

Review

Economic, social and legal implications of MediSearch (AI search engine) from Indian health perspective

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Abstract: This paper tries to understand economic, social and legal implications of the introduction and usage of MediSearch (AI search engine) in the Indian healthcare context. Discussing the economic ramifications, the paper highlights the potential for cost savings, the influence on healthcare accessibility, and the shifts in traditional medical paradigms. On the social side, the study explains ability of AI based platforms to bridge healthcare disparities, with a potential for enhancing general health literacy among the general population. From a legal standpoint, study highlights the concerns related to data privacy, regulatory issues, and possible malpractice implications. With the integration of these perspectives, the study also explains opportunities, challenges and future of MediSearch from the Indian health perspective.

Keywords: MediSearch; healthcare; artificial intelligence

1. Introduction

The Internet has significantly grown during the 1990s and now becomes an essential source of health information in the world. People try to use different mediums like blogs, social networks, websites, applications to find health information. Google search engine is the most used medium for health related searches. Because of this easy availability of information many people turn to digital media for health-related information before consulting a doctor. However, this practice has led to the spread of false information, increased anxiety, and more self-diagnosis and self-treatment. Due to this, during consultations, patients often ask more queries and request more treatments options even if there are unrelated to their diagnosis, giving doctors a complex role in interpretation and advice to patients. Despite the advantages of accessing health information online, the use of Internet Health Information Seeking remains low in developing countries. In contrast to developed nations like the United States, where over 75% of people have adopted Internet Health Information Seeking (National Cancer Institute, 2018), only 32% of Internet users in India, have searched for health information online (Lee and Lin, 2016). However, in last 5 year India Internet penetration has been increasing at rapid rate, with an estimated 1.2 billion people being active Internet users across the country. This is largely due to number of factors like increased availability of broadband, inexpensive data plans, and various government initiatives under the digital India campaign (Statista, 2021). The healthcare landscape is undergoing a significant transition in a time of rapid technological advancement and digital transformation. In this regard, a new paradigm in healthcare access, management,

and delivery has been ushered in by the introduction of platforms like MediSearch. The use of MediSearch, a digital health tool, to combine information technology and medical care has the potential to totally alter the Indian healthcare system (Smagulov and Smagulova, 2019).

The Indian healthcare system is a combination of complex issues, from obstacles to accessibility and financial limitations to the urgent need to provide fair health services for its diverse people. Through the introduction of MediSearch, there is a great chance to address these issues and guide in a time of informed healthcare decisions, patient empowerment, and better use of medical resources (Guo and Li, 2018).

This article tries to clarify both the potential advantages and the complex difficulties that come with the introduction of MediSearch into India's healthcare narrative by providing an in-depth examination of the economic, social, and legal components. Analysing how MediSearch aligns with India's economic reality is crucial as we go with our exploration. Economic factors are centred on the cost of healthcare, accessibility to medical care, and effective resource management. In addition, MediSearch has the ability to promote early intervention and raise health awareness, which could have an impact on societal dynamics (Väänänen et al., 2021).

By analysing how MediSearch might close the information gap between patients and healthcare professionals, help to close health inequities, and promote preventative healthcare practises, this article will look into the societal impacts. The article will examine the legal repercussions in an era where data privacy is crucial. With the introduction of technology into healthcare, also calls for a careful analysis of the regulatory environment governing the use of private medical data on websites like MediSearch in the context of digital health solutions, it will examine the current regulatory landscape in India and address issues with patient rights, informed consent, and medical liability. This exploration of MediSearch's economic, social, and legal aspects from the perspective of Indian healthcare will provide a detailed understanding of its potential to change the dynamics of healthcare. We intend to shed light on how to utilise this modern tool's capabilities while avoiding possible drawbacks by identifying the opportunities and difficulties it presents.

The role of technology, as represented by MediSearch, is one that needs to be carefully analysed and taken into account as India works to provide its population with affordable and effective healthcare, a mission that forms the core of this in-depth investigation.

2. India's health care sector

India's health care sector is a complicated story of exceptional achievements and ongoing challenges. It is a nation with an emerging medical tourism industry that rivals the best in the world through technological progress, but accessibility, affordability, as well as lack of infrastructure still remains some of its main challenges to majority of the population. This is a story laden with potential and yet every day sees millions of Indians struggling to access adequate healthcare. For example, cutting-edge diagnostics are available at Plush private hospitals at

exorbitant cost offering hope for faster and more accurate diagnoses. Conversely, many rural patients have to undertake long journeys to get to a competent doctor only to spend long periods waiting for treatment by specialists. Thus, it ends up being seen as two-tiered medicine system; where better healthcare stands beside limited access that affects majority in India.

Current state of Indian health care sector

Demographic shift: A growing young population with frequent exposure to information and health trends through social media and the internet is becoming more aware of the importance of preventive healthcare. This generation prioritizes regular checkups, screenings, and healthy habits to avoid chronic diseases later in life. India's economic growth leads to a rise in disposable income among its young population. This allows them to invest in preventive healthcare services, gym memberships, and healthy food options, which were previously considered luxuries (Invest India, n.d.). Urbanization and a shift towards more sedentary lifestyles have led to an increase in lifestyle diseases like diabetes, heart disease, and obesity in young adults. This necessitates proactive management through preventive care measures like regular blood sugar monitoring, cholesterol level checks, and dietary consultations.

Financial innovations: Schemes like Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) provide health insurance coverage to millions, reducing financial burdens during emergencies (Thomas et al., 2023). This increased financial security is having a positive impact on greater healthcare utilization in several ways. AB-PMJAY covers a significant portion of hospitalization expenses, minimizing the financial burden on patients and their families. This allows them to seek necessary medical care without the fear of huge medical bills, which previously deterred many from seeking treatment. With financial security, people are more likely to seek preventive care and early diagnosis of illnesses. This can lead to timely treatment and potentially lower long-term healthcare costs associated with managing chronic conditions. AB-PMJAY coverage often extends to empaneled private hospitals, which may offer a wider range of specialists compared to public facilities. This allows patients to access specialized care they might have previously avoided due to cost concerns. Financial security through health insurance encourages people to utilize preventive and curative healthcare services more readily. This can lead to a healthier population overall and a decrease in the burden of preventable diseases on the healthcare system in the long run.

Medical tourism boom: Leveraging its skilled professionals and cost-effective treatments, India is attracting medical tourists globally, placing it among the top destinations in the medical tourism (Deep and Vidisha, 2022). International patients often come with unique medical needs and require treatment protocols based on their home country's practices. This exposes Indian healthcare professionals to diverse medical approaches, encouraging them to stay updated on the latest global trends and potentially improving treatment options for domestic patients. The influx of medical tourists can lead to collaborations between Indian hospitals and foreign medical institutions. This exchange of expertise can encourage innovation in areas like

surgical techniques, technology adoption, and even hospital management practices.

The revenue generated by medical tourism can be reinvested into improving healthcare infrastructure in India. This can lead to the development of specialized facilities, acquisition of advanced medical equipment, and training programs for healthcare professionals, ultimately benefiting both domestic and international patients. India's position as a leading medical tourism destination strengthens its reputation for quality healthcare on a global scale. This attracts skilled professionals from abroad, further enriching the Indian healthcare talent pool and potentially leading to the development of niche medical specialties within the country.

Financing hurdles: Out-of-pocket expenditure remains a significant concern, with nearly half of total healthcare spending borne by patients themselves (Nanda et al., 2023). Limited public health insurance penetration leaves many vulnerable during critical situations. This high reliance on out-of-pocket payments creates a ripple effect of challenges. The fear of exorbitant medical bills can lead people to delay seeking necessary healthcare, especially for preventive or chronic conditions. This can worsen health outcomes in the long run and potentially lead to more expensive emergency care later. High medical costs can push families into debt or even financial ruin. The burden of out-of-pocket payments can force them to sell assets, take out loans at high-interest rates, or even forego other essential needs like food or education for their children. The financial burden of healthcare disproportionately impacts lower-income households. Without adequate health insurance, these families are often forced to choose between seeking medical care and meeting their basic needs, further widening the gap in health outcomes between socioeconomic classes.

Uneven infrastructure: India faces a shortage of doctors, nurses, and hospital beds, especially in rural areas (Kamala, 2021). This disparity leads to overcrowding in urban hospitals and limited access to specialists in rural regions (Invest India, n.d.). This geographical disparity significantly impacts healthcare outcomes in several ways: The lack of well-equipped clinics and trained healthcare professionals in rural areas creates barriers to accessing even basic medical services. This can lead to delayed diagnoses, inadequate treatment for common illnesses, and a higher prevalence of preventable diseases. The limited availability of healthcare resources in rural areas forces people to travel long distances to seek care at urban hospitals. This creates overcrowding, longer wait times, and potential strain on the capacity and resources of these facilities. The concentration of specialists in major cities creates a significant gap in access to specialized care for rural populations, resulting in delayed referral for critical conditions, reliance on less-qualified providers, and potentially poorer treatment outcomes. The uneven distribution of healthcare infrastructure translates to poorer health outcomes in rural areas. This can be reflected in higher infant and maternal mortality rates, a higher burden of communicable diseases, and lower life expectancy compared to urban populations. The distribution of healthcare professionals in India resembles a patchwork quilt—pockets of plenty in urban areas contrasting starkly with the scarcity in rural regions. This uneven distribution creates a ripple effect of challenges. Urban centers often struggle with managing a surplus of general practitioners, while rural areas face a critical deficit. This mismatch leads to under-utilization of skills in cities and a lack

of basic care in rural areas. Specialist care, often concentrated in major cities, remains out of reach for many in remote areas resulting in delayed diagnoses of complex conditions, reliance on less-qualified providers for critical care, and ultimately, poorer treatment outcomes. Several factors contribute to the uneven distribution. Better career opportunities, higher salaries, and access to amenities attract healthcare professionals to urban centers. Conversely, a lack of infrastructure, limited facilities, and challenging living conditions deter them from rural postings. The disparity in workforce distribution translates directly to public health outcomes. Rural populations experience higher rates of preventable diseases, delayed treatment for chronic conditions, and lower life expectancy compared to their urban counterparts.

The challenges in India's healthcare system have a profound human cost, impacting millions of lives across the country. Uneven distribution of resources, particularly specialists, in rural areas often leads to delayed diagnoses. This can be particularly detrimental for critical illnesses, where early intervention is crucial. Patients might have to travel long distances to access specialists, causing delays and potentially worsening health outcomes. Limited access to diagnostics and specialists can result in inadequate treatment plans. This can lead to complications, longer recovery times, and potentially higher healthcare costs in the long run. Delayed diagnoses, inadequate treatment, and a lack of preventive care contribute to higher rates of preventable diseases and mortality, especially in rural areas. Children are particularly vulnerable, facing higher risks of malnutrition and infectious diseases. Living with chronic illnesses, managing the emotional toll of a sick family member, and the constant worry about medical bills can take a significant toll on mental health. Anxiety, depression, and stress become additional burdens for patients and their families.

3. What is MediSearch

It is a reliable source for medical information. It employs large language models (LLMs) to provide clear responses to medical queries based on reliable sources. In many ways MediSearch is unique from other sources of health information. As a major differentiator in comparison to traditional search engines, the response of MediSearch is much clearer and easy to understand. Instead of providing with unlimited list of links to click for the user, MediSearch provide a thorough and in-depth response to the inquiry. MediSearch is also more trustworthy as it makes use of a range of credible resources to make sure that data is precise and up-to-date, including publications, books, and websites from reputable organisations. Additionally, MediSearch is easier to use for the user. It doesn't require specialised medical expertise for the user to utilise it, the queries and the responses are written in simple, understandable English and Hindi as well. MediSearch demonstrates a performance level of 92% (Oravkin, 2023) (**Figure 1**) on the sample exam for United States medical licensing which is significantly higher in comparison of its competitors.

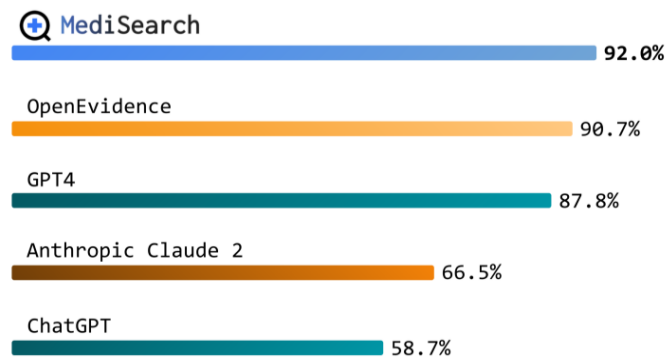


Figure 1. Performance on the US medical licensing exam.

4. Methodology

From the standpoint of Indian health-sector, this study uses a theoretical and conceptual approach to understand the legal, social, and economic implications of MediSearch, an emerging AI search engine. As part of the methodology, a thorough study of the literature is conducted in order to understand, compile and evaluate the possible implications of the emerging AI tool. Through an analysis of many aspects of artificial intelligence in healthcare, specifically in the Indian setting, this research attempts to offer a bird eye view of MediSearch’s possible effects.

5. Economic implications

Numerous aspects of the healthcare system, healthcare costs, and other economic factors are affected by MediSearch’s integration with India’s healthcare system. As this digital health tool starts to gain acceptance in India, several important economic variables start to take shape:

- MediSearch may have an impact on how medical resources are allocated, which may have an effect on total medical costs. The platform could improve diagnostic accuracy and decrease the need for unnecessary tests and procedures by giving patients access to full medical information. This effectiveness might help keep healthcare costs under control, which is important for a nation that wants to offer accessible and reasonably priced healthcare services to its sizable population (Guo and Li, 2018).
- A sizable private healthcare industry distinguishes India’s healthcare system. The use of MediSearch could alter how private healthcare providers conduct business. Private healthcare organisations may need to modify their pricing patterns, service offerings, and communication strategies to be competitive in an increasingly transparent climate where more knowledgeable people are looking for cost-effective alternatives.
- An important player in the international market is India’s pharmaceutical industry. The impact of MediSearch on patients’ access to drug information and available treatments may have an effect on pharmaceutical companies’ business plans. The demand for specific prescriptions may shift, affecting cost and market dynamics, if patients are better equipped to make decisions about their medications (Shaheen, 2021).
- The incorporation of MediSearch may promote the development of

telemedicine and digital health solutions. The need for virtual consultations and remote monitoring may increase as patients gain remote access to medical information. This pattern may result in an abundance of creative startups and businesses in the field of digital health, fostering the expansion of the economy and the creation of jobs there (Bhaskar et al., 2020).

- Through services like MediSearch, healthcare data is becoming more digital, which may have an impact on the health insurance market. Insurance companies may be better able to customise insurance packages with more precise and thorough medical histories available, which could result in more effective coverage plans and better risk assessment (Park et al., 2021).
- Due to its affordable medical care, India has become a major destination for medical tourists. MediSearch may draw more overseas patients looking for low-cost, high-quality medical care since it increases the transparency of healthcare options. This might strengthen the medical tourism industry, boosting regional economies (Hassan and Bellos, 2022).
- The use of digital health tools may lead to an increase in the demand for personnel with training in data administration, medical technology, and patient education. This can result in employment openings in these specialised domains and help the healthcare job market flourish (Zheng et al., 2021).

6. Social implications

A number of social impacts that go beyond the scope of medical care can be brought by the integration of MediSearch into the Indian healthcare system. This digital health platform is set to influence social dynamics and health-related behaviours in the following ways as it becomes increasingly a part of people's lives:

- MediSearch has the ability to promote open and cooperative connections between patients and providers. The platform enables people to take an active role in making healthcare decisions by giving them access to their medical histories, treatment options, and health information. This change from a passive to an active patient role may result in more fruitful interactions with medical staff, improving the overall quality of care (Lorenzini et al., 2023).
- MediSearch's ability to increase health awareness and education is one of its major societal effects. People are better able to grasp their health concerns, preventive measures, and treatment alternatives as they have access to correct medical information. This newly discovered information might encourage people to adopt healthier lifestyle choices and to follow medical advice more closely (Wang et al., 2022).
- MediSearch might help close health gaps in a country with a wide range of socioeconomic circumstances. The platform enables people from different economic strata to access the same degree of medical knowledge by liberalising access to it. This may result in more fair healthcare choices and maybe narrow the disparity in health outcomes between various socioeconomic groups.
- The impact of MediSearch goes beyond individual healthcare to affect the priorities of public health. A population that is well-informed about their health may advocate more strongly for public health programmes, vaccination

campaigns, and preventive measures. A wider societal movement in favour of putting a priority on wellness and proactive health management may result from this (Wang et al., 2022).

- MediSearch’s implementation may highlight the significance of digital skills in contemporary culture because using it requires some level of digital literacy. However, this can also prompt worries about leaving out portions of the population who have little internet access or expertise. To ensure inclusivity and fair benefits, closing the technological gap becomes essential.
- The fact that considerable medical information is accessible through MediSearch may affect how families decide on medical care. Patients and their families may have more thoughtful discussions about available treatments, which could result in shared decision-making and a deeper comprehension of the effects of various medical interventions (Westerlund et al., 2021).
- Discussions on privacy and ethical issues are prompted by the launch of MediSearch. The benefits of making informed decisions and worries about data security and privacy must be balanced, and this requires social discussion involving people, legislators, and stakeholders in the healthcare industry (Hermansyah et al., 2023).

7. Legal implications

There are numerous legal issues that call for thorough examination as a result of MediSearch’s incorporation into India’s healthcare ecosystem. A number of legal consequences, including those relating to data privacy, patient rights, adherence to regulations, and other issues, arise when this digital health platform becomes an essential component of managing medical information:

- The protection of patient data security and privacy is the main legal issue surrounding MediSearch. The platform must strictly abide by data protection laws, such as the “Personal Data Protection Bill”, in order to store and share sensitive medical information. To protect patients’ private health information, strict access rules, secure storage, and compliance with powerful data encryption become essential (Murdoch, 2021).
- In the context of MediSearch, the legal theory of informed consent is highlighted. Patients must expressly consent in order for the platform to retain, access, and share their health information. To protect patients’ right to make knowledgeable decisions about their data, it is crucial to make sure they fully comprehend the implications of giving consent.
- It matters legally whether the medical information on MediSearch is accurate. Liability issues may occur if obsolete or incorrect information influences medical decisions that cause injury and Side effects. In order to keep accurate health information, it is crucial to specify the duties of the platform, healthcare providers, and patients (Tobia et al., 2021).
- The operation of MediSearch within the Indian healthcare system involves adhering to a complicated web of regulatory regulations. These could include rules established by the Medical Council of India, “Telemedicine Practise Guidelines”, and other legislation pertaining to healthcare. To prevent legal

issues, it's crucial to make sure that functions are in compliance with these rules.

- Many questions and problems would be raised regarding the proper ownership of medical data and the service provider's intellectual property rights. Who will be the owner of the patient's medical records? Can the platform use concealed and aggregated data for research? An authoritative legal framework that defines ownership and usage rights is necessary to address these problems. This collection could be kept safe with the use of AI tools (Sidebottom et al., 2021).
- International data transfer laws may come into play if the information held on MediSearch is moved across national boundaries. To maintain legality, it is necessary to understand the legal complexity of data transfers, particularly when working with patients or providers from other jurisdictions (Alzubi et al., 2021).

8. Opportunities and challenges

Numerous opportunities that could transform healthcare delivery and patient outcomes are possible by the entry of MediSearch into India's healthcare system. To achieve the successful integration and use of this digital health platform, a number of obstacles must be overcome in addition to these opportunities.

8.1. Opportunities

MediSearch has the potential to break down physical barriers by enabling people in remote locations to get access to medical information, speak with experts, and get advice without having to physically be present. MediSearch technology can also improve healthcare outcomes in rural areas of developing countries by improving physicians' efficiency and the quality of medical services (Guo and Li, 2018). MediSearch may encourage educated decision-making by arming patients with thorough medical information. This empowers people to take an active role in their health management and treatment decisions. By decreasing unnecessary testing, minimising paperwork, and promoting quicker information sharing among healthcare professionals, the platform can result in streamlined operations within the healthcare system. During the COVID-19 pandemic, AI has a great deal of promise for enhancing the effectiveness of healthcare systems by providing helpful assistance in numerous areas (Wang et al., 2021).

Additionally, AI-powered systems like MediSearch can use health data to improve public health initiatives, preventative measures, and early treatments, ultimately leading to better health outcomes (Wang et al., 2022). Data from MediSearch that has been aggregated and anonymised may offer useful insights for medical research, enabling evidence-based healthcare improvements and policy decisions. The platform's success might open up new opportunities for business ventures, the creation of jobs, and technological developments in the healthcare industry (Rodríguez-González et al., 2019).

8.2. Challenges

Strict data protection measures are required because the storage and distribution

of sensitive medical information raises worries about data breaches, unauthorised access, and potential patient data exploitation (Montjoye et al., 2017). Due to low levels of digital literacy and access, MediSearch's advantages might not be distributed equally throughout all societal groups, which might worsen health disparities. In order to avoid misdiagnoses, disinformation, and medical errors caused by reliance on wrong data, it is essential to ensure the accuracy and trustworthiness of the medical information on the platform. To maintain legal compliance and prevent any legal problems, adherence to the healthcare regulations, data protection legislation, and telemedicine rules demands a dedicated effort (Esmailzadeh, 2020). While MediSearch might narrow gaps, there is a chance that it could widen health disparities if some communities are left out owing to technological or socioeconomic limitations. Strong technological infrastructure, including high-speed internet, secure servers, and user-friendly interfaces, may be missing in some places but is necessary for the successful deployment of MediSearch (Borg and Borg, 2023). It can be difficult to get healthcare providers to use the platform, interact with patients online, and verify data accuracy; this calls for cultural and systemic changes. Encouraging patient confidence in platform security and data privacy to promote acceptance and avoid resistance due to privacy concerns, reliability is crucial (Jermutus et al., 2022).

9. Future of MediSearch in India

As we look towards the future of India's healthcare system, MediSearch's development and mass adoption have the potential to completely alter how access to, management of, and provision of healthcare is carried out.

MediSearch may one day seamlessly interact with various aspects of healthcare, serving as a central repository for patient records, diagnostic results, treatment regimens, and even data from wearable devices. Patients may have a single profile that medical professionals can access, promoting thorough and coordinated care. The possibilities of MediSearch may go beyond data storage to include providing individualised health advice. The platform may provide personalised wellness programmes, preventive measures, and treatment recommendations by examining patient history, genetic information, and lifestyle factors (Hosny and Aerts, 2019). Due to MediSearch, telehealth might replace traditional healthcare delivery. Physical visits could be eliminated, relieving pressure on the healthcare system, thanks to virtual consultations, remote monitoring, and e-prescriptions (Kuziemy et al., 2019). The development of artificial intelligence (AI) may be crucial for MediSearch in the future. AI systems might examine compiled data to spot patterns, forecast illness outbreaks, and provide suggestions for early intervention, resulting in proactive and data-driven healthcare management. MediSearch could be an effective platform for medical research thanks to its extensive collection of anonymised patient data. This information could be used by researchers to advance medical understanding, find new treatment options, and advance science (Patel et al., 2020). MediSearch might develop into a whole health management ecosystem that links patients, medical professionals, insurance companies, and pharmacies. This connected network may make it easier to communicate easily, provide prescriptions

quickly, and authorise treatments quickly (Guo and Li, 2018). Patients may become outspoken supporters of healthcare policy changes, patient rights, and health improvements as they become more knowledgeable about their own health using MediSearch. This grassroots movement might alter healthcare goals and systems. MediSearch's future is anticipated to incorporate strong data governance and ethical AI frameworks. The three main tenets of the platform's operations would be getting express consent, ensuring transparency in data utilisation, and protecting data integrity (Richardson et al., 2021). To adjust to the digital healthcare paradigm, healthcare practitioners might pursue ongoing education. To fully utilise MediSearch, advancements in telehealth procedures, data management, and patient interaction are required. As MediSearch develops, it might become a benchmark for other countries facing healthcare difficulties. Collaboration across borders could promote information sharing and enhance healthcare systems globally.

10. Limitations and future research directions

The study depends significantly on secondary data sources, such as scholarly articles. The lack of primary data collection restricts the capacity to give empirical confirmation for the theoretical implications highlighted. As a theoretical and conceptual work, the study prioritizes conceptual inquiry above empirical validation as the AI health search engine tool is still the emerging concept. This emphasis may result in a lack of specific evidence to back up the stated outcomes. Because of the rapid rate of technical improvements in AI, new developments and innovations may occur that are not included in this research. The current constraints highlight the necessity for more empirical study and ongoing monitoring of technology and contextual advances. Future research should address these limitations in order to improve the findings' robustness and usefulness of the study.

11. Conclusion

Future healthcare reform could be generated by the seamless integration of technology and healthcare through MediSearch, improving patient outcomes, decreasing inefficiencies, and rethinking the patient-provider relationship. However, in order to achieve change, it would be necessary to address social, legal, and ethical issues as well as develop technology. The possibility of MediSearch influencing the future of healthcare in India may very well materialise via cooperative efforts of hospitals, doctors, government and technology companies.

Conflict of interest: The authors declare no conflict of interest.

References

- Alzubi, O. A., Alzubi, J. A., Shankar, K., & Gupta, D. (2021). Blockchain and artificial intelligence enabled privacy-preserving medical data transmission in Internet of Things. *Transactions on Emerging Telecommunications Technologies*, 32(12). <https://doi.org/10.1002/ett.4360>
- Bhaskar, S., Bradley, S., Sakhamuri, S., et al. (2020). Designing futuristic telemedicine using artificial intelligence and robotics in the COVID-19 era. *Frontiers in Public Health*, 8, 556789. <https://doi.org/10.3389/fpubh.2020.556789>
- Borg, M. (2022). Pipeline Infrastructure Required to Meet the Requirements on AI. *IEEE Software*, 40(1), 18–22.

- <https://doi.org/10.1109/ms.2022.3211687>
- Deep, S., & Vidisha, V. (2022). Medical Tourism. *Journal of Biomedical Research & Environmental Sciences*, 3(2), 179–180. <https://doi.org/10.37871/jbres1418>
- Esmacilzadeh, P. (2020). Use of AI-based tools for healthcare purposes: A survey study from consumers' perspectives. *BMC Medical Informatics and Decision Making*, 20(1), 170. <https://doi.org/10.1186/s12911-020-01191-1>
- Guo, J., & Li, B. (2018). The application of medical artificial intelligence technology in rural areas of developing countries. *Health Equity*, 2(1), 174–181. <https://doi.org/10.1089/heq.2018.0037>
- Hassan, V. I., & Bellos, G. (2022). COVID-19: Reshaping medical tourism through artificial intelligence (AI) and robotics. *Athens Journal of Tourism*, 9(2), 77–98. <https://doi.org/10.30958/ajt.9-2-2>
- Hermansyah, M., Najib, A., Farida, A., et al. (2023). Artificial intelligence and ethics: Building an artificial intelligence system that ensures privacy and social justice. *International Journal of Science and Society*, 5(1), 154–168. <https://doi.org/10.54783/ijsoc.v5i1.644>
- Hosny, A., & Aerts, H. J. W. L. (2019). Artificial intelligence for global health. *Science*, 366(6468), 955–956. <https://doi.org/10.1126/science.aay5189>
- Invest India. (n.d.). Indian Healthcare Industry: Investment Opportunities. Available online: <https://www.investindia.gov.in/sector/healthcare> (accessed on 9 March 2024).
- Jermutus, E., Kneale, D., Thomas, J., & Michie, S. (2022). Influences on user trust in healthcare artificial intelligence: A systematic review. *Wellcome Open Research*, 7. <https://doi.org/10.12688/wellcomeopenres.17550.1>
- Kamala, T. (2021). How to fix India's depleted rural workforce. *BMJ*, n1564. <https://doi.org/10.1136/bmj.n1564>
- Kuziemsky, C., Maeder, A. J., John, O., et al. (2019). Role of artificial intelligence within the telehealth domain. *Yearbook of Medical Informatics*, 28(1), 35–40. <https://doi.org/10.1055/s-0039-1677897>
- Lee, S. T., & Lin, J. (2016). A self-determination perspective on online health information seeking: The Internet vs. face-to-face office visits with physicians. *Journal of Health Communication*, 21(6), 714–722. doi:10.1080/10810730.2016.1157651
- Lorenzini, G., Arbelaez Ossa, L., Shaw, D. M., & Elger, B. S. (2023). Artificial intelligence and the doctor-patient relationship expanding the paradigm of shared decision making. *Bioethics*, 37(5), 424–429. <https://doi.org/10.1111/bioe.13158>
- Montjoye, Y. A. D., Farzanehfar, A., Hendrickx, J., & Rocher, L. (2017). Solving artificial intelligence's privacy problem. *Field Actions Science Reports. The Journal of Field Actions*, (Special Issue 17), 80–83.
- Murdoch, B. (2021). Privacy and artificial intelligence: Challenges for protecting health information in a new era. *BMC Medical Ethics*, 22(1), 122. <https://doi.org/10.1186/s12910-021-00687-3>
- Nanda, M., & Sharma, R. (2023). A comprehensive examination of the economic impact of out-of-pocket health expenditures in India. *Health Policy and Planning*, 38(8), 926–938. <https://doi.org/10.1093/heapol/czad050>
- National Cancer Institute. (2018). Health information national trends survey (HINTS). Available online: <https://hints.cancer.gov/> (accessed on 9 March 2024).
- Oravkin, E. (2023). Launch YC: MediSearch AI search engine for trustworthy medical information. Available online: <https://www.ycombinator.com/launches/JEM-MediSearch-ai-search-engine-for-trustworthy-medical-information> (accessed on 9 March 2024).
- Park, S. H., Choi, J., & Byeon, J. S. (2021). Key principles of clinical validation, device approval, and insurance coverage decisions of artificial intelligence. *Korean Journal of Radiology*, 22(3), 442–453. <https://doi.org/10.3348/kjr.2021.0048>
- Patel, S. K., George, B., & Rai, V. (2020). Artificial intelligence to decode cancer mechanism: Beyond patient stratification for precision oncology. *Frontiers in Pharmacology*, 11, 1177. <https://doi.org/10.3389/fphar.2020.01177>
- Richardson, J. P., Smith, C., Curtis, S., et al. (2021). Patient apprehensions about the use of artificial intelligence in healthcare. *NPJ Digital Medicine*, 4(1), 140. <https://doi.org/10.1038/s41746-021-00509-1>
- Rodríguez-González, A., Zanin, M., & Menasalvas-Ruiz, E. (2019). Public health and epidemiology informatics: Can artificial intelligence help future global challenges? An overview of antimicrobial resistance and impact of climate change in disease epidemiology. *Yearbook of Medical Informatics*, 28(1), 224–231. <https://doi.org/10.1055/s-0039-1677910>
- Shaheen, M. Y. (2021). Applications of Artificial Intelligence (AI) in healthcare: A review. *ScienceOpen Preprints*.
- Sidebottom, R., Lyburn, I., Brady, M., & Vinnicombe, S. (2021). Fair shares: Building and benefiting from healthcare AI with mutually beneficial structures and development partnerships. *British Journal of Cancer*, 125(9), 1181–1184. <https://doi.org/10.1038/s41416-021-01454-2>
- Smagulov, S., & Smagulova, V. (2019). Digital transformation of healthcare. *Intellectual Archive*, 8(1).

https://doi.org/10.32370/2018/IA_2019_01_SI.01

Statista. (2021). Number of internet users in India from 2010 to 2023. Available online:

<https://www.statista.com/statistics/255146/number-of-internet-users-in-india/> (accessed on 9 March 2024).

Tobia, K., Nielsen, A., & Stremitzer, A. (2021). When does physician use of AI increase liability? *Journal of Nuclear Medicine*, 62(1), 17–21. <https://doi.org/10.2967/jnumed.120.256032>

Thomas, B., Raykundaliya, D. P., Bhatt, S., et al. (2023). Study of awareness, enrolment, and utilization of Ayushman Bharat Pradhan Mantri Jan Arogya Yojana in Gujarat, India. *International Journal of Community Medicine and Public Health*, 10(8), 2741–2747. <https://doi.org/10.18203/2394-6040.ijcmph20232151>

Väänänen, A., Haataja, K., Vehviläinen-Julkunen, K., & Toivanen, P. (2021). AI in healthcare: A narrative review. *F1000Research*, 10, 6. <https://doi.org/10.12688/f1000research.26997.1>

Wang, L., Zhang, Y., Wang, D., et al. (2021). Artificial intelligence for COVID-19: A systematic review. *Frontiers in Medicine*, 8, 704256. <https://doi.org/10.3389/fmed.2021.704256>

Wang, X., He, X., Wei, J., et al. (2022). Application of artificial intelligence to the public health education. *Frontiers in Public Health*, 10, 1087174. <https://doi.org/10.3389/fpubh.2022.1087174>

Westerlund, A. M., Hawe, J. S., Heinig, M., & Schunkert, H. (2021). Risk prediction of cardiovascular events by exploration of molecular data with explainable artificial intelligence. *International Journal of Molecular Sciences*, 22(19). <https://doi.org/10.3390/ijms221910291>

Zheng, B., Wu, M. N., Zhu, S. J., et al. (2021). Attitudes of medical workers in China toward artificial intelligence in ophthalmology: A comparative survey. *BMC Health Services Research*, 21(1), 1067. <https://doi.org/10.1186/s12913-021-07044-5>