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Trust in AI in medicine – a non-medical perspective

Poziom zaufania do sztucznej inteligencji w medycynie – perspektywa osób spoza środowiska medycznego

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Abstract

Introduction and Objective. The aim of this study was to determine the level of trust among people outside the medical community toward AI (AI) in health care, and to identify factors influencing the acceptance or rejection of this technology.

Materials and Method. The study included 817 respondents with no professional or academic ties to medicine. A diagnostic survey method was used, employing a questionnaire consisting of 33 closed and multiple-choice questions. The questions addressed knowledge, experience, opinions, and concerns regarding the use of AI in diagnostics and treatment. Data were collected both in paper form and online between March – June 2025.

Results. A large proportion of respondents perceive AI as a tool supporting physicians (45.2%), rather than an independent decision maker. The most commonly indicated areas of application were radiology, diagnostics, and therapy personalization. The level of trust in AI was rated as moderate with 63.1% of respondents expressing a neutral attitude. Key factors for building trust included audits, system certification, collaboration between AI and physicians, and decision transparency. The vast majority of respondents (92.6%) expect patients' right to be informed about AI usage, while 65.7% emphasize the irreplaceable role of physician empathy. The main concerns involved diagnostic errors (84%), lack of physician oversight (69.6%), and difficulties assigning legal responsibility (65.4%).

Conclusions. People outside the medical community accept the presence of AI in medicine, but only as a tool supporting the physician. Conditions for acceptance include transparency, legal regulations, education for both patients and doctors, and maintaining the doctor-patient relationship.

Key words

diagnostics, patient, medicine, trust, AI

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Streszczenie

Wprowadzenie i cel pracy. Celem badania było określenie poziomu zaufania osób spoza środowiska medycznego do sztucznej inteligencji (AI) w ochronie zdrowia oraz identyfikacja czynników wpływających na akceptację lub odrzucenie tej technologii.

Materiał i metody. Badaniem objęto 817 osób niezwiązanych zawodowo ani naukowo z medycyną. Zastosowano metodę sondażu diagnostycznego z wykorzystaniem kwestionariusza ankiety składającego się z 33 pytań zamkniętych i wielokrotnego wyboru. Pytania dotyczyły wiedzy, doświadczeń, opinii oraz obaw związanych z wykorzystaniem AI w diagnostyce i leczeniu. Dane zbierano w formie papierowej oraz online w okresie od marca do czerwca 2025 roku.

Wyniki. Duża część badanych (45,2%) postrzega AI jako narzędzie wspierające lekarza, a nie jako samodzielnego decydenta. Najczęściej wskazywane obszary zastosowania AI to radiologia, diagnostyka i personalizacja terapii. Poziom zaufania do AI oceniany był jako umiarkowany. Neutralną postawę wobec tej technologii przyjęło 63,1% respondentów. Kluczowe dla wzrostu zaufania okazały się audyty, certyfikacja systemów, współpraca AI z lekarzem i przejrzystość decyzji. Zdecydowana większość ankietowanych (92,6%) oczekuje, iż pacjent będzie miał prawo do informacji o użyciu AI, a 65,7% podkreśla niezastąpioną rolę empatii lekarza. Główne obawy dotyczą błędnych diagnoz (84%), braku kontroli lekarza nad AI (69,6%) oraz trudności w przypisaniu odpowiedzialności prawnej (65,4%).

Wnioski. Osoby spoza środowiska medycznego akceptują obecność AI w medycynie, jednak wyłącznie jako narzędzia wspierającego lekarza. Warunkiem akceptacji są przejrzystość, regulacje prawne, edukacja pacjentów i lekarzy oraz zachowanie relacji lekarz–pacjent.

Słowa kluczowe

diagnostyka, medycyna, pacjent, zaufanie, sztuczna inteligencja

INTRODUCTION

Artificial Iintelligence (AI) is finding increasingly wide application in medicine – in imaging diagnostics, patient data analysis, home care, and predicting treatment outcomes [1, 2]. Despite the great potential of AI, many people, both patients and future physicians, do not fully trust it [3, 4], the reason probably being a lack of understanding of how AI works [5]. It is often described as a 'black box' because algorithms make decisions in ways that are difficult to explain [6, 7]. This makes it hard to speak of full trust [8]. Some researchers even argue that one cannot 'trust' AI in the same sense as a human being [3]. AI has no intentions or morality, so it cannot be held responsible for its errors [5, 9]. Trust in medicine is based on human relationships, experience, and responsibility [6]. Replacing the physician with AI may therefore weaken this relationship and raise concerns about the dehumanization of care [10]. Patients are often unaware that AI participated in their treatment, which may violate their right to information and informed consent [4, 11]. There are also no clear rules of responsibility for AI errors [12], and it is unclear who should bear responsibility – the doctor, the programmer, or the company [13]. This creates concerns and reduces willingness to accept AI in health care [14]. Trust in AI can be increased if it is transparent, explainable, and subject to control [1, 15]. AI should not only function effectively but also provide justification for its decisions in a manner understandable to patients and doctors [12]. Many people also expect AI systems to be approved, audited, and registered like medicines or medical procedures [16]. The education of doctors and patients in AI is essential [2, 17], because lack of knowledge can lead to either false trust or complete rejection of this technology [4].

Studies have shown that even though medical professionals struggle to understand how AI works [6], AI should support the physician, not replace them [12, 18]. On the other hand, chatbots can support patients in home care through empathetic communication, structured explanations, and encouragement to consult doctors, which helps them better prepare for appointments [19].

AI shows significant progress in medicine, for example, in radiology and oncology, and in some tasks surpasses existing solutions [20]. Full implementation, however, is still limited by a lack of trust and regulatory issues [20, 21]. AI can also increase treatment precision and better tailor therapies to individual patients [4]. Much, however, depends on how society perceives AI; some people distrust AI because they do not understand how it works [5]. Others fear the loss of contact with physicians, lack of empathy, and legal ambiguity [10, 18]. Scientists emphasize that the concept of trust in medicine needs to be redefined, since the human-AI relationship differs from human-human relationships [22]. Therefore, we believe that the perspective of people not connected with medicine may help better prepare the system for implementing this technology [14].

OBJECTIVE

The aim of the study was to assess the level of trust among people outside the medical community toward the use of AI in medicine, and to identify factors influencing its acceptance or rejection. The study sought to determine how non-medical participants perceive the role of AI in diagnostics and treatment, what concerns they have, and what conditions, such as transparency, legal regulation, audits, and cooperation with physicians, may enhance trust and social acceptance.

MATERIALS AND METHOD

The study included 817 participants who had no professional ties to medicine, and used a quantitative approach, employing a diagnostic survey based on a questionnaire with 33 closed and multiple-choice questions. The survey was voluntary and anonymous. Data were collected both online and using printed questionnaires distributed in public spaces, such as universities, museums, and restaurants, ensuring diverse social representation. Respondents answered questions about their knowledge, opinions, and experiences related to AI, including trust in AI decisions, its role in diagnostics, doctor-patient relations, legal responsibility, and training needs. The study was conducted from March – June 2025.

Results were processed descriptively. Some responses were presented graphically as tables or pie charts showing the percentage distribution of answers, rounded to one decimal place (margin of error ±0.1–0.2 pp).

RESULTS

Level of knowledge and awareness of AI (AI) in medicine. Among people outside the medical community, most respondents had only a general understanding of the use of AI in medicine. More than half had heard of this issue but had no direct contact with it, while nearly one-third were interested in it independently, mainly through literature or their own research. In the respondents' opinion, the use of AI in medical diagnostics is generally perceived positively, although it is accompanied by considerable caution. About 42% of respondents supported the inclusion of AI in diagnostic processes, yet almost half had not formed a clear opinion. The majority of respondents indicated that AI should only support doctors in decision-making, not completely replace them.

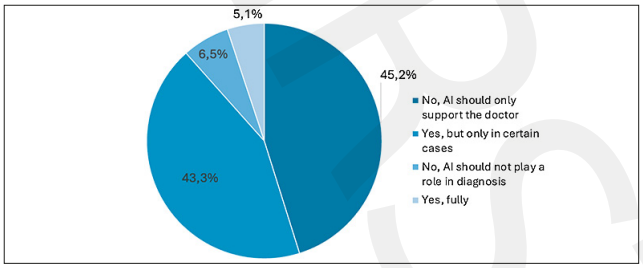

Figure 1. Do you think AI can replace a doctor in the diagnostic process?

Areas of application and potential of AI in medicine. According to respondents, AI can be applied in many areas of medicine, but the most promising were considered to be in diagnostics (over 61%) and image analysis in radiology (58%). Although participants recognized numerous possibilities for using this technology, most believed that diagnostic and therapeutic decisions should not be made independently

by AI. Limited autonomy of AI was accepted by 41% of respondents, but more than half (54%) emphasized that ultimate responsibility and decision-making must remain in the hands of physicians.

Trust in AI and the factors shaping it. The declared level of trust in AI systems was consistent with this view. Most respondents (63%) maintained a neutral attitude toward decisions made by AI systems, while only 15% expressed clear trust. On the other hand, more than 20% declared a lack of trust in AI, showing that despite growing interest in the technology, a certain degree of distance toward it still persists. Analysis of factors influencing trust revealed that the most significant concerns were algorithmic errors (65%) and the lack of transparency in how AI systems operate (56%). The issue of legal liability in the case of mistakes (51%) and diagnostic effectiveness and accuracy (52%) also proved to be important.

Nearly half of the respondents (49%) considered training with AI essential for the future of medicine, and another 42% viewed it as desirable but optional. Only a few saw no need for this type of education. Most respondents (66%) believed that AI would be a tool supporting specialists' work rather than a threat to their jobs. Only one in four participants (24%) perceived a potential risk of AI replacing certain medical specialties.

Legal liability, ethics, and doctor–patient relationship. The issue of legal responsibility evoked strong opinions – as many as 64% of respondents stated that doctors should be held accountable for any errors made by AI systems, while only 18% indicated technology developers as the responsible party. This result shows that in public awareness, the traditional view of the doctor as the main decision-maker in the diagnostic and therapeutic process still dominates. In the context of the doctor–patient relationship, half of the respondents (52%) did not see a threat of dehumanization, believing that AI would only serve as a supporting tool. At the same time, 38% expressed concern that technological development might limit direct contact with patients.

A strong consensus emerged regarding patients' right to be informed about the use of AI in the diagnostic process. As many as 93% of respondents stated that patients should be informed about AI participation, clearly emphasizing the importance of transparency and respect for patient autonomy in modern medicine.

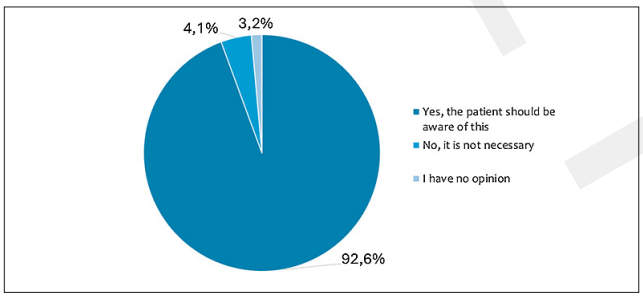

Figure 2. Should patients have the right to know that AI participates in the diagnostic process?

Personal experience and educational needs regarding AI. Most respondents had only moderate experience with the use of AI in medicine. More than half of them (51%) rated their experience as average, while almost one in three (29%) admitted to having no experience at all. A large majority (97%) had no formal education or training in AI in medicine. The lack of such formal preparation contrasts with the growing interest in this technology and may indicate the need to systematically include AI-related topics in medical education.

According to the respondents, AI can significantly contribute to improving the quality of medical education. As many as 69% believed that AI could support teaching in a limited but important scope, while another 18% were convinced of its distinctly positive impact. Only a few (8%) saw no educational value at all. An overwhelming majority (87%) agreed that medical students should receive training in the use of AI, with 29% considering it essential, and 59% regarding it as desirable at a basic level.

Concerns, medical specialties, and the future of AI in medicine. When asked about factors that could increase trust in AI in medicine, the most frequently mentioned were collaboration between AI and physicians (74%), and audits or certification by independent institutions (72%). Respondents also highly valued long-term effectiveness studies (64%) and the ability of AI systems to explain their decisions (56%). For 43% of respondents, better education for both patients and doctors was also a key factor.

Despite general trust in the development of AI technology, most participants (59%) feared that it could lead to errors that are difficult to detect, although they believed this could be prevented through proper safeguards and oversight. Two-thirds (65%) supported strict legal regulations and supervision by relevant authorities, while another 18% believed that such regulations should apply primarily to advanced technologies.

The most frequently mentioned concerns regarding AI development in medicine were the possibility of misdiagnosis (84%), lack of physician control over AI decisions (70%), and difficulty in assigning responsibility in case of error (65%). Nearly half of respondents (47%) also pointed to privacy risks, while 40% expressed concern about the dehumanization of doctor-patient relationships.

Respondents also recognized varying potential for AI application across medical specialties. The most frequently mentioned were neurology (61%), cardiology (54%), family medicine and orthopaedics (both 49%), as well as oncology (48%) and dermatology (47%). Gynaecology (25%) was mentioned much less frequently, which may reflect the differing levels of technological advancement across fields. Most participants also evaluated positively the potential use of AI in the care of critically ill patients. More than half (52%) stated that AI should support doctors in decision-making, while 23% saw it as a tool that could accelerate responses in life-threatening situations.

Self-assessment of knowledge about AI in medicine was generally low: more than half (56%) rated their knowledge as average, 37% as low or very low, and only 8% believed they had good knowledge of the subject. No one assessed their knowledge as very good. A large majority (65%) admitted they had not yet had the opportunity to work with AI systems in medical practice, and 25% declared no interest in the topic. Only 10% of respondents had any experience, theoretical or practical, with such tools.

The results also indicate a need to educate patients about AI: more than two-thirds (67%) believed that patients should

have at least basic knowledge about the role of AI in medicine, and 23% emphasized that such education should be an integral part of public health activities. According to respondents, the main concerns of patients include algorithmic errors (87%), loss of contact with doctors (62%), and the possibility of machines replacing specialists (65%).

Table 1. Survey questions, responses, and percentages

Question	Answers	Percentage (%)
In which areas of medicine can AI be most useful?	Radiology (image analysis)	58.1%
	Administration and healthcare management	53.0%
	Diagnostics	61.3%
	Robotic surgery	47.9%
	Personalized treatment	37.3%
	None of the above	6.5%
What most influences your level of trust in AI in medicine?	Algorithm transparency (clarity of how AI operates)	55.8%
	Effectiveness and accuracy of AI in diagnostics	52.1%
	Impact of AI on the doctor–patient relationship	27.7%
	Lack of clear legal responsibility in case of error	51.2%
	Possibility of algorithmic errors	65.4%
Which factors would most increase your trust in AI in medicine?	Cooperation between AI and doctors rather than independent decision-making	73.7%
	AI's ability to explain why a specific decision was made	56.2%
	Long-term studies on AI effectiveness in diagnostics	63.6%
	Audits and certification of AI systems by independent institutions	72.3%
	Better education of doctors and patients about AI	42.9%
What are your biggest concerns about the use of AI in medicine?	Possibility of incorrect diagnosis	84.0%
	Difficulty in assigning responsibility for errors	65.4%
	Lack of full physician control over AI decisions	69.6%
	Dehumanization of the doctor–patient relationship	40.1%
	Threats to patient data privacy	46.5%
	None, I believe AI is safe	0.9%
In which medical specialties does AI have the greatest potential for application?	Oncology	47.5%
	Neurology	61.3%
	Cardiology	53.5%
	Family medicine	49.3%
	Dermatology	47.0%
	Orthopaedics	49.3%
	Gynaecology	24.9%
	Other	1.8%
What concerns might patients have about the use of AI in diagnostics?	Fear of algorithm errors	86.6%
	Lack of personal contact with the doctor	61.7%
	Replacement of doctors by machines	64.5%
	Uncertainty about legal responsibility	55.3%
	Other	0.0%

The issue of responsibility for errors made by AI in medicine sparked diverse opinions among respondents. Half of those surveyed (50%) believed that responsibility should be shared between the doctor and the system's creators,

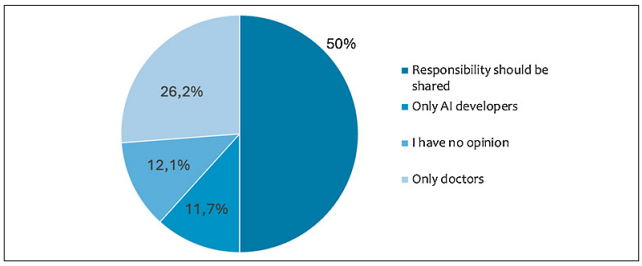

Figure 3. Do you think that in the case of an error made by AI, responsibility should rest solely with the system's creators or also with the doctors who used it?

indicating the need for shared accountability in the decision-making process. More than one-fourth (26%) assigned full responsibility to the physician, while only 12% thought it should rest solely with the technology developers.

A clear majority (66%) were convinced that physician empathy is an essential element of patient interaction, something AI cannot replace. However, one in four participants (27%) considered it acceptable to limit the emotional aspect of the relationship in favour of AI's effectiveness. Respondents attached similarly high importance to ethical issues related to the use of AI in medicine. For nearly 60% of participants, ethical aspects were crucial in shaping their trust in this technology, while for about one-third (32%), effectiveness was more important.

Predictions regarding the future of AI in medicine were characterized by moderate optimism: more than two-thirds of respondents (67%) believed that AI would support doctors but not replace them; one in four (25%) expected it to become an integral part of everyday clinical work, while only a few individuals (3%) did not anticipate significant development of this technology. Similar tendencies were observed concerning therapy personalization. Most respondents (66%) stated that AI could effectively tailor treatment to individual patients, though mainly in specific cases.

In a hypothetical situation where a diagnosis made by AI differed from that of a doctor, most respondents (59%) declared they would prefer to seek an additional opinion or undergo further testing. About one-third (32%) said they would trust the doctor's diagnosis, while only a small fraction (6%) admitted they would have more confidence in the assessment made by AI.

These results clearly show that despite growing trust in the technology, human knowledge and experience remain decisive factors.

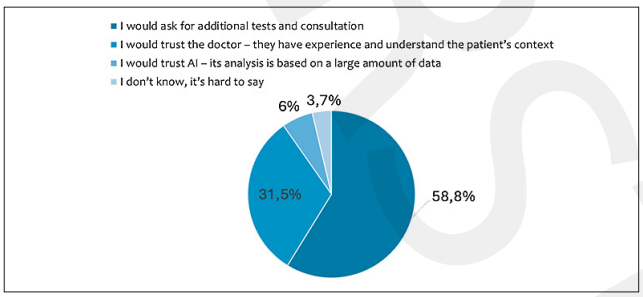

Figure 4. Imagine that AI made a diagnosis different from the doctor's opinion. What would you do?

The conducted study showed that people outside the medical community perceive AI primarily as a tool supporting the physician, rather than as an independent

diagnostic or therapeutic entity. Most respondents support the presence of AI in diagnostics; however, its role should be limited to assisting the work of the specialist. Analysis of the responses indicated that AI is perceived as particularly useful in radiology, image analysis, cardiology, and neurology, as well as in therapy personalization.

The level of trust in AI in medicine turned out to be moderate. More than half of the respondents (53.5%) opposed AI systems making independent therapeutic decisions, and most trust ratings fell within a neutral range. At the same time, participants emphasized that audits and certification of AI systems, the ability to explain AI decisions, and close cooperation with physicians are crucial for building trust. The doctor-patient relationship proved especially significant. Most respondents did not believe that the development of AI will lead to the dehumanization of medical care, yet more than 65% consider physician empathy an irreplaceable factor in the treatment process. In terms of legal responsibility, there is a clear expectation for a transparent division of competencies and duties.

Most respondents assigned full responsibility to the doctor, although half indicated the need for shared responsibility between physicians and system developers. An overwhelming majority (92.6%) also believe that patients should be informed about the use of AI in diagnostics, which confirms the importance of transparency and protection of the patient's right to informed consent.

Respondents declared limited knowledge and experience regarding AI in medicine. Most rated their competence as average or low, and only a few had formal education in this field. At the same time, participants clearly recognized the need for education for both doctors and patients, with particular emphasis on training future medical professionals. The most frequently cited concerns related to the use of AI in medicine included the risk of incorrect diagnoses (84%), lack of physician control over system decisions (69.6%), and difficulty assigning responsibility (65.4%). Ethics and data privacy also play an important role in shaping trust. For more than half of respondents, ethical aspects are a key condition for accepting this technology. In cases of discrepancies between a doctor's diagnosis and AI-generated results, most respondents (58.8%) indicated the need for additional tests and consultations, confirming that in situations of uncertainty, society still places greater trust in humans than in AI systems.

DISCUSSION

The results of the study show that people outside the medical community generally have moderate trust in AI in medicine, and see it mainly as a tool to support doctors, not as an independent instrument. Similar conclusions appear in other studies [23]. Participants tend to trust doctors' diagnoses more than those made by AI, especially in the case of serious illnesses [23]. Even when participants are informed that AI is more accurate than humans, this does not always increase their trust [23, 24]. In the presented study, however, various forms of 'encouragement', such as a doctor's recommendation or an explanation that the AI system has been certified, could improve respondents' attitudes. Trust in medicine is not only a matter of effectiveness, but also of relationships and a sense of safety [25]. Academic literature emphasizes that AI can both strengthen and weaken these relationships, depending on how the system is designed [15, 25]. The lack of transparency and the so-called 'black box' effect make people fear errors and the lack of physician control, which is evident both in the results obtained in this and other studies [7, 25]. On the other hand, well-designed and explainable AI, which shows how it reaches its conclusions, can help build trust and make it easier for doctors to collaborate with technology [7, 15].

Many publications also highlight that education – for both doctors and patients – plays a key role [15, 17]. A lack of knowledge leads either to distrust or blind faith in AI, both of which can be risky [9, 17]. Other studies, similar to the respondents in the current study, also indicate that training, certification, and audits are needed to ensure system safety and reliability [21, 24]. An important topic remains the issue of responsibility [21, 26]. Both in the current findings and in the literature, people are uncertain about who should be held accountable for an error made by AI – the doctor, the system's creator, or the hospital [21, 26]. Most participants in the current study believed that responsibility should be shared, which seems the most reasonable solution [26]. It is also clear that physician empathy is something people believe technology cannot replace [18, 27]. Patients still prefer situations where AI assists the doctor, rather than makes independent decisions [11, 18]. Some studies even show that when patients learn that their doctor uses AI, their trust in the doctor may decrease, unless they themselves have significant experience with the technology [11]. Doctors, on the other hand, tend to trust AI more when they use it regularly and understand how it works [28].

Interestingly, the 'first impression' of AI strongly influences whether people are willing to use it. This so-called 'initial trust' can be even more important than the belief that the technology is effective [29]. This suggests that before AI is more widely implemented in medicine, it is necessary to ensure education, transparency, and clear rules of use [9, 29]. The presented study confirms that society accepts the presence of AI in medicine, but only as a tool supporting humans [27, 26]. Trust in AI is possible if specific conditions are met: transparency of operation, education, audits, clear division of responsibility, and preservation of human contact in the doctor-patient relationship [9, 15, 27].

Recent Polish evidence confirms that attitudes toward AI in healthcare are similarly ambivalent. In a qualitative study conducted in the general population, showed that acceptance of AI is linked to perceived usefulness and trust in technology, whereas concerns relate to reliability, lack of control, and the absence of human qualities such as empathy [30]. These findings are consistent with the presented results, suggesting that moderate trust and conditional acceptance of AI (as a physician-supporting tool) reflect a broader and not unique pattern observed both in Poland and internationally [30].

The obtained results should also be considered in the context of the applicable legal regulations concerning data protection and the use of AI in healthcare. In the European Union, health-related data constitute a special category of personal data and are subject to enhanced protection under the General Data Protection Regulation (GDPR), which requires an appropriate legal basis, the implementation of safeguards, and the assurance of accountability in the processing of such data. In Poland, these regulations are supplemented by the Act on Patient Rights and the Patient

Rights Ombudsman, which governs, inter alia, access to medical records and the patient's right to information.

Furthermore, Regulation (EU) 2024/1689 of the European Parliament and of the Council (the so-called AI Act) introduces a harmonized, risk-based regulatory framework for AI systems in the European Union; within the healthcare sector, certain AI applications may be classified as high-risk systems, particularly when they are used as medical devices or as safety components of such devices. The trust-building factors identified in this study, such as system transparency, human oversight, and clearly defined accountability, remain consistent with the direction adopted in the existing regulatory framework, thereby underscoring the importance of a coherent legal and societal approach for the safe implementation of AI in medicine.

Limitations of the study. This study has several limitations which should be taken into consideration when interpreting the obtained results. First, the study was voluntary in nature, which may have led to selection bias, as individuals more interested in AI may have been more likely to participate. Moreover, the sample was not randomly selected, which limits the generalizability of the findings to the broader population. The data were based on respondents' self-reports and reflect their subjective opinions rather than actual behaviours. It is also important to note that the majority of participants had no direct experience with the use of AI in medical practice, which implies that their responses may have been derived more from general beliefs than from real-world experience. Additionally, the use of a survey questionnaire consisting of closed-ended and multiple-choice questions, limited the possibility of conducting an in-depth analysis of respondents' attitudes. The inclusion of qualitative methods, such as interviews, could have provided more detailed insights into the factors shaping trust in AI.

Another limitation is the cross-sectional design of the study, which reflected respondents' opinions only at a specific point in time. Given the dynamic development of AI technologies, societal attitudes toward them may also change rapidly. Finally, the study was conducted within a specific geographical and cultural context, which may have limited the applicability of the findings to other populations and healthcare systems.

Despite these limitations, the study provides important insights into the perception of AI in medicine among individuals outside the medical community and identifies key factors influencing the level of trust in and acceptance of this technology.

CONCLUSIONS

The study shows that people outside the medical community are cautiously open to AI in health care, provided that it remains a physician-supervised support tool. Although respondents see the highest value in diagnostics, radiology, and therapy personalization, they expect doctors to retain final authority over clinical decisions. Trust in AI is mostly neutral, which signals untapped potential that depends on how transparently and responsibly systems are designed and deployed. The factors that most strengthen trust are clear and actionable: independent audits and certification, explainable decision pathways that patients and clinicians can understand, and explicit human oversight. Equally clear are the main barriers to acceptance. People worry about diagnostic error, loss of physician control, unclear legal responsibility, privacy risks, and the possible erosion of human contact. At the same time, empathy is viewed as irreplaceable, and most respondents want to be informed whenever AI is used in their care. These findings suggest a practical agenda for safe adoption. Health systems and vendors should prioritize explainability and post-market auditing, define shared liability frameworks that specify the roles of clinicians and developers, and embed AI into workflows as decision support rather than autonomous actors.

Education should advance on two fronts. Clinicians and students need training that covers technical basics, limitations, and medico-legal context. Patients need accessible information that clarifies what AI does and what it does not do. Policy makers can accelerate trust by establishing proportionate regulations for validation, registration, and monitoring of clinical AI, with transparency requirements that match risk levels. Institutions should adopt disclosure policies so that patients know when AI contributes to their diagnosis or treatment, and they should preserve time and space for human interaction in clinical encounters.

Finally, future research should track outcomes from real-world deployments, compare different disclosure and explainability strategies, and examine how first contact and early user experience shape long-term trust. Taken together, the obtained results indicate that social acceptance of medical AI is achievable, but only under conditions that keep people in the loop, make systems auditable and understandable, and protect the centrality of the doctor–patient relationship.

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