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Public Pulse on AI Across Industries:

Deep Dive into Patient Comfort, Concerns, and Hopes for AI in Healthcare

Index

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Deep Dive into Patient Comfort, Concerns, and Hopes for AI in Healthcare

The cross-sectional survey explores 1,015 Americans' opinions on adopting AI across sectors and then dives deeper into AI adoption in healthcare. Results reveal general openness to AI acceptance. Worries about job loss and lack of explainability are major holdbacks. Shopping and education have the highest acceptance while healthcare and finance have the least. Within healthcare, poor awareness of current uses signals the need for provider outreach. Direct exposure and supplemental tools may enable patient acclimation before clinical integration. While most people believe AI will bring about a positive impact in the future, ensuring accuracy, transparency, and human control is vital to mitigate risks and maximize its benefits.

Background

Artificial intelligence (AI) solutions are increasingly explored and adopted across many industries. AI is transforming industries across the board, enhancing efficiency, productivity, and decision-making processes to create a more advanced and interconnected world. In medicine, the AI market is projected to grow from USD 14.6 billion in 2023 to USD 102.7 billion by 2028 at a CAGR of 47.6% as AI applications gain the ability to improve patient outcomes through early diagnosis, personalized treatment plans, and predictive analytics. However, research shows that unless thoughtfully implemented with end-user needs in mind, AI innovations often fail to gain trust and traction.

There remains a lack of research specifically understanding patient comfort and perspectives regarding medical AI. This gap is concerning given the booming investment and innovation in healthcare AI solutions. In 2021 alone, funding for AI startups doubled globally to over $66 billion, with nearly 20% targeting the healthcare domain. However, there is also limited comparative research benchmarking consumer trust and acceptance of AI more broadly across industries like finance, human resources, and education. This rapid pace of AI advancement underscores the urgent need for human-centric research guiding ethical, responsible adoption within healthcare in particular, which is highly personal and stakes are often life-critical. Further insights into patient viewpoints can shape the socially-responsible development of AI that elevates rather than disrupts human well-being across all sectors.

Research Objectives

The purpose of this study is to survey consumer comfort levels regarding AI technologies across industries like healthcare, finance, education, and retail and then dive deeper into healthcare. It will analyze factors driving acceptance versus reluctance or skepticism. Within healthcare specifically, the research will identify priorities and concerns that must be addressed for successful, trusted implementation of AI innovations in areas like diagnostics, triage, treatment planning, and virtual support. The goal is to uncover what is currently holding the public back from embracing transformational healthcare AI and provide guidance to decision-makers, technology developers, and providers on earning patient buy-in.

Research Design

This was a cross-sectional, observational survey that gathered perspectives on AI technologies from 1,015 participants across diverse demographics. Respondents ranged in age from **18-24 (11%), 25-34 (20%), 35-44 (19%), 45-54 (16%), 55-64 (15%) and 65+ (10%)**, reflecting 2020 U.S. census population distributions as closely as possible. Gender identity was reported as male (49%), female (50%) and other (1%). Participants completed an online questionnaire with 16 questions designed and delivered through the Sogolytics survey platform. The survey incorporated Likert scale, multiple select and ranking questions to gauge comfort levels with various AI applications and gather insights into factors influencing acceptance or hesitation. Survey data was compiled and analyzed using Sogolytics automated analysis tools to identify trends based on descriptive statistics. Qualitative feedback is coded to derive common themes regarding priorities, concerns and desired safeguards when implementing AI innovations, especially within the healthcare domain. The data was segmented by demographics and certain variables to derive key insights.

Results

According to the survey results as seen in **Figure 1**, 70% of respondents indicated they understand the general concept of artificial intelligence (AI). Approximately 44% agreed and 26% strongly agreed that AI is likely already being utilized in many aspects of their daily lives, often without their knowledge.

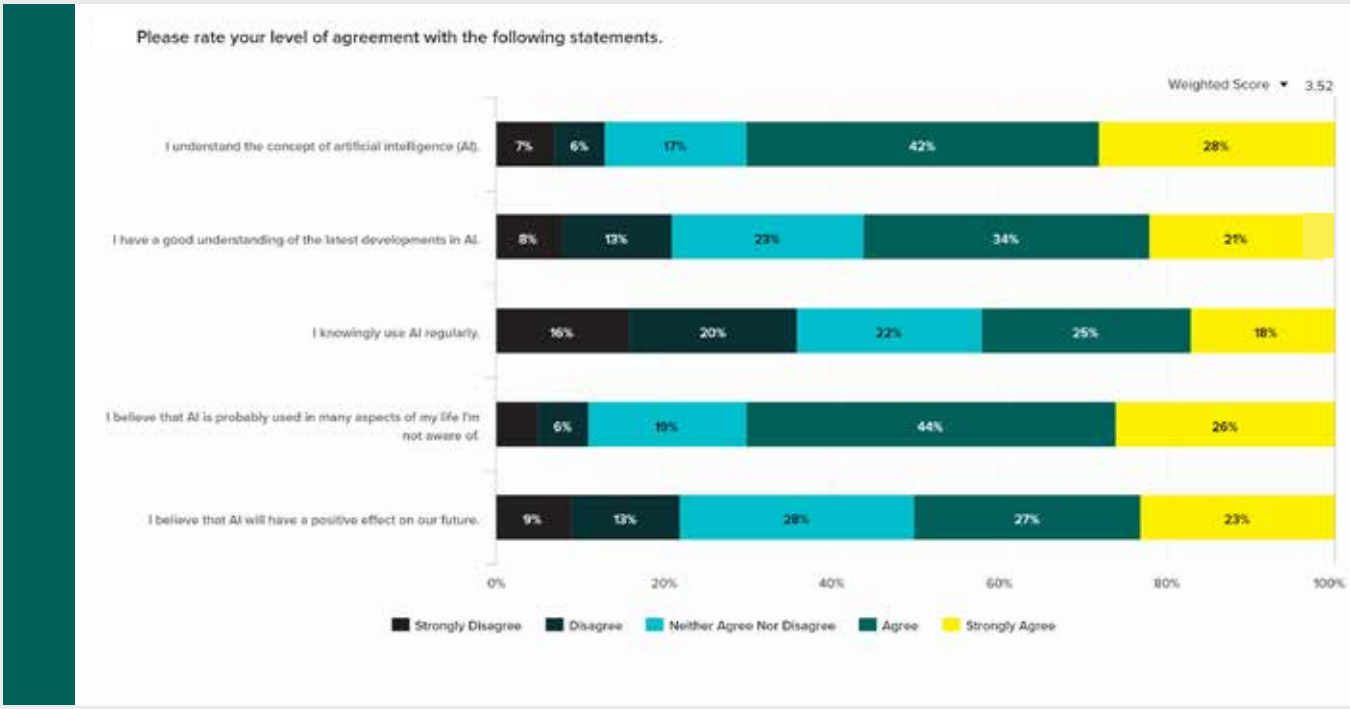

Figure 1:

An interesting finding emerged when examining respondents' preferred sources for learning about AI: The youngest age group (18-24) indicated **TikTok** as their primary channel, while those 65 and over were least likely to proactively seek out information on AI at all. Regarding the general impact of AI on the future, 50% of respondents agreed with the statement that AI will have an overall positive impact, while 22% disagreed with that notion (Figure 1).

When asked about the potential positive impacts of AI, saving human time **(43%)** and empowering learning **(41%)** ranked as the top two perceived benefits (Figure 2). However, risks like replacing human jobs **(52%)** and creating data security issues **(31%)** were identified as the greatest concerns (Figure 3) related to AI adoption. An interesting dichotomy emerged: While AI is seen as saving human time, there is also fear it may replace human roles. Additionally, 40% felt AI could reduce errors, but 31% worried it may conversely reduce transparency and oversight which could make detecting errors harder.

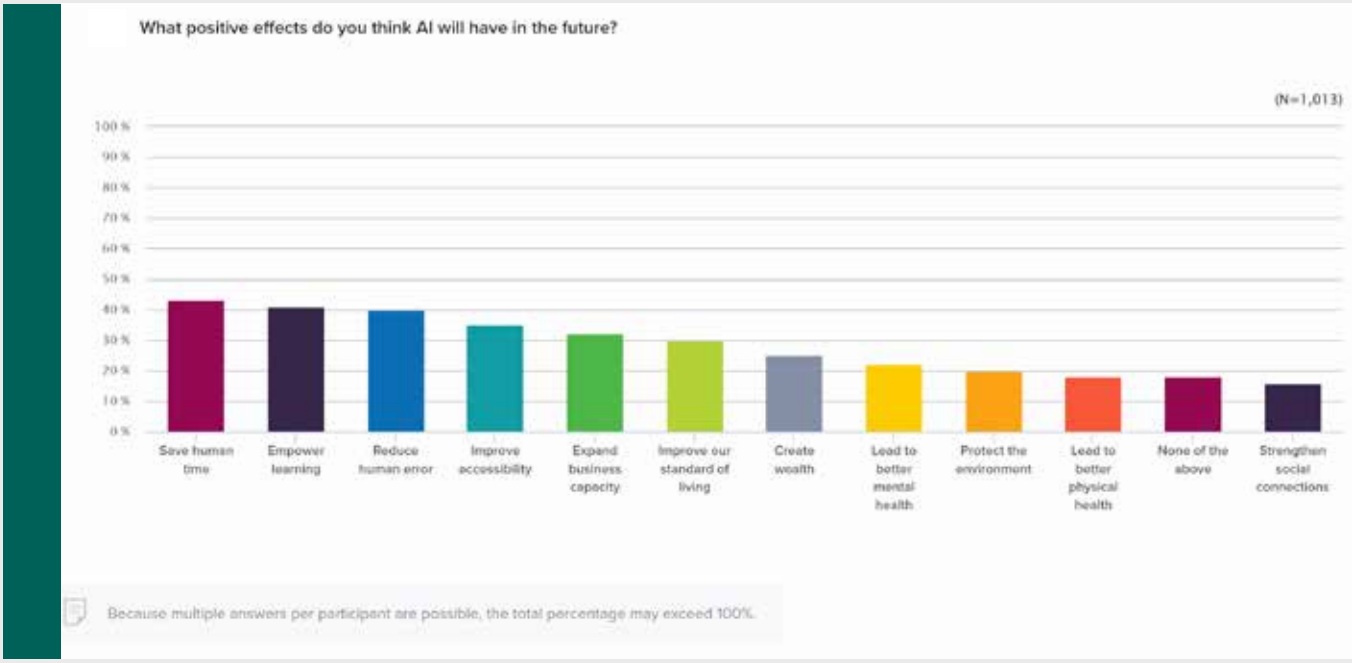

Figure 2: Positive effects of AI

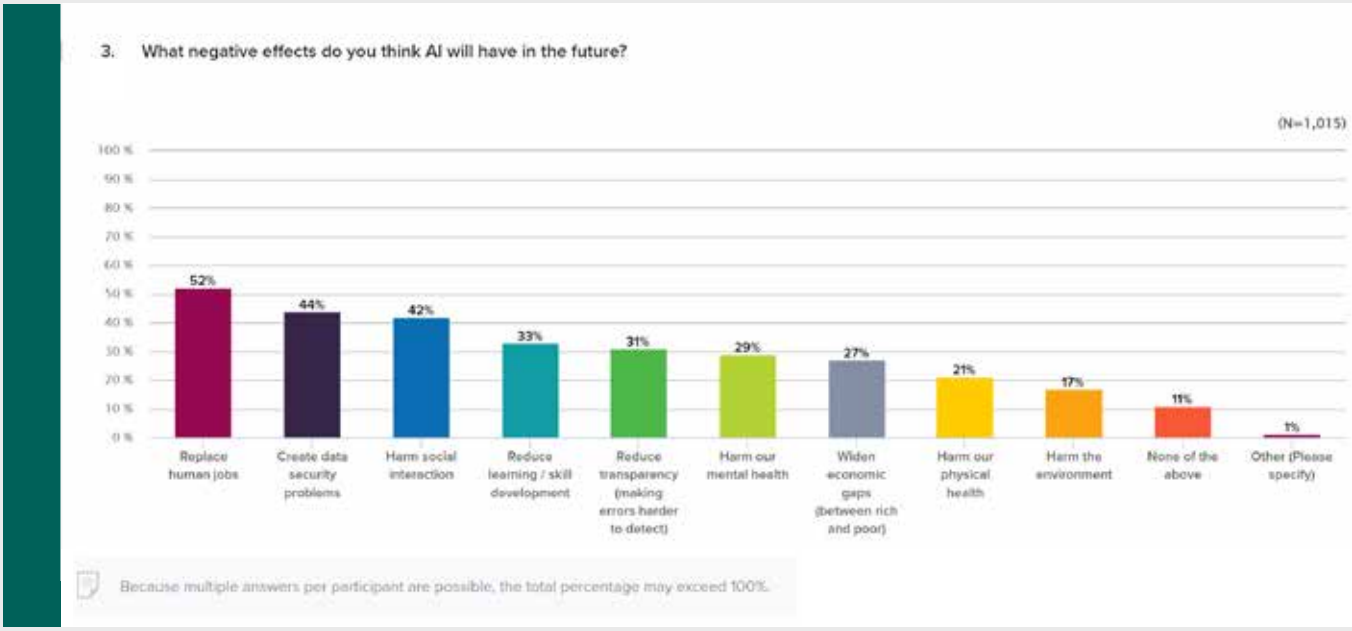

Figure 3: Negative effects of AI

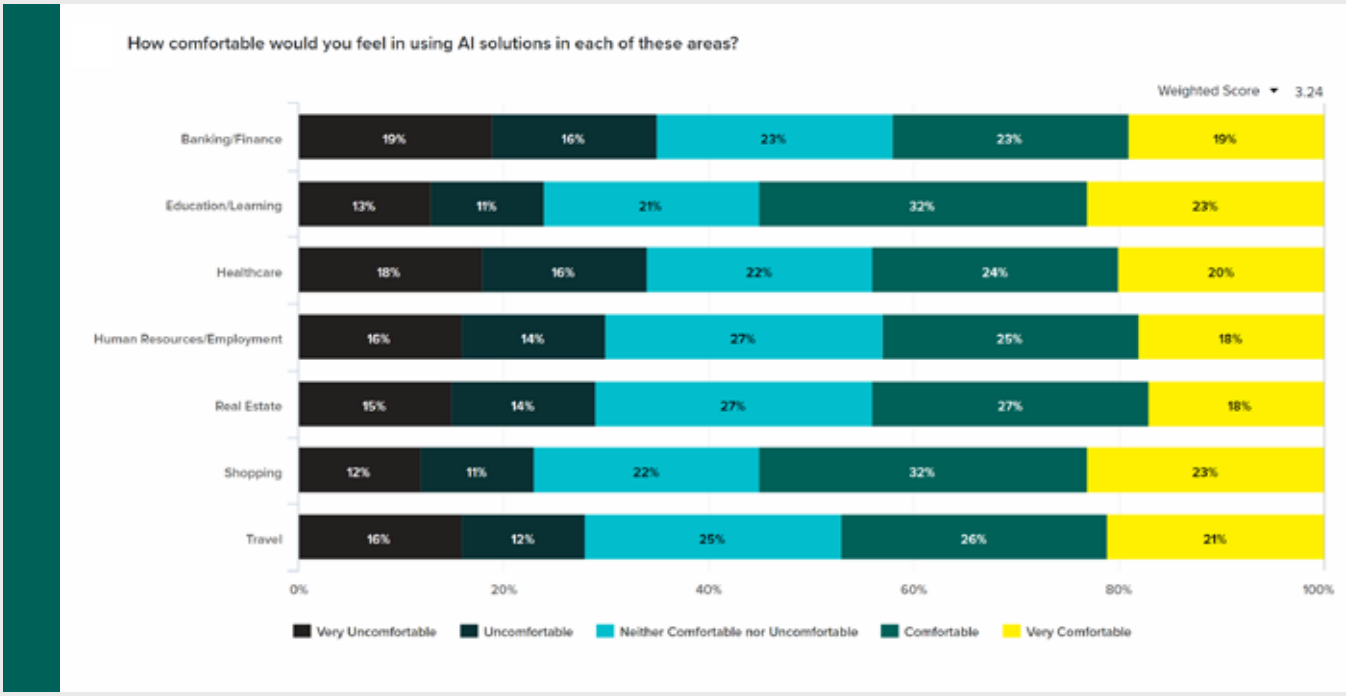

Figure 4: Comfort level across industries

To assess public comfort with AI integration across different life aspects, seven major domains were evaluated – banking/finance, education, healthcare, human resources/employment, real estate, shopping, and travel. The overall trend as seen in **Figure 4** showed moderate openness and receptivity to adopting AI across these areas. Shopping was the domain where respondents felt most comfortable with AI applications, with 23% identifying themselves as very comfortable. Healthcare and finance emerged as the sectors with the lowest comfort, where people are most hesitant about AI.

When specifically comparing healthcare attitudes, only 32% indicated their provider currently uses AI technology, while 40% were unsure, highlighting poor public awareness of current adoption levels. Of those whose providers do use AI, 80% reported (Figure 5) being open to integration, suggesting direct exposure significantly improves acceptance.

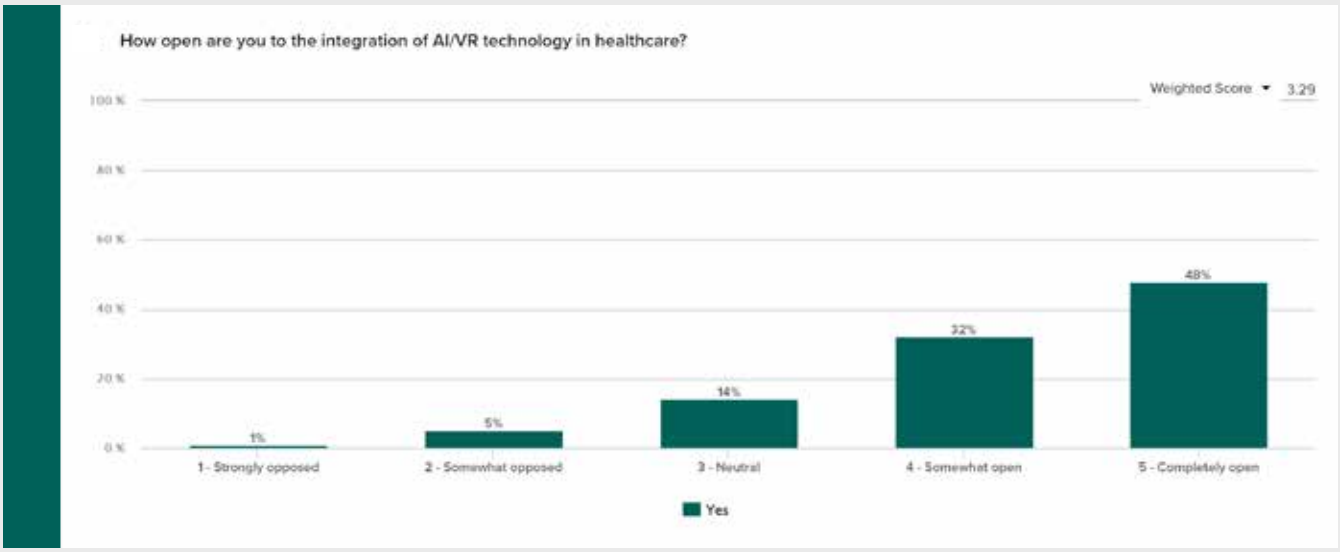

Figure 5: Openness to AI integration among those whose HC providers use AI

For healthcare applications (Figure 6), interest was highest in AI for physical rehabilitation (41%) and education (39%). Mental health treatment was the area where people showed the least interest (35%).

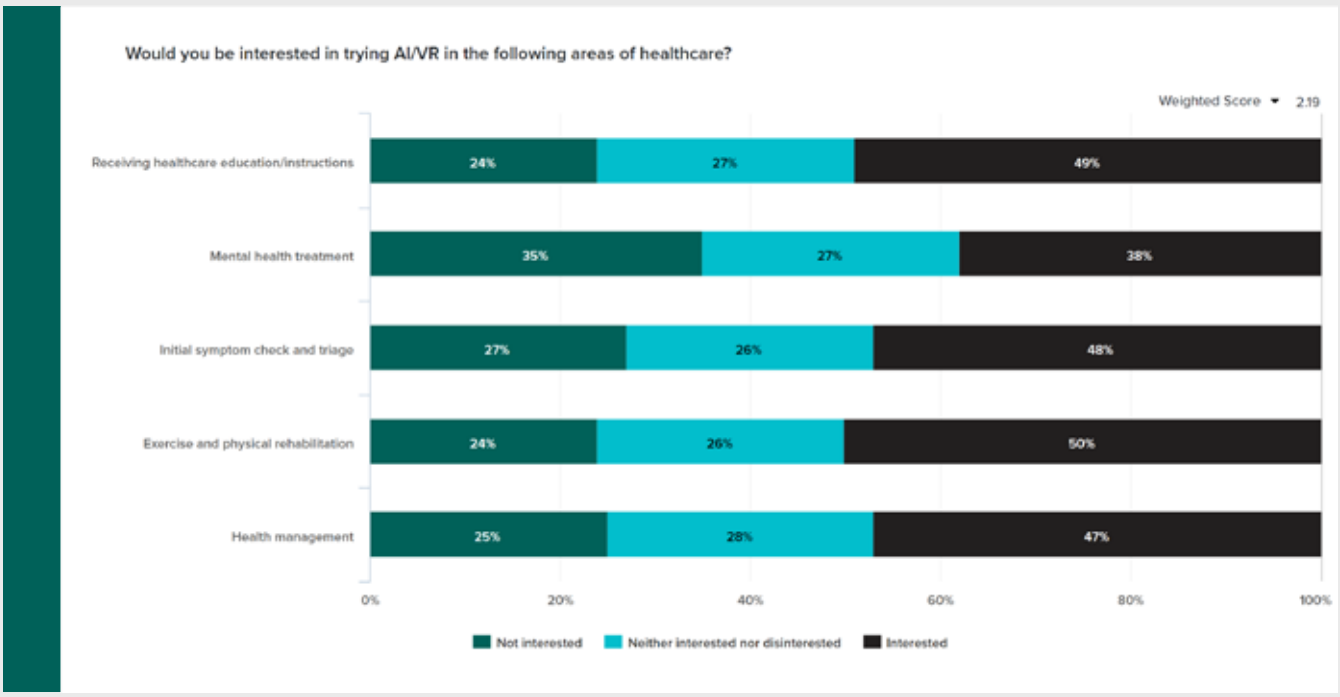

Figure 6: Interest in AI across HC areas among those whose providers use AI

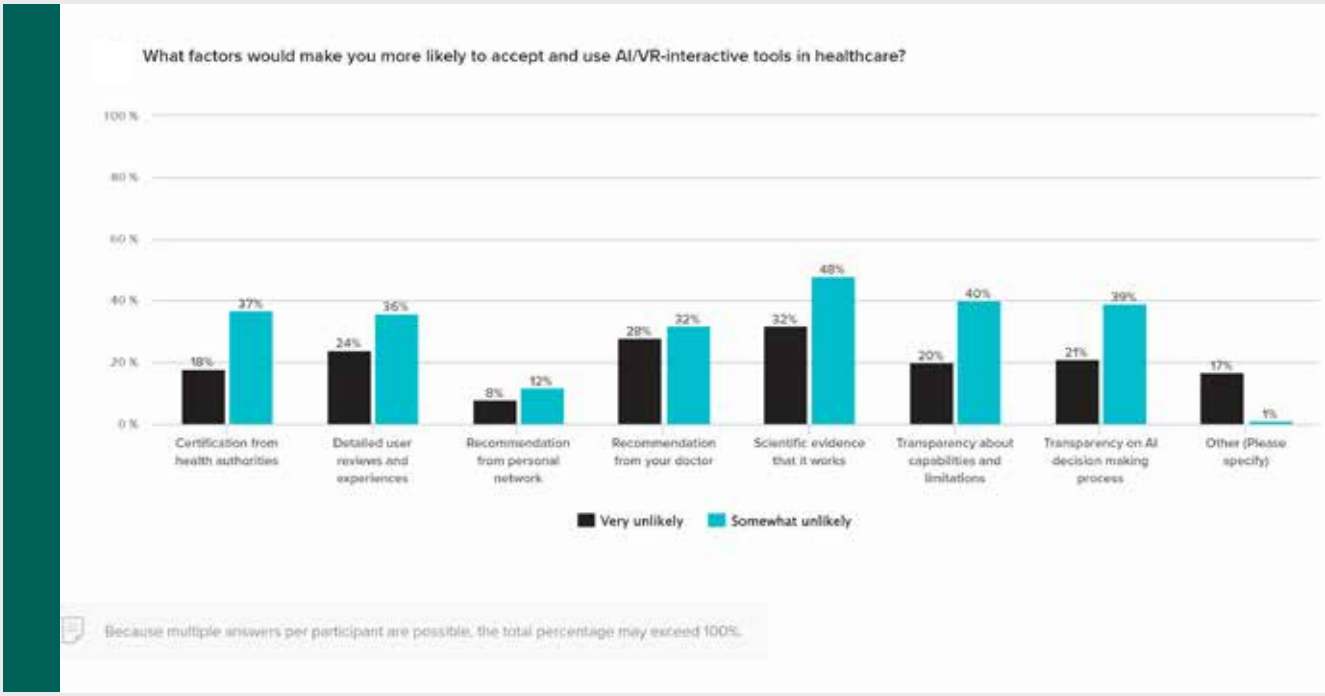

Figure 7: Acceptance factors among those unlikely to trust AI

Overall, 46% expressed moderate to high likelihood to trust AI/VR technology in healthcare, with only 17% very unlikely and 14% somewhat unlikely to trust it. 31% who did not trust AI indicated scientific evidence and explaining limitations as the top two factors that would increase their AI acceptance (Figure 7). An additional finding was that people working in healthcare (188 respondents) and technology (234 respondents) expressed notably higher levels of healthcare AI trust compared to other professions.

When asked to rank potential AI benefits from most to least impactful, respondents overall chose personalized recommendations as the greatest benefit, while improved accuracy of diagnosis was ranked as the least beneficial. Similarly, when ranking AI concerns, the inaccuracy of diagnostic predictions emerged as the top-ranked major concern (Figure 8).

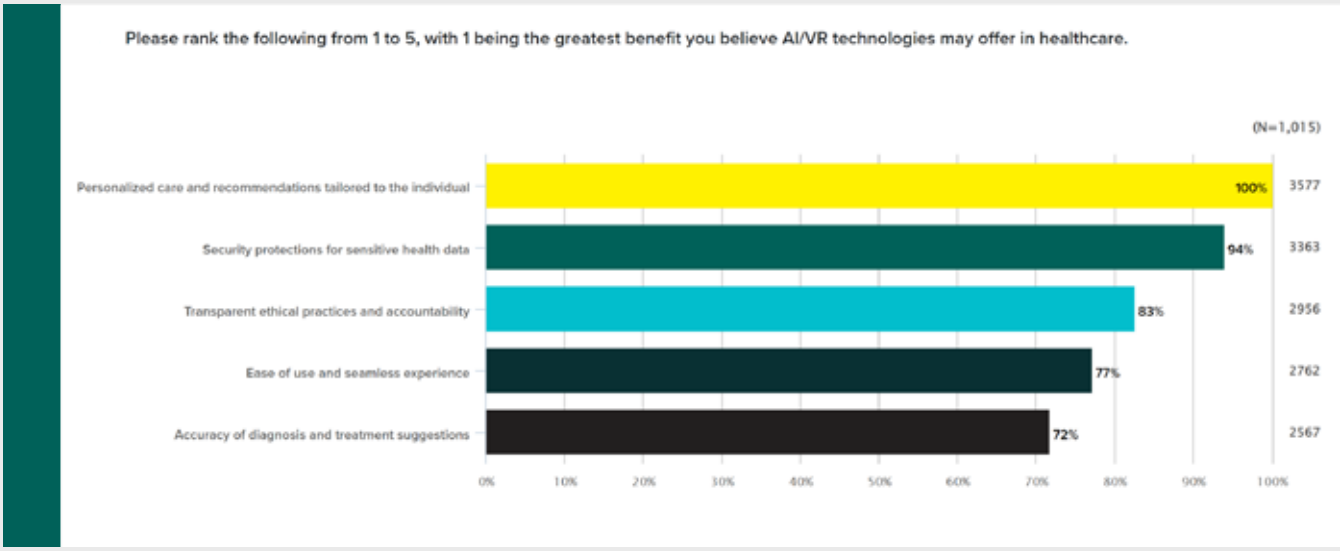

Figure 8a: Ranking the greatest benefits

When asked about the biggest anticipated impact of AI in healthcare, 24% of respondents believed it would be on administrative tasks, while 16% felt the largest impact would be on patient education.

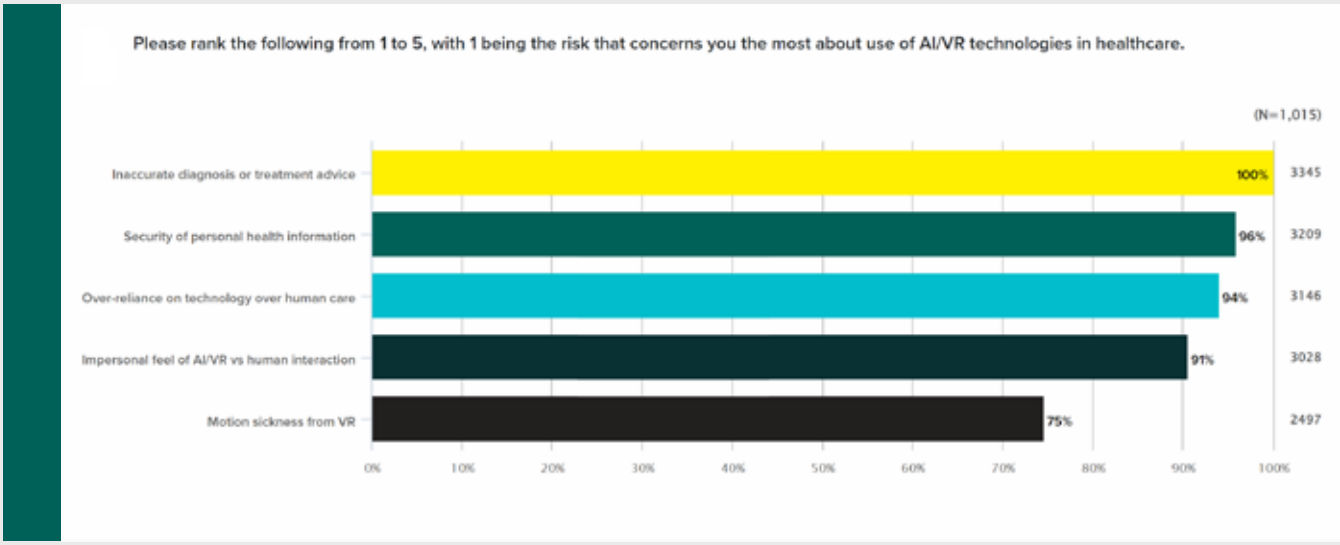

Figure 8b: Ranking the greatest concerns

Interpretation

The results reveal a nuanced public perspective on AI: While efficiencies are welcomed in certain domains like shopping, sectors with higher trust needs like healthcare and finance cause discomfort. Respondents recognize AI's increasing integration across life but remain concerned about the risks of replacing human roles and loss of oversight. The generational difference highlights how age impacts preferred channels for gathering information about emerging technologies like AI and how informational material should be crafted thoughtfully and propagated through the right medium to reach the right audience.

Within healthcare specifically, poor awareness of current uses indicates an opportunity for provider outreach and education to build understanding. Direct exposure seems to significantly improve perceptions, suggesting phased rollouts focused on smaller aspects like rehabilitation and education may enable providers to get patients comfortable with AI benefits before tackling clinical applications. However, for all healthcare uses of AI, ensuring accuracy, explainability, and continued human oversight will be crucial to overcoming diagnosis concerns and building trust. The higher relative acceptance from healthcare and tech workers underscores the importance of cross-disciplinary teams that blend data science and clinical care skill sets to create patient-centric AI solutions.

Limitations

While the study provides valuable insights into public comfort with AI, it has several limitations. The sampling methods might have resulted in the underrepresentation of certain demographics and regions within the United States and it does not include international perspectives. As cross-sectional data, it offers only a snapshot versus longitudinal tracking of evolving attitudes. By concentrating solely on comfort levels, the research overlooks other relevant perceptions around ethics, preferences, etc. Additionally, participant responses relied on their own perception of AI, which may be limited or skewed by media portrayals, thereby influencing the result.

While these limitations do not invalidate the findings, they indicate opportunities to build on this work through expanded participant diversity, longitudinal measurement, and a more holistic lens in future studies.

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Appendix

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