging technologies like AI-powered symptom checkers, which could ease the

strain on health-care systems, according to a recent study.

Symptom checkers are online platforms that help with self-triage based on a range of inputted symptoms and demographic details.

The study, led by University of Waterloo researchers, found that "tech seekers," people who are open to technology but perceive a lack of access to it, are the most likely to want to use the technology—more than "tech acceptors," people who are both open to it and perceive it to be accessible.

The least likely group of people to adopt the tool are "tech rejectors," those who do not view it as accessible and have a negative view of AI. In between were "skeptics," who have concerns about trust and output quality, and "unsure acceptors," who do not perceive access to be an issue but have negative perceptions about AI.

"These findings should be of great interest—or concern—to the three active arms of any health-care system that intends to use AI-driven [symptom](#) checkers: prospective patients, medical experts and developers of AI-driven symptom checkers," said co-author Ashok Chaurasia, a professor in the School of Public Health Sciences. "This study highlights the need for more collaboration between these groups to improve AI models and their perception within the [general population](#) and [medical experts](#)."

Stephanie Aboueid, the study's lead author and a School of Public Health Sciences graduate, said, "This technology is very promising in the health-care sector, given that it has the potential to reduce unnecessary medical visits and address the lack of access to primary care providers."

The researchers surveyed 1,305 [university students](#) aged 18 to 34 who had never used a symptom checker before the study. They gathered data

on trust, usefulness, credibility, demonstrability, output quality, perspectives about AI, ease of use and accessibility for the analysis.

"Symptom checkers are important because they speak to the younger generation who value timeliness and convenience," Aboueid said. "They are not just a fad, as we've seen with Babylon, for example, which recently went public and has been adopted by various health institutions.

Aboueid said the researchers used university-aged responders for the study because they are typically eager adopters of technology. Because of the age group studied, high education levels and good health status, additional studies are needed in other populations with wider age ranges, education and health levels, the researchers said.

The study, "Latent classes associated with the intention to use a symptom checker for self-triage," was co-authored by Waterloo researchers Stephanie Aboueid, Samantha Meyer, James Wallace and Ashok Chaurasia and published in the journal *PLOS ONE*.

More information: Stephanie Aboueid et al, Latent classes associated with the intention to use a symptom checker for self-triage, *PLOS ONE* (2021). [DOI: 10.1371/journal.pone.0259547](https://doi.org/10.1371/journal.pone.0259547)

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