



Knowledge, Attitude and Practice Regarding Telemedicine among People Attending a Tertiary Care Hospital in Eastern India

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Abstract

Background: Telemedicine has emerged as an important innovation in healthcare delivery, improving access to medical services, particularly in geographically underserved areas. The increasing availability of mobile devices and internet connectivity has further supported its expansion and helped reduce the burden on resource-constrained healthcare systems. **Objectives:** This study aimed to assess the knowledge, attitudes, and practices related to telemedicine among outpatient department attendees at a tertiary care hospital in Eastern India. It also sought to evaluate users' awareness, understanding, proficiency, perceived challenges, and acceptance of telemedicine services. **Methods:** A cross-sectional survey was conducted over five months among 89 participants aged above 18 years attending the outpatient department. Data were collected to assess awareness, attitudes, utilization practices, and barriers related to telemedicine. The mean age of participants was 40.08 years. **Results:** Telemedicine awareness was mainly derived from online sources. Most participants accepted telemedicine for follow-up consultations, with 82% expressing acceptance and 92% finding it convenient. However, 55% felt that a full consultation was not feasible through telemedicine. A majority of participants required subsequent physical consultations. Younger participants showed more favorable perceptions toward telemedicine compared with older individuals. **Conclusion:** Although telemedicine cannot address all healthcare needs, it has an important role in providing medical care and health education. When integrated into an established patient–doctor relationship, telemedicine can serve as an efficient, convenient, and valuable mode of healthcare delivery.

Keywords: Access; Barriers; Digital Health; Technology; Telemedicine

Introduction

According to the Institute of Medicine (US) Committee on Evaluating Clinical Applications of Telemedicine (1996), telemedicine is defined as the delivery of healthcare services through real time electronic communication technologies between the patient and healthcare provider(s) using mainstream and innovative information technology. This has emerged as a crucial innovation in modern healthcare, especially in the post-Covid era. Telemedicine has been recognized by the World Health

Organization (WHO) as an effective strategy to increase access to healthcare, particularly in geographically under-served areas (Ryu, 2012, World Health Organization, 2018). The WHO has established the Global Observatory for eHealth (GOe) to assess the benefits of information technology in addressing the inequities of healthcare delivery (Ryu, 2012).

Telemedicine can address long standing disparities in specialist availability and healthcare delivery by overcoming the distance related barriers (World Health Organization, 2021). This new method of service delivery has been proven to be sustainable, affordable and more pragmatic. Beneficiaries of this service can range from remote tribal communities to military personnel stationed in precarious locations (Dwivedi *et al.*, 2024).

The rapid expansion of mobile use and widespread internet availability in India has facilitated access and enhanced the feasibility of telemedicine services. National regulatory advisory including the telemedicine practice guidelines issued by the Ministry of Health and Family Welfare in collaboration with the Indian Council of Medical Research have further institutionalized its integration into routine care (MoHFW, 2020). Telemedicine has emerged as an effective measure in delivering healthcare for chronic non-communicable diseases like diabetes, cancer, coronary heart diseases, and also some mental health conditions like anxiety disorder (Goyal & Khatib, 2022).

Successful implementation of telemedicine largely depends on healthcare professionals' knowledge, awareness, technical competence and attitude as well as barriers encountered in clinical practice. Evidence suggests that provider readiness significantly influences telemedicine adoption and sustainability within tertiary care settings (Kruse *et al.*, 2018). A very recent survey has shown that physicians of various disciplines are slowly taking up the use of telemedicine as they become aware of its potential benefits and time saving aspects. This changing attitude was evident across age and gender groups of physicians (Dhilawala *et al.*, 2026). However, the effectiveness of such services also depends on patients' readiness to use them (Haleem *et al.*, 2021). In India, digital literacy is uneven. Hence, the penetration of this new mode of service delivery is likely to face significant practical challenges. Furthermore, in India, multiple types of health systems co-exist simultaneously, which poses additional concerns in ensuring security, safety and accuracy in service delivery. A very interesting comparative analysis between the global and Indian scenario with respect to telemedicine found that India has certain unique challenges. While government subsidies and a digital health push at the federal level are factors helping in its growth, there are still problems like digital illiteracy and language barriers (Hemalatha *et al.*, 2026).

Another recent study of 2026, from western India, has revealed that often there is a gap between theoretical knowledge and actual practice as far as telemedicine is concerned. And this study also showed that besides the technology issues, many administrative issues must also be solved before telemedicine becomes fully operational (Rankja *et al.*, 2026). There is a significant gap in practical data regarding the attitudes of patients toward telemedicine use in healthcare sector. Hence, this study aims to fill that gap by generating reference data, especially with regard to age- and gender-related nuances, which can contribute towards policy and/or guidelines formulation.

This study aims to assess telemedicine as it currently operates in a tertiary care setting from the viewpoint of healthcare service users. The study examines users' awareness and understanding of telemedicine, their attitudes toward its utilization, their proficiency with telemedicine technologies, and the difficulties they encounter in using it. This evaluation is essential for identifying gaps between knowledge and skills, comprehending the obstacles in telemedicine usage, determining the training requirements of medical professionals and formulating strategies to improve the implementation and effective utilization of telemedicine in healthcare systems. Moreover, these findings may guide modifications to hospital workflow to facilitate telemedicine services.

Methodology

A cross-sectional questionnaire-based survey design was adopted for this study, as this approach has been commonly used in previous KAP studies assessing knowledge, attitudes, and practices regarding

telemedicine among healthcare professionals and consumers (Dhilawala *et al.*, 2026; Lei & Jiang, 2026; Murshidi *et al.*, 2022). This structured questionnaire-based survey conducted in the outpatient department (OPD) of a tertiary care hospital in Eastern India, between August and December, 2024. This is a major multi-specialty hospital in this region, catering to a large catchment area that includes not only the local population, but also patients from other states and from neighboring countries. This hospital is attended by people from diverse socio-economic backgrounds. This hospital also has diverse academic programs for various grades of medical staff.

Sample Size Calculation:

Sample size was calculated using the single population proportion formula (Cochran, 1977; Naing *et al.*, 2006).

$$n = \frac{z^2 p (1-p)}{e^2} \quad \text{where 'n' is sample size, 'p' is proportion, 'e' is precision}$$

here $\alpha = 5\%$, hence, ' $z\alpha$ ' (value of the standard normal variate at 5% error) = 1.96

p (expected proportion) = 75%. (1-p) = 25%. e = 10%. [this prevalence rate is deduced from a recent survey in Kerala among users of Sanjivani, the national telemedicine service of India (Rosh *et al.*, 2025)].

$$\text{So } n = \frac{(1.96)^2 \times (75) \times (25)}{(10)^2} = 72$$

Hence, $n = 72$. However, to account for incomplete responses or missed data, a further 20% is added. Thus, a minimum of 86 patients is the required sample size. Convenience sampling was chosen for the survey.

The structured questionnaire was created and pre-tested among 25 hospital staff, who were not linked with this study. The questionnaire was printed in English and translated into the local language (Bengali). The validity of the Bengali version was assessed by an independent expert who was not associated with this study. The WHO double-translation recommendations were followed, and minor modifications suggested by the expert were incorporated (WHO, 2018). Most study participants completed the questionnaire in Bengali; however, those who were comfortable with English were allowed to complete the survey in English.

The questionnaire had a total of 17 questions, in addition to the initial sociodemographic data. The questionnaire was designed to examine participants' knowledge, attitude, and practice regarding telemedicine. Knowledge was assessed through questions on awareness of telemedicine technologies, understanding about their uses and benefits, and familiarity with legal and ethical considerations (5 questions). Attitude was explored by asking participants about perceived barriers to telemedicine adoption, such as infrastructure limitations, data security concerns, training needs, patient acceptance, their level of satisfaction after telemedicine session (8 questions). Remaining 4 questions examined the practice through questions on participants' experience with telemedicine platforms, self-reported technical skills, the frequency and types of telemedicine services they used, and mode of payment. The questionnaire consisted of structured items designed to capture participants' responses on a 5-point Likert-type scale (Joshi *et al.*, 2015). On average, completing the questionnaire took about 15 minutes per participant.

Inclusion Criteria:

All adult (>18 years of age) patients visiting the tertiary care OPD and those who consented to participate were included.

Exclusion Criteria:

- Health professionals like medical doctors, residents, or interns working in the hospital.
- Private medical practitioners are involved in patient care.

- Nurses and technical staff members.
- Individuals who did not speak the local language or English.

Statistical Analysis:

Data collected from the structured questionnaire in this cross-sectional study were subjected to comprehensive statistical analysis. Descriptive statistics were first used to summarize participants' demographic characteristics, as well as their awareness, knowledge, attitudes, skills, and perceived barriers related to telemedicine. Categorical variables, such as age and gender distribution and frequency of telemedicine usage, were presented as frequencies and percentages. To examine the associations between demographic factors (e.g., age, gender) and telemedicine-related parameters (awareness, knowledge, attitudes, skills, and utilization patterns), chi-square tests were applied. Quantitative data were expressed as mean \pm standard deviation, while categorical data were expressed as percentages. All analyses were conducted using SPSS version 25, and a p -value <0.05 was considered statistically significant.

Ethical Approval

The survey was conducted among OPD patients and/or their accompanying people, who consented to the study. The Ethical Approval was obtained from the Institutional Academic Review Board, Manipal Hospital, Dhakuria, India with the ethical number AMRI-EC/AP-20/DNB-Med/2023-24 on 31 July, 2024.

Results

A total of 89 participants took part in the survey, comprising 54 males (60.7%) and 35 females (39.3%). The mean age of participants was 40.08 years (SD = 15.52). Table 1 presents distribution of participants across different age groups.

Table 1: Age Distribution of the Study Subjects

Age	Frequency	Percentage (%)
18-20	3	3.4
21-30	29	32.6
31-40	20	22.5
41-50	14	15.7
51-60	9	10.1
61-70	10	11.2
71-80	4	4.5
Total	89	100.0

The data in Table 1 indicate that the largest proportion of participants was in the 21–30 years age group (32.6%), while the smallest proportion was below 20 years of age (3 participants; 3.4%).

Tables 2 to 7 summarize participants' responses to various survey questions.

Table 2: Source of Participants' Awareness about Telemedicine

From which medium did you get the idea or concept of telemedicine?	Frequency	Percentage (%)
Print media	7	7.9
Online	57	64
Tele calling	6	6.7
Miscellaneous	19	21.3
Total	89	100.0

Table 2 represents the frequency distribution of different sources from which the participants knew about telemedicine. In this study, online sources were the most frequent medium as cited by 57 (64%) participants.

Table 3: Participants' Perception on Whether a Full Medical Consultation Is Possible through Telemedicine

Do you think that full medical consultation is possible through telemedicine?	Frequency	Percentage (%)
No	49	55.1
Yes	40	44.9
Total	89	100.0

In this study, the majority of participants (55.1%) did not believe that a full medical consultation is possible through telemedicine. However, 44.9% agreed that it is possible (Table 3).

Table 4: Participants' Perception on the Feasibility of a Follow-Up Consultation Via Telemedicine

Can follow-up be done through telemedicine?	Frequency	Percentage (%)
No	16	18.0
Yes	73	82.0
Total	89	100.0

Out of 89 participants, the majority (73, 82.0%) indicated that follow-up can be done through telemedicine, while a smaller proportion (16, 18.0%) reported that it cannot. Thus, participants were more likely to accept telemedicine as a means of follow-up consultation, than the initial visit (Table 4).

Table 5: Participants' Perception of Whether Face-To-Face Consultation Provides Better Care than Telemedicine

Are patients more likely to get better care when seen in face-to-face consult?	Frequency	Percentage (%)
Neutral	5	5.6
Agree	23	25.8
Completely Agree	61	68.6
Total	89	100.0

Most participants perceived face-to-face consultations as providing better care than telemedicine. Specifically, 61 participants (68.6%) completely agreed, 23 (25.8%) agreed, and only 5 (5.6%) remained neutral. Overall, 84 participants (94.4%) indicated that, in their opinion, patient care is more favorable in face-to-face consultations compared to telemedicine (Table 5).

Table 6: Perception of Telemedicine Effectiveness for Emergency Care

Telemedicine is more likely to be effective for emergency care	Frequency	Percentage (%)
Strongly Disagree	7	7.9
Disagree	12	13.5
Neutral	22	24.7
Agree	29	32.6
Completely Agree	19	21.3
Total	89	100.0

Participants showed varied opinions on telemedicine's effectiveness for emergency care. While 48 participants (53.9%) agreed or completely agreed, 19 (21.4%) disagreed or strongly disagreed, and 22 (24.7%) remained neutral (Table 6).

Table 7: Patients' Perception of Consultations with Doctors from Different Streams Via Telemedicine

Do you think that consultation with team of doctors of different streams is possible with telemedicine?	Frequency	Percentage (%)
Strongly Disagree	2	2.2
Disagree	11	12.4
Neutral	17	19.1
Agree	36	40.5
Completely Agree	23	25.8
Total	89	100.0

Table 7 shows patients' perception of team consultations through telemedicine. A total of 59 participants (66.3%) agreed or completely agreed that consultations with doctors from different streams are possible

via telemedicine, while 13 participants (14.6%) disagreed or strongly disagreed, and 17 (19.1%) remained neutral.

Regarding other questions in the study, only 12 participants were completely satisfied with telemedicine consultations, while the majority (57 out of 89; 64%) felt the need for an in-person consultation even after using telemedicine. The response of remaining 20 people ranged from mildly to moderately satisfied. Most participants (67 out of 89; 75%) relied solely on smart phones for telemedicine, whereas the remaining participants used a combination of desktops, laptops, toll-free phone calls, or government kiosks.

Furthermore, a substantial majority (82 out of 89; 92%) agreed that telemedicine offers a convenient way to access health care services, demonstrating a strong support for telemedicine consultations. The data was further analyzed according to age and gender strata.

Table 8: Perception of the Possibility of Full Medicine Prescription through Telemedicine by Age Group

Do you think that full medicine prescription can be done through telemedicine?	Age			Total
	<40	41-60	≥61	
No	13	8	4	25
Yes	39	15	10	64

Table 8 shows that the majority of the participants (64 out of 89; 72%) agreed that full medicine prescriptions can be issued via telemedicine. Agreement was highest among participants under 40 years (39 out of 52; 75%), followed by those aged 61 years and above (10 out of 14; 71%), and lowest in the 41–60 age group (65%).

Table 9: Participants' Perception of Completing a Full Consultation Via Telemedicine by Age Group

Do you think that the full consultation is possible through telemedicine?	Age			Total
	<40	41-60	≥61	
No	28	14	7	49
Yes	24	9	7	40

Although participants generally supported the possibility of telemedicine prescriptions (Table 8), over half of the study participants (55%) felt that a full consultation cannot be completed solely through telemedicine (Table 9). This contrasting result suggests that while prescriptions via telemedicine are seen as feasible, full consultations are not perceived as completely possible through this mode by the study participants.

Table 10: Participants' perception of completing a full consultation via telemedicine by gender

Do you think that the full consultation is possible through telemedicine?	Gender		Total
	Female	Male	
No	22	27	49
Yes	13	27	40

Table 11: Participants' Perception of Receiving Disease Awareness and Prevention Measures Via Telemedicine by Gender

Are you able to get awareness and prevention measures of the disease through telemedicine?	Gender		Total
	Female	Male	
Never	3	4	7
Almost Never	1	1	2
Sometimes	11	19	30
Often	11	14	25
Always	9	16	25

Table 11 indicates that the majority of both female and male participants felt they were able to receive disease awareness and preventive measures through telemedicine, with males showing a slightly higher proportion (49, 90.7%) of positive responses compared to females (31, 88.5%).

Table 12: Participants' Perception of Convenience in Using Telemedicine by Gender

The use of telemedicine technology is convenient way to receive care	Gender		Total
	Female	Male	89
Never	4	2	6
Almost Never	0	1	1
Sometimes	10	28	38
Often	11	15	26
Always	10	8	18

The above Table 12 shows that a total of 31 out of 35 female participants (88.6%) perceived telemedicine as a convenient way to receive care to some degree. For male, the response rate was higher; 94% (51 out of 54).

Further analysis of the data revealed variations in responses across different demographic groups.

Table 13: Participants' Satisfaction with Telemedicine Cost by Age Group

		Age							Total	
		18-20	21-30	31-40	41-50	51-60	61-70	71+		
Are you satisfied with the cost of telemedicine?	Strongly Dissatisfied	0	0	0	0	2	0	0	2	
		0.0%	0.0%	0.0%	0.0%	22.2%	0.0%	0.0%	2.2%	
	Dissatisfied	1	0	1	0	1	1	1	5	
		33.3%	0.0%	5.0%	0.0%	11.1%	10.0%	25.0%	5.6%	
	Neutral	1	19	13	10	2	5	1	51	
		33.3%	65.5%	65.0%	71.4%	22.2%	50.0%	25.0%	57.3%	
	Satisfied	0	7	4	2	3	2	2	20	
		0.0%	24.1%	20.0%	14.3%	33.3%	20.0%	50.0%	22.5%	
	Fully Satisfied	1	3	2	2	1	2	0	11	
		33.3%	10.3%	10.0%	14.3%	11.1%	20.0%	0.0%	12.4%	
	Total		3	29	20	14	9	10	4	89
										100.0%

In Table 13, it is evident that more than 50% of participants gave the neutral response regarding the cost of telemedicine, while 35% had varying levels of satisfaction. But there is a marked age difference. 50 years and below age group gave more positive response compared to above 50 years age group (96.9 vs 80%). However, if the two negative responses (dissatisfied and strongly dissatisfied) were considered in calculation, the difference between the two age groups was not statistically significant ($\chi^2 = 5.15, p = 0.274$).

Table 14: Satisfaction Levels with Telemedicine Care Across Genders

		Sex		Total	
		Female	Male		
Are you satisfied with the care you receive through the use of telemedicine?	Never	2	3	5	
		5.7%	5.6%	5.6%	
	Almost Never	2	2	4	
		5.7%	3.7%	4.5%	
	Sometimes	13	28	41	
		37.1%	51.9%	46.1%	
	Often	12	13	25	
		34.3%	24.1%	28.1%	
	Always	6	8	14	
		17.1%	14.8%	15.7%	
	Total		35	54	89
					100.0%

When the participants were asked about their satisfaction of care via telemedicine (Table 14), majority of both female (88.5%) and male (90.7%) participants expressed at least moderate satisfaction with the telemedicine care. Females reported relatively more "often" and "always" responses, while males were

more represented in the “sometimes” category; however, this difference was not statistically significant ($\chi^2 = 2.051$, $p = 0.726$).

Table 15: Patient Disposition Following Telemedicine Consultation by Gender

		Sex		Total
		Female	Male	
What is the usual patient disposition after telemedicine?	Inappropriate consultation	2 5.7%	5 9.3%	7 7.9%
	Needs physical consult	28 80.0%	29 53.7%	57 64.0%
		Completely satisfied	3 8.6%	9 16.7%
	Others	2 5.7%	11 20.4%	13 14.6%
		Total	35	54

Table 15 indicates that majority of participants (64%) reported the need for a physical consultation after a telemedicine session. Among female participants, 80% required a follow-up, while 53.7% of male participants did so. The absolute numbers were similar (28 females vs 29 males), and the difference was not statistically significant ($p = 0.079$).

This analysis suggests that the observed difference in proportion may be influenced by the smaller sample size of female participants, and telemedicine may not fully meet the expectations for complete care across genders.

Discussion

This study assessed the knowledge, attitudes, and practices regarding the utilization of telemedicine among individuals attending the outpatient department of a tertiary care hospital in Eastern India. The findings indicate that although participants recognized the multiple utilities and benefits of telemedicine, several barriers persist that limit its use, particularly in resource-poor settings and among digitally naïve populations.

Telemedicine, being a relatively new healthcare intervention, requires extensive research, including rigorous statistical analysis and meta-analyses, for effective implementation in practical settings. The success of implementing any health service delivery model depends on multiple factors, including input costs, electronic infrastructure, patient awareness, and quality of service, among others. Global and national initiatives, along with appropriate execution models, can significantly enhance healthcare standards in low-income populations through the use of telemedicine. Recent technological advances in the development of telemedicine in developing countries seem promising. The declining costs of electronic gadgets, increasing computational speeds, high-speed internet bandwidth, and the falling costs and expanding options for digital storage have collectively driven telemedicine toward more widespread use.

Studies have found that although the initial costs of telemedicine may be high, the average cost comes down considerably with widespread use (Zhang *et al.*, 2026). In a country like India, where the transport cost to health facility often becomes prohibitive, telemedicine can be a good option to lower the costs incurred (Ashwood *et al.*, 2017).

Telemedicine enables rural health centers to provide quality healthcare services at lower costs. It also allows people in remote areas to access specialized healthcare services of multi-specialty hospitals more easily without incurring additional transportation expenses (Butzner & Cuffee, 2021).

This study, conducted at Manipal Hospital (formerly known as AMRI), Dhakuria, found that male participants (60.7%) and individuals aged 21–30 years (32.6%) demonstrated a high level of awareness and a positive attitude toward telemedicine, indicating their preparedness to adopt digital healthcare modalities. This is in contrast to the study by Pradhan *et al.* (2022), in which the geriatric population

was more predominant. When the proportion of participants aged above 50 years was higher, the knowledge and attitude scores regarding telemedicine were comparatively lower (Pradhan *et al.*, 2022).

A study conducted among healthcare providers on telemedicine services reported that 78% of respondents were females, which is in contrast with the current study, where male participants were predominant (Galle *et al.*, 2021). Several studies have reported limited use of telemedicine consultations among women, consistent with the findings of the present study, whereas a study conducted in Bangladesh differs (Haque *et al.*, 2022).

In fact, telemedicine can be used to improve women's health care in general, including low risk obstetrics too (Whittington *et al.*, 2020). The present survey examined telemedicine in general and did not go into specifics of different disciplines like gynecology.

Similar to the findings of Goyal and Khatib (2022), most participants in this study agreed that follow-up can be conducted through telemedicine (82%), while they also perceived that better care is obtained through face-to-face consultations compared to telemedicine. In this study, 53.9% of participants agreed that telemedicine is likely to be effective for emergency care. A majority (66.3%) also agreed that consultations involving multiple specialties are feasible through telemedicine, indicating overall positive perceptions. In comparison, the study by Goyal and Khatib (2022) reported that nearly half of the participants (43.75%) were neutral regarding the reliability of telemedicine consultations. Notably, in this study, a larger proportion of participants (64%) expressed dissatisfaction and felt the need for a subsequent physical consultation, suggesting that while telemedicine is considered feasible for certain services, it may not fully meet participants' expectations for complete care.

In the current study, most participants (75%) used a mobile phone for telemedicine consultations. Additionally, 92% of participants perceived telemedicine as a convenient way to receive care, which is consistent with a study among medical and allied health students, where over 80% reported the same (Al Hinnawi, 2024). However, the uptake of telemedicine services is likely to vary widely by educational status, place of residence and/or internet access.

It is not necessary that telemedicine services be available round the clock. Sometimes, opportunistic services at places where large numbers of people gather for small periods can also bring significant health benefits. One example is the telemedicine services of Government of Uttar Pradesh during Kumbh Mela (Mishra *et al.*, 2004).

ISRO is now developing the VRC concept: Village Resource Centre. Here, digitally disadvantaged people of remote villages are connected via government kiosks to premier hospitals (Mishra *et al.*, 2012). Survey among the users of these services is also needed in the future.

Limitations

This study was conducted in a single tertiary care urban hospital, which may limit the generalizability of the findings. Additionally, its cross-sectional design provides only a snapshot view and may not capture changes in attitudes toward telemedicine over time. The study also did not assess the types of telemedicine technologies used or examine their broader implementation and public perception.

Future Scope

While the current study provides insights into telemedicine utilization, further research is suggested. Future studies should examine different types of telemedicine technologies and their implementation, assess public attitudes in other rural and resource-poor settings, and explore qualitative measures of healthcare delivery. Additionally, evaluating the cost-effectiveness of telemedicine services and their impact on patients with chronic illnesses or psychiatric morbidities is important to understand its effectiveness among diverse populations.

Conclusion

This study assessed the knowledge, attitude and practices regarding telemedicine utilization among individuals attending a tertiary care rural teaching hospital in Eastern India. The survey revealed that

though telemedicine offers numerous benefits and practical applications, its use is restrained by several barriers, especially among digitally naïve populations. Furthermore, ensuring proper access could enable telemedicine to provide better healthcare services to patients residing in rural areas. The findings of this study can inform the design and implementation of future strategies to enhance telemedicine adoption among both patients and healthcare professionals in rural hospital settings. Telemedicine, when integrated into established patient–doctor relationships, can serve as an efficient and valuable conduit for care delivery.

While telemedicine cannot address all healthcare challenges, it plays an important role in addressing a wide range of medical and health educational needs. Services such as telehealth, tele-education and tele-home healthcare are proving to be innovative approaches in the healthcare sector to deliver care and training. Additionally, international telemedicine initiatives have enhanced global connectivity, thereby reducing distance as a barrier to access quality healthcare.

CRedit Authorship Contribution Statement

R.P: Conceptualization, Data Collection, Writing. S.B: Editing, Data collection, Software use. M.S: Writing, Editing, Modification. A.P: Editing, Supervision, Technical Support.

AI Assistance Declaration

The author hereby declares that, during the preparation of this manuscript, generative AI tools such as ChatGPT, Microsoft Copilot, and Google Gemini were utilized to assist with language enhancement and grammar correction. Following the use of these tools, the author thoroughly reviewed and revised the content and takes full responsibility for the final version of the manuscript, ensuring its accuracy and adherence to the required academic standards.

Conflict of Interest

The authors declare that they have no conflicts of interest.

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