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Adoption Factors of Health-Tech in India

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***Abstract* – Health-Tech is now a prominent e-health solution, and it is now possible to conduct consultation remotely, improving the accessibility of medical services. Health-Tech is increasingly becoming available in India but is not evenly used by users. The present study is a review of existing problems that influence the adoption of Health-Tech services in India, based on the Technology Acceptance Model (TAM). The paper focuses on the relationship between ease of use, usefulness, and the intention of users to adopt Health-Tech platforms. Quantitative research methodology was employed, and a structured questionnaire was used to collect data from 118 respondents. Data were examined using Jamovi statistical software, including descriptive and path analysis to support the hypotheses. The results indicate that perceived ease of use has a positive effect on perceived usefulness, implying that user-friendly Health-Tech tools enhance perceived usefulness. However, perceived usefulness was not found to have a significant positive effect on behavioral intention to utilise Health-Tech services. These findings imply that users may be conscious of the potential benefits of Health-Tech, yet other aspects such as trust, digital literacy, and privacy concerns may affect their consumption of such services. The study contributes to the current body of knowledge regarding Health-Tech adoption behaviour in India and guides healthcare providers and policy- makers interested in increasing access to and utilization of digital healthcare services.**

Keywords: **Health-Tech, technology acceptance model, perceived usefulness, perceived ease of use, Health-Tech adoption in India.**

I. INTRODUCTION

According to the definition by the World Health Organization, Health-Tech is defined as the use of organized knowledge and skills implemented in the form of devices, medicine, vaccinations, procedures, and systems to address a health issue and enhance quality of lives (WHO, n.d.). This definition encompasses medication, equipment, practices, and organizational structures such as computer-based information systems.

The COVID-19 pandemic saw a rise in the use of health technology in global health systems (Lee and Shin, 2025). Governments reacted quickly to major disruptions in in-person care by promoting remote care modalities. Health-Tech became a key element of modern healthcare, empowering patients and clinicians to communicate without being in a shared physical space during the COVID-19 period. OECD statistics show that the number of digital consultations per patient increased fourfold in 2021, with some of the highest figures found in Slovenia, Lithuania, and Australia (OECD, 2025).

In India, health technology has become part of everyday life, with well-established platforms like Practo, Tata 1mg, Apollo 24/7, and PharmEasy. However, a significant number of users remain reluctant to use such services due to concerns around digital navigation, trust, data protection, and the reliability of virtual consultations (Liu et al., 2022; Mayoka et al., 2012; Nicolaou et al., 2013). Studies show that users in low-income economies still show reluctance to adopt online medical services due to lack of trust, low levels of digital skills, and privacy issues. Related research also suggests that low digital literacy and technology-related obstacles weaken trust in Health-Tech, particularly among less literate populations (Lee and Shin, 2025).

In the present study, the Technology Acceptance Model (TAM) has been used to explicate the predictors of Health-Tech adoption. TAM emphasises three constructs: Perceived Usefulness, Perceived Ease of Use, and Usage Intentions. Davis (1989) defines ease of use as freedom from effort. Present-day research demonstrates that user resistance to Health-Tech services is reduced and acceptance increases when the design is less complex (Lee and Shin, 2025; Yao et al., 2025). Empirical studies confirm a substantial effect of perceived usefulness and perceived ease of use on a person's intention to pursue virtual healthcare services (Lee and Shin, 2025; Yao et al., 2025).

Accordingly, this paper aims to:

- Find out how perceived usefulness affects intentions to use Health-Tech.
- Identify the impact of perceived ease of use on usage intentions.
- Test whether there is a relationship between perceived ease of use and perceived usefulness.

II. LITERATURE REVIEW

Health-Tech has become a groundbreaking trend in healthcare provision, allowing remote consultations, diagnosis, and treatment through information and communication technologies. It is particularly instrumental in improving accessibility of healthcare in countries like India, where healthcare resources are not evenly distributed and a large population resides in rural regions. Health-Tech platforms help patients connect with medical

care providers through video calls, telephone, and online health apps, lowering travel costs and increasing the availability of healthcare services (Parekh and Suryawanshi, 2025).

Empirical research highlights the promise of Health-Tech in addressing healthcare delivery challenges in India, particularly in rural and underserved areas. The COVID-19 pandemic accelerated the pace of digital health service usage worldwide, placing considerable emphasis on Health-Tech (Parthasarathi et al., 2024).

The introduction of Health-Tech in India has not yet achieved its potential due to several technological, institutional, and behavioural limitations. A systematic review by Venkataraman et al. (2024) identified barriers including unreliable technological infrastructure, data privacy and security concerns, insufficient ICT training among healthcare professionals, and resistance to new digital systems. Recent research also found that despite awareness of Health-Tech guidelines, a significant proportion of practitioners do not apply Health-Tech in practice due to medico-legal issues, economic ambiguity, and absence of formal training (Suriyamoorthy et al., 2025).

Individual-level technological literacy is another key determinant of digital healthcare adoption. The degree to which users can understand and engage with digital systems strongly impacts their readiness to use Health-Tech platforms. eHealth literacy and technological familiarity are decisive factors shaping user attitudes to digital healthcare services (Rajan et al., 2025).

Technology-adoption theories present a strong model for explaining such behavioural patterns. According to TAM, perceived usefulness and perceived ease of use are the two factors that dictate user adoption of new technologies and affect behavioural intention (Raheja et al., 2024). Empirical studies in developing countries confirm that both factors are major drivers of behavioural intention toward new digital technologies (Dadhich et al., 2023; Gupta et al., 2023).

Research Gap

The concept of Health-Tech has received considerable interest as a digital intervention to enhance access to care, particularly in developing economies like India. Prior research has discussed advantages, issues, and obstacles to the use of Health-Tech within the Indian healthcare environment (Arora et al., 2024; Venkataraman et al., 2024), identifying limited digital infrastructure, digital illiteracy, and privacy and regulatory issues as primary challenges.

Previous studies have largely examined Health-Tech from the perspectives of healthcare professionals, healthcare systems, policy frameworks, and institutional preparedness (Parthasarathi et al., 2024). While these studies offer essential implementation insights, few have focused on end-user acceptance and behavioural intention toward Health-Tech services.

According to TAM, perceived usefulness and perceived ease of use are two factors that determine individual technology adoption (Davis, 1989). Despite extensive application of TAM in technology adoption studies, there is a lack of empirical research on the role these constructs play in fostering Health-Tech adoption by non-expert users in India. Moreover, past research has generally targeted healthcare providers rather than patients or users (Raheja et al., 2024).

This paper addresses this gap by exploring factors influencing Health-Tech adoption in India through the Technology Acceptance Model — specifically examining the connection between perceived ease of use, perceived usefulness, and users' behavioural intention to embrace Health- Tech-services.

Methodology

This study adopts a quantitative research methodology to investigate issues surrounding the adoption of Health-Tech in India. The Technology Acceptance Model (TAM) is used as the theoretical framework to explain how users accept technology based on their perceived usefulness and ease of use (Davis, 1989).

A structured questionnaire was used to collect data measuring the constructs of perceived usefulness, perceived ease of use, and behavioral intention to use Health-Tech services. Questionnaire items were based on existing technology adoption research to achieve validity and reliability (Raheja et al., 2024). The questionnaire was distributed via internet platforms, targeting individuals who were aware of or had experience with online healthcare services. One hundred and eighteen valid responses were received and analyzed.

Data were analyzed using the Jamovi statistical package, where descriptive analysis, reliability testing, and path analysis were performed to examine the relationships between study variables.

III. HYPOTHESIS TESTING

The Technology Acceptance Model (TAM) is widely applied to explain user acceptance of new technologies. TAM posits that perceived usefulness and perceived ease of use are the two factors that dictate technology adoption behaviour (Davis, 1989). Perceived ease of use refers to the degree to which a person believes a system will be free of effort, while perceived usefulness refers to the degree to which a person believes the technology will enhance performance.

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Within the Health-Tech context, ease of use and ease of understanding a system are likely to create a perception of usefulness in users. Previous studies have indicated that less demanding technologies are more likely to be perceived as helpful and useful (Venkatesh et al., 2003). When Health-Tech platforms offer user-friendly interfaces and communicative systems, users can be expected to form more positive views of usefulness.

H1: Perceived ease of use has a positive effect on perceived usefulness of Health-Tech services.

Perceived usefulness has also been assumed to be a critical factor affecting users' intention to embrace new technologies. When people believe that a given technology enhances efficiency, convenience, or accessibility, they tend to express stronger intention to use it (Davis, 1989). Health-Tech may benefit the healthcare community through remote consultations, shorter travel times, and better access to medical services, especially among rural residents (Parekh and Suryawanshi, 2025).

H2: Perceived usefulness has a positive relationship with behavioral intention to use Health-Tech services.

IV. DATA ANALYSIS

Table II: Measurement Model Statistics

Component	Item	Standard Loading	AVE	Cronbach's α	CR
Perceived Usefulness	PU1	0.830	0.81	0.853	0.91
	PU2	0.857			
	PU3	0.834			
Perceived Ease of Use	PEU1	0.837	0.81	0.586	0.92
	PEU2	0.852			
	PEU3	0.849			
Health-Tech Usage Intentions	UI1	0.819	0.69	0.765	0.90
	UI2	0.832			
	UI3	0.843			
	UI4	0.839			

Source: Author

Table III: Path Analysis

	Hypothesised Path	Path Coefficient	T Value	P Value	Outcome
H1	PU ← PEU	0.0847	3.41	<0.01	Supported
H2	UI ← PU	0.101	2.22	0.28	Not Supported

Source: Author

The path analysis results indicate that H1 was supported: perceived ease of use has a substantial positive influence on perceived usefulness (path coefficient = 0.0847, $p < 0.01$). This suggests that the more users find Health-Tech platforms easy to use, comprehend, and navigate, the more likely they are to consider them advantageous for accessing healthcare. This outcome is consistent with TAM, which postulates that less effort-consuming systems are more likely to be perceived as useful.

The findings indicate, however, that perceived usefulness does not have a significant effect on behavioral intention to use Health-Tech, thereby nullifying H2 ($p = 0.28$). Users may be aware of the possible advantages of Health-Tech, but this perceived advantage may not be sufficient to drive their intention to use these services. Several contextual factors may explain this finding. Some users may still prefer face-to-face consultations, especially for health-related matters. Digital literacy, trust in online healthcare services, privacy concerns, and knowledge about Health-Tech applications may all moderate the relationship between usefulness perception and adoption intent.

Another potential explanation is that Health-Tech in India remains at an early stage of growth. Although Health-Tech platforms are convenient and accessible, users may not yet be sufficiently experienced or trusting to consult a physician through such systems. This means that perceived

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usefulness may not directly convert to high behavioral intention.

In general, the results indicate that ease of use is a significant contributor to forming perceptions of Health-Tech systems, but other factors beyond perceived usefulness may shape behavioral intentions. Future research should explore variables such as trust, perceived risk, digital literacy, or social influence to gain more comprehensive insights into Health-Tech adoption behaviour in the Indian context.

V. FINDINGS

The results give an understanding of variables affecting the use of Health-Tech services in India as examined through the Technology Acceptance Model. The study aimed to examine how perceived ease of use and perceived usefulness relate to behavioral intention to use Health-Tech platforms.

The findings reveal that perceived ease of use has a positive and significant impact on perceived usefulness, supporting the first hypothesis (H1). This implies that the easier Health-Tech systems are to use, understand, and navigate, the higher the chances of users perceiving them as useful in seeking healthcare services. This observation is consistent with TAM, which states that less demanding technologies are more likely to gain favour among users in terms of perceived usefulness and enhanced acceptance (Davis, 1989; Venkatesh et al., 2003).

Nevertheless, perceived usefulness was not found to play a statistically significant role in users' behavioral intention to adopt Health-Tech services, rejecting H2. Even though users may be aware of the possible advantages of Health-Tech — such as increased accessibility and convenience — perceived utility may not directly translate to increased intention to use Health-Tech platforms.

This could be because Health-Tech in India is still in its early growth stages and users may still find traditional medical consultations more comfortable. Trust in digital healthcare services, privacy concerns, data protection issues, and low levels of digital literacy can also play a role in determining willingness to adopt Health-Tech services. Other researchers have identified technological infrastructure, user awareness, and institutional support as key variables influencing Health-Tech adoption in developing-country healthcare systems (Venkataraman et al., 2024).

Altogether, the results indicate that ease of use is a decisive factor in forming user perceptions of Health-Tech platforms, yet other factors may also contribute to behavioral intention to adopt digital healthcare services. The findings also indicate that it is necessary to develop convenient Health-Tech solutions and to enhance user familiarity and confidence in digital healthcare technologies.

Implications

The outcomes of this research are valuable to healthcare providers, Health-Tech platforms, and policy-makers seeking to increase the use of Health-Tech services in India.

First, as perceived usefulness is significantly shaped by perceived ease of use, Health-Tech platforms must be user-friendly and accessible. Developers should concentrate on ease of navigation, clear guidance, and low technical complexity, so that people from various backgrounds can easily find and utilise Health-Tech services.

Second, as perceived usefulness alone did not prove significant in driving behavioral intention, organizations need to work on developing user trust and confidence in Health-Tech systems. This can be achieved by guaranteeing data privacy, maintaining secure platforms, ensuring quality consultations, and maintaining transparency in medical procedures.

Third, policy developers and healthcare providers ought to enhance digital literacy and awareness among users. Educational programmes, training, and awareness campaigns can help address hesitation toward Health-Tech adoption.

Moreover, in order to enhance Health-Tech use, infrastructure and accessibility must be improved, particularly in rural and under-served regions. Good internet connectivity and affordable digital devices can significantly increase user engagement with Health-Tech services.

VI. CONCLUSION

This paper has examined the factors affecting adoption of Health-Tech in India using the Technology Acceptance Model. The conclusion is that perceived usefulness is highly affected by perceived ease of use — that is, if a Health-Tech system is easy to use, users are more likely to perceive it as useful. However, perceived usefulness was not found to be significant in terms of driving behavioral intention to use Health-Tech services.

These findings suggest that prior awareness of Health-Tech's potential usefulness may be offset by other factors — such as trust, digital literacy, and privacy concerns — that become decisive in shaping adoption behaviour. These variables should be explored in future research to better understand Health-Tech adoption in Indian healthcare settings.

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