

Investigation of the attitudes and experiences of pediatricians toward telehealth use during this pandemic (COVID-19) era

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SUMMARY

Objectives: Motivated by the increased popularity of the telemedicine system, this study explored the influence of treatment effectiveness and its organizational characteristics on the adoption of telehealth among pediatric health professionals. . The pandemic situation urges the need to conduct such studies to reveal plans for adopting telehealth systems. **Methods:** This article analyzed various state-of-the-art methods and designed a well-structured questionnaire comprising technically strong questions related to the objective of the study. The work engaged 90 participants, of whom 30 were excluded due to irregular follow-up and incoherent feedback to the questionnaire. In total, the responses of 60 pediatricians were collected, and statistical analysis was performed with SPSS version 20. **Results:** The in-depth analysis of the data collected through questionnaires permits the deepening of understanding of the impact of administrative and clinical perspectives of telehealth among physicians. The study declared that telehealth has both advantages and disadvantages that need careful optimization for hassle-free implementation. This need requires support from government bodies, the public, and pediatric health care professionals. **Conclusion:** This study highlighted the relevant contribution of telehealth dynamics at every stage of implementation. Through careful optimization, telehealth can overcome the prevailing barriers and could effectively serve remote patients, thereby increasing the satisfaction level of pediatricians during pandemics.

Keywords: Telehealth; pediatrician; pandemic; remote healthcare service; healthcare sector.

RESUMEN

Investigación sobre las actitudes y experiencias de los pediatras respecto al uso de la telesalud durante la pandemia de COVID-19

Objetivos: Ante la creciente popularidad del sistema de telemedicina, este estudio exploró la influencia de la efectividad del tratamiento y sus características organizativas en la adopción de la telesalud entre los profesionales de la salud pediátrica. La situación de pandemia urge la necesidad de realizar estudios de este tipo para identificar planes de adopción de sistemas de telesalud. **Métodos:** Este artículo analizó diversos métodos de vanguardia y diseñó un cuestionario bien estructurado con preguntas técnicamente sólidas relacionadas con el objetivo del estudio. El trabajo contó con 90 participantes, de los cuales 30 fueron excluidos debido a un seguimiento irregular y a la incoherencia en la retroalimentación del cuestionario. En total, se recopilaron las respuestas de 60 pediatras y el análisis estadístico se realizó con

el programa SPSS versión 20. **Resultados:** El análisis exhaustivo de los datos recopilados mediante cuestionarios permite comprender mejor el impacto de las perspectivas administrativas y clínicas de la tele-salud entre los médicos. El estudio declaró que la tele-salud presenta ventajas y desventajas que requieren una optimización cuidadosa para una implementación sin complicaciones. Esta necesidad requiere el apoyo de los organismos gubernamentales, el público y los profesionales de la salud pediátrica. **Conclusión:** Este estudio destacó la importante contribución de la dinámica de la tele-salud en cada etapa de la implementación. Mediante una optimización cuidadosa, la tele-salud puede superar las barreras existentes y atender eficazmente a los pacientes remotos, aumentando así el nivel de satisfacción de los pediatras durante las pandemias.

Palabras clave: Telesalud; pediatra; pandemia; servicio de atención médica a distancia; sector sanitario.

RESUMO

Investigação das atitudes e experiências de pediatras em relação ao uso da telessaúde durante esta era de pandemia (COVID-19)

Objetivos: Motivado pela crescente popularidade do sistema de telemedicina, este estudo explorou a influência da eficácia do tratamento e suas características organizacionais na adoção da telessaúde entre profissionais de saúde pediátrica. A situação da pandemia exige a realização de tais estudos para revelar planos para a adoção de sistemas de telessaúde. **Métodos:** Este artigo analisou vários métodos de última geração e elaborou um questionário bem estruturado compreendendo perguntas tecnicamente fortes relacionadas ao objetivo do estudo. O trabalho envolveu 90 participantes, dos quais 30 foram excluídos devido ao acompanhamento irregular e feedback incoerente ao questionário. No total, as respostas de 60 pediatras foram coletadas, e a análise estatística foi realizada com o SPSS versão 20. **Resultados:** A análise aprofundada dos dados coletados por meio de questionários permite o aprofundamento da compreensão do impacto das perspectivas administrativas e clínicas da telessaúde entre os médicos. O estudo declarou que a telessaúde tem vantagens e desvantagens que precisam de otimização cuidadosa para implementação sem complicações. Essa necessidade requer suporte de órgãos governamentais, do público e de profissionais de saúde pediátrica. **Conclusão:** Este estudo destacou a contribuição relevante da dinâmica da telessaúde em todos os estágios da implementação. Por meio de otimização cuidadosa, a telessaúde pode superar as barreiras preexistentes e pode atender efetivamente pacientes remotos, aumentando assim o nível de satisfação dos pediatras durante pandemias.

Palavras-chave: Telessaúde; pediatra; pandemia; serviço de saúde remoto; setor de saúde.

1. INTRODUCTION

Telehealth is widely described as the prompt utilization of electronic information and communication systems for providing and supporting the health care sector while maintaining distance. Here, the techniques are the internet, videoconferencing, streaming media, store and forward imaging, and terrestrial and wireless communications [1]. Due to the COVID-19 pandemic in 2020, physician access to telehealth increased, which led to great attributes in telehealth, such as development in technology, changes in association, and health care delivery. This advancement in telehealth leads to cost-friendliness, better health outcomes, and improved inpatient care entry [2]. The possibilities of telehealth for patient access in medical care are strong in rural regions but are lacking in other areas [3].

Pediatricians are very concerned about children due to the need to obtain increasingly complex medicine and chronic diseases [4]. This turns into higher demand for subspecialty

pediatric care; however, the present wellness programme does not provide proper timely receipt or arrange subspecialty care [5]. Almost one-quarter of children experience difficulty in subspecialty care needs [6]. Even though parents and providers support communication with subspecialists, facilities remains poor [7]. Additionally, half of the common pediatricians hesitate to report difficulty with subspecialists [8]. Children from poor and remote communities face additional obstacles in obtaining care from the best pediatric subspecialty centers, mainly due to large distances and decreased awareness [9]. There are many possibilities for pediatricians in telehealth, such as education, practice, research, quality control, and consultation. Telehealth serves as higher quality in pediatric care and suggests reducing the pediatrician's work barriers by giving proper telehealth to patients [9].

In recent days, frameworks and techniques in telehealth requirements for patient care have increased, and few studies have given national estimates on the common usage of telehealth among physicians [10]. Some barriers faced in telehealth usage are lack of reimbursement, potential liability issues, lack of training, and cost of equipment, which leads to telehealth usage remaining low among physicians [11]. Similarly, another study also dealt with the estimation of barriers associated with pediatric telehealth services, such as strict state regulatory activities, low payment, and the absence of physical examination [12].

With the appearance of the SARS-CoV-2 pandemic, the Indian government initiated various steps to control the disease spread, transforming a few hospitals into COVID-19 wards, and many regular hospitals were shut down with outpatient division and operation theatres except for emergency services. Patients faced many struggles for adequate care during hospital visits, especially during a pandemic. To overcome the obstacles, the government provided proper guidelines for the practice of telemedicine to avoid the lack of healthcare services for the public. Telemedicine means delivering the service of health care, and the critical factor of distance will break through the help of communication technology. It serves as a reason for exchanging valid knowledge on diagnosis, preventing and receiving treatment for the injury of disease, and avoiding overcrowding in hospitals, particularly during pandemics [13]. Telemedicine can be divided into communication modes such as text-based and audio or video. The service model has been selected by the corresponding medical practitioner depending on the availability of technology. Telemedicine measures deal with screening of diseases, health care management, teleproctoring, and disaster management. Telemedicine is extensively used in the dermatology and pathology fields. Other branches, such as pediatrics, possess minimal services that need appropriate awareness of its vast utilization. The major aim of telemedicine is to provide equal service for all, with optimal safety to both physicians and patients, cost-effectiveness, and fast care on time. Meanwhile, children who are in high-risk communities need elaborate medical assistance during an emergency through telemedicine services.

1.1. Objectives

To perform data collection and statistical analysis of the information collected from pediatric professionals on the adoption of a telehealth system. To reveal the perspectives and attitudes of pediatric professionals on the adoption of telehealth during a pandemic.

2. METHODS

2.1. Study Design: A cross-sectional descriptive study

2.2. Sampling method: Purposive sampling

2.3. Data collection: Ninety pediatricians from government, private and public sectors were approached, and 30 participants were excluded due to incomplete follow-up. Hence, 60 respondents were finally engaged in the analysis during pandemic. A well-structured questionnaire with technically strong questions was used, and a 5-point scale was utilized to grade the answers. The questions related to the contribution of telemedicine inpatient recovery, cost-effectiveness, barriers, optimization possibilities, and hygienic characteristics were correlated to provide deep insights into the objectives. Validity denotes the degree to which the instrument explores the precise information by the objective. Our study analyzed the state-of-the-art methods and developed a well-structured questionnaire with appropriate cross-checking by field experts.

2.4. Statistical Analysis: Descriptive inferential statistics were utilized for the determination of the correlation coefficient, and consequently, the detection of associations with the demographic and predictor variables was also performed. Several factors were noted in the Excel sheets, and a comparative analysis was performed with statistical analysis. Statistical analysis was performed using Statistical Package for Social Sciences (SPSS) version 20.0. The range of values was estimated, and the correlation coefficient was also determined with every set of values. The demographic physical parameters of age and other factors are presented as counts and percentages using frequency analysis. ANOVA (analysis of variance) is a test used to test the difference among the groups. If the p value is smaller than 0.05, then it is shown that respondents differ in this study. One-way ANOVA was used to assess the differences between the investigated parameters in the different physical parameter groups. The study represents regression analysis and is presented in a table for the depiction of the interrelation of all the parameters for the determination of their corresponding value.

2.5. Compliance with ethical standards and consent: All the participants provided informed consent after the nature of the study was explained. The present study was approved by the Institutional Human Ethics Committee, -----on-----. Confidentiality was maintained throughout the study. Wherever necessary, the relevant information was cross-checked to maintain originality. Details about the respondents were kept in a password-protected computer, which was accessed only by the principal investigator.

3. RESULTS

3.1. Demographic analysis

Figure 1a represents the age based distribution of the investigated population, in which 40% of the pediatricians belonged to the age group of 25 to 35, 26.67% of the population belonged to the age range of 36 to 45, and 33.33% of the population belonged to the age range of 46 to 55. This states that the study included the perspectives of all the participants irrespective of age.

Figure 1b illustrates the gender based analysis of the study in which female pediatricians were observed to be less involved (33.33%), and consequently, male respondents were found

to be 66.67% in the present study. Similarly, Figure 1c denotes the service location of the respondents, where most of the pediatricians (73.33%) were providing services in urban areas, 13.33% were in rural areas, and the remaining 13.33% were in both sectors. This remains one of the limitations of the study, as it lacks equal urban and rural populations.

Meanwhile, Figure 1d shows that nearly half of the respondents (46.67%) were servicing in an autonomous body, 20% in the public sector, and 33.33% in the private sector. These results revealed that the study involved participants belonging to all categorizations of the healthcare sector.

Figure 1e describes the working experience of the pediatrician, in which 53.33% of the population had been providing services for 1 to 10 years, 26.67% 11 to 20 years, and 20% of the respondents had been working for more than 20 years.

Figure 1f shows that 73.33% of the respondents had been providing telehealth services for less than six months, and 26.67% for more than six months.

Accordingly, Figure 1g depicts the mode of telehealth service among the investigated population. Nearly 46.67% of the population is engaged in tele- and video conferencing, 26.67% is associated with mere video conferencing, and 13.33% of the population has been observed to use the oral/telephonic and e-Sanjeevani OPD methods.

Similarly, Figure 1h provides the types of barriers to the pediatrician during the adoption of telehealth services, in which 33.33% reported the absence of physical examination, 20% of the pediatrician reported communication barriers, 26.67% reported the absence of clinical examination, and 6.667% reported each barrier. Figure 1i illustrates the advantage of the telehealth service from respondents. It was observed that 40% of the pediatricians felt advantaged about the prevention of infection, 26.67% were happy in serving remote patients without traveling, 20% of the population was satisfied with providing immediate and authorized primary care to the children, and 13.33% benefited in terms of time and cost-effectiveness.

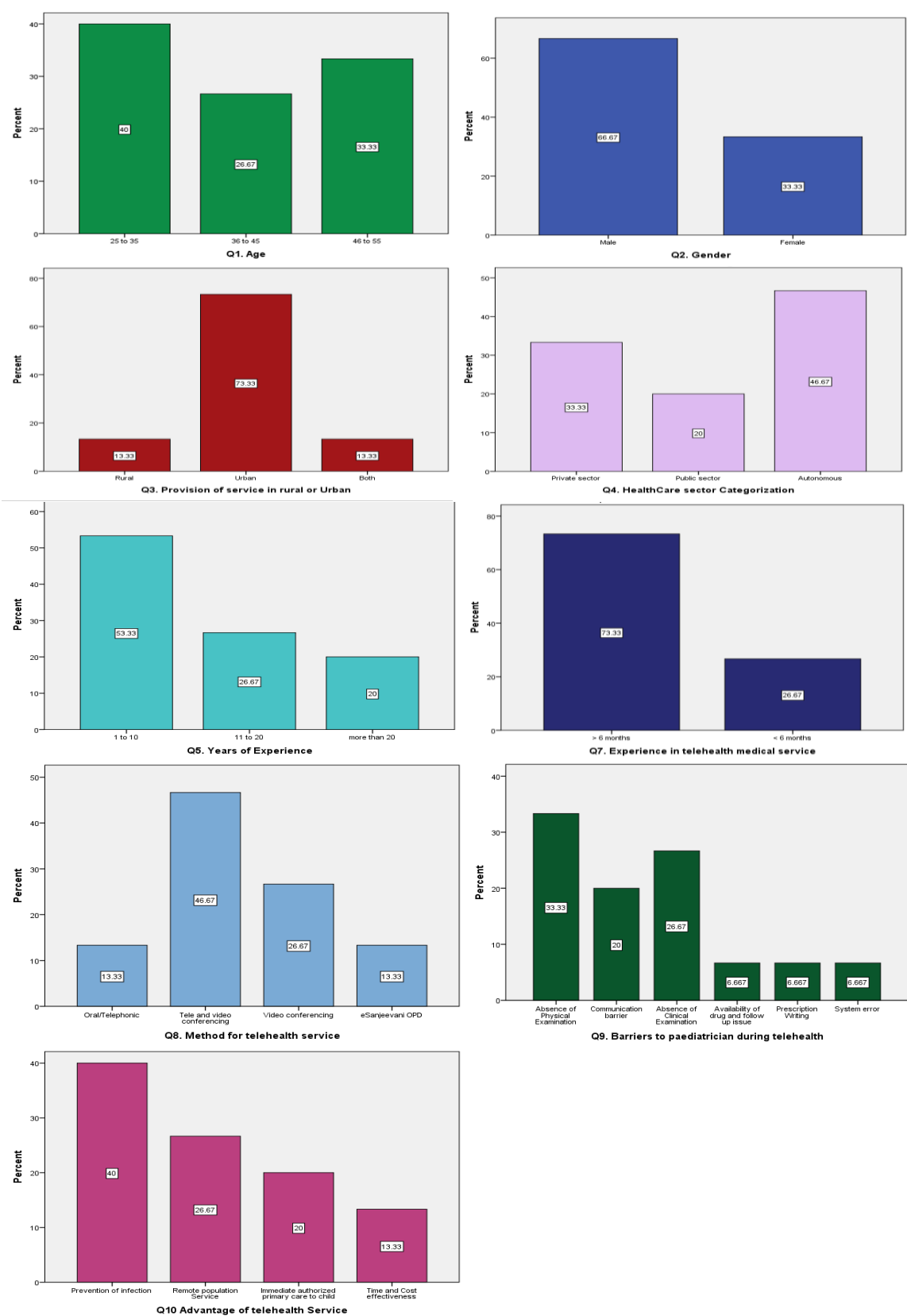


Figure 1. Demographic analysis

Table 1. Analysis of variance (ANOVA) in obtaining a contribution to patient recovery.

Q11 Telehealth achieves contribution to patient recovery					
	Sum of squares	df	Mean Square	F	Sig.
Between groups	2.408	2	1.204	7.022	0.002
Within groups	9.775	57	0.171		
Total	12.183	59			

Table 1 defines that there exists a contribution to inpatient recovery using telehealth during the pandemic period. This is illustrated by the p value = 0.002, which is less than 0.05.

3.2. Post Hoc Tests

Table 2 depicts the post hoc analysis in which multiple comparisons of the dependent variable as telehealth achieves a contribution to patient recovery have been revealed. The Bonferroni's test obtained a significant value of 0.004. Hence, it is strongly proves that the respondents embrace the acceptability of the contribution of telehealth during a pandemic.

Table 2. Multiple comparisons

Dependent variable: Q11 Telehealth achieves a contribution to patient recovery Bonferroni				
(I) Q24 Tele health provides new opportunities	(J) Q24 Telehealth provides new opportunities	Mean difference (I-J)	Std. error	Sig.
Strongly agree	Agree	0.42500*	0.12859	0.004
	Neutral	0.00000	0.20207	1.000
Agree	Strongly agree	-0.42500*	0.12859	0.004
	Neutral	-0.42500	0.18130	0.068
Neutral	Strongly agree	0.00000	0.20207	1.000
	Agree	0.42500	0.18130	0.068

Table 3 denotes the significant relationship between the predictor variables, such as the physician's complexity in revealing patient information, telehealth implementation in the future, incorrect medicine intake, patient cooperation, medicine and material costs, hygiene, the possibility of new opportunities, and careful optimization for future benefits.

Table 3. ANOVA Analysis

		Sig.
Q18 Complexity in understanding patient's health	Between groups	0.001
	Within groups	
	Total	
Q20 No problem during implementing telehealth	Between groups	0.003
	Within groups	
	Total	
Q17 Theoretical examination from different viewpoints may to the intake of the wrong medicine	Between groups	0.026
	Within groups	
	Total	
Q16 Telehealth approaches are complicated and hard to implement in the pandemic situation	Between groups	0.000
	Within groups	
	Total	
Q15 The patients were very cooperative during treatment with the telehealth approach	Between groups	0.001
	Within groups	
	Total	
Q21 Reduced material and maintenance cost of hospital	Between groups	0.048
	Within groups	
	Total	
Q22 Access to extend	Between groups	0.034
	Within groups	
	Total	
Q23 Assurance of hygienic way for both physicians and patients thereby maintaining COVID 19 promises	Between groups	0.019
	Within groups	
	Total	
Q24 Tele health provides new opportunities	Between groups	0.025
	Within groups	
	Total	
Q25 Careful optimization can broaden the telehealth system in future	Between groups	0.047
	Within groups	
	Total	

3.3. Nonparametric Correlations

Table 4 represents the correlation between experience in telehealth medical services and experience in telehealth medical services, and careful optimization can broaden the telehealth system in the future. Consequently, Table 5 shows that careful optimization can broaden the telehealth system in the future and overcome barriers to pediatricians during telehealth.

Table 4. Correlations

			Q7. Experience in telehealth medical service	Q25 Careful optimization can broaden the telehealth system in future
Spearman's rho	Q7. Experience in telehealth medical service	Correlation coefficient	1.000	-0.148
		Sig. (2-tailed)	.	0.261
		N	60	60
	Q25 Careful optimization can broaden the telehealth system in future	Correlation coefficient	-0.148	1.000
		Sig. (2-tailed)	0.261	.
		N	60	60

Table 5. Correlations 2

			Q25 Careful optimization can broaden the telehealth system in future	Q9. Barriers to the pediatrician during telehealth
Spearman's rho	Q25 Careful optimization can broaden the telehealth system in future	Correlation coefficient	1.000	0.130
		Sig. (2-tailed)	.	0.324
		N	60	60
	Q9. Barriers to the pediatrician during telehealth	Correlation coefficient	0.130	1.000
		Sig. (2-tailed)	0.324	.
		N	60	60

3.4. Cross tabulations

Tables 6 to 10 show the cross-tabulation analysis of the predictor variables of barriers to pediatricians during telehealth.

Table 6. Cross-tabulation of Barriers to the pediatrician during telehealth and Careful optimization can broaden the telehealth system in future

Count				
		Q25 Careful optimization can broaden the telehealth system in future		
		Strongly agree	Agree	Neutral
Q9. Barriers to the pediatrician during telehealth	Absence of Physical Examination	4	8	0
	Communication barrier	0	12	0
	Absence of Clinical Examination	4	4	4
	Availability of drugs and follow on the issue	4	0	0
	Prescription Writing	0	0	0
	System error	0	0	0
Total		12	24	4

Table 7. Barriers to the pediatrician during telehealth * Q25 Careful optimization can broaden the telehealth system in future Cross tabulation

Count			
		Q25 Careful optimization can broaden the telehealth system in future	Total
		Disagree	
Q9. Barriers to the pediatrician during telehealth	Absence of Physical Examination	8	20
	Communication barrier	0	12
	Absence of Clinical Examination	4	16
	Availability of drugs and follow on the issue	0	4
	Prescription Writing	4	4
	System error	4	4
Total		20	60

Table 8. Barriers to the pediatrician during telehealth * Q24 Telehealth provides new opportunities for Cross tabulation

Count				
		Q24 Telehealth provides new opportunities		
		Strongly agree	Agree	Neutral
Q9. Barriers to the pediatrician during telehealth	Absence of physical examination	6	11	3
	Communication barrier	3	8	1
	Absence of clinical examination	3	13	0
	Availability of drugs and follow on the issue	2	0	2
	Prescription writing	0	4	0
	System error	0	4	0
Total		14	40	6

Table 9. Barriers to the pediatrician during telehealth and Telehealth provides new opportunities

Count		
		Total
Q9. Barriers to the pediatrician during telehealth	Absence of physical examination	20
	Communication barrier	12
	Absence of clinical examination	16
	Availability of drugs and follow on the issue	4
	Prescription writing	4
	System error	4
Total		60

Table 10. Barriers to the pediatrician during telehealth and Q23 Assurance of hygienic way for both physicians and patients thereby maintaining COVID 19 promises

Count		Q23 Assurance of hygienic way for both physicians and patients thereby maintaining COVID 19 promises		Total
		Strongly agree	Agree	
Q9. Barriers to the pediatrician during telehealth	Absence of Physical Examination	12	8	20
	Communication barrier	4	8	12
	Absence of Clinical Examination	8	8	16
	Availability of drugs and follow on the issue	0	4	4
	Prescription Writing	0	4	4
	System error	4	0	4
Total		28	32	60

Table 11. Reliability statistics

Cronbach's Alpha	N of Items
0.817	27

3.5. Interpretation

The table illustrates the Cronbach's alpha value of reliability analysis. The determined alpha value is .817. This represents the highest rate of internal consistency for the reliability scale with definite sample.

4. DISCUSSION

Due to the COVID-19 pandemic, telehealth usage has greatly increased and played a vital role in the response. In India, some hospitals allow patients to access their care to avoid direct personal visits with physicians.

The extensive employment of telehealth systems remains unclear now, despite their existing favorable government supporting schemes, such as fast-tracked electronic prescribing associated with supported home delivery of the medicine. Whereas the input survey was collected on or before the breakout of financial blockades, to overcome the barriers faced by telehealth adoption, immediate action was taken regarding payment [14]. This serves as a motivation for more pediatricians and shows involvement in incorporating telehealth practice. Clinical reports mixed reviews of the transformation to virtual care during the COVID-19 pandemic. A study in April 2020 on primary health physicians found many telehealth uses, even though there remains dissatisfaction, including billing queries and a lack of cases. During this pandemic, an increased number of medical professionals and donors have adopted successful telehealth services to provide proper care to the investigated cases [15, 16]. If telehealth breaks its barriers and identifies its remedial measures, it will play a successful role postpandemic. Similarly, the current study also prove the significant contribution of telehealth for patient

recovery. In addition, the study discussed barriers of pediatrician during telehealth in various aspects.

Telehealth faces many drawbacks; for example, patients are not present on time, and here, physical testing is not applicable [10]. The restricted evaluation is only possible via inspection, which is lacking here due to the poor quality of video and video facilities. In particular, infants and toddlers face considerable difficulty in diagnosing the correct problem [17]. If the physician fails to diagnose the correct disease, it leads to an underestimation of the disease [18]. To avoid these kinds of problems, physicians should collect complete information about the issue in patients. We can also use electronic devices such as ultrasonography, electronic stethoscope, pulse oximeter, and electronic blood pressure apparatus by knowing the proper effectiveness and accuracy of those devices. Through rudimentary analysis, we encourage telehealth pediatricians and health workers to eliminate these challenges.

The pediatrician should have a very minimal level threshold for placing basic studies due to fewer investigation possibilities [19]. If there is no nearby hospital, telemedicine would be very helpful, and a pediatrician will provide guidance with proper first aid that will be life-saving for that patient until they reach the nearest hospital. Calculating dosage based on the age and weight of the children is important [20]. If the parameters are unknown, then prescriptions must be avoided. Particular medicines, such as psychotropic and narcotics drugs, are strictly restricted by telemedicine authorities and cannot be suggested to any chronic disease patients. Every prescription must have a specific format that may be checked at any time. Maintaining a proper record is mandatory for the first time. A screenshot record such as email text WhatsApp chats and video recording is also acceptable. To cover the liability of risk, documenting the report indication and calling back instructions is important.

Common symptom prescriptions will be easily cloned by frauds that lead to senseless drug users, who will face a vigorous penalty under stringent law [21]. For convenience, the practitioner can select their telemedicine. An important duty of a physician is to keep patients' privacy details secret and not share them with others. Patient pictures should be shared via safe means of communication. The physician–patient relationship will break if any fault occurs [22]. At any time, patient trust should not break, especially in risky situations. The government guidelines are not clear in addressing any blockade. If the practitioner is exempt, the patient data will be shared owing to technical issues. The same pay design that applies for inpatient appointments is appropriate here well. Telemedicine is most economical both for the patient and physicians to reduce the travel cost and stay. The Indian Academy of Telehealth recently announced an app for those members that can be utilized for telemedicine consultation and payment facilities.

The key person can contact the pediatrician, and the age group is not usually for the patients. The difficulty in physician–patient communication will be further clarified through telecommunication. Apart from this, patient knowledge and socioeconomic factors may face challenges when communicating through phone calls or video calls. Prescriptions through this method will lead to incorrect interpretation, neither by patients on their own nor by chemists, which end up in terrible results. The remedy is to obtain good quality internet speed, nonstop power supply, and workspaces on telecommunication, and chosen centers such as post offices, pharmacies, and PHC centers with good internet speed and training facilities such as ASHAs are also available. The staff must be trained in performing a video call and skilled in explaining prescriptions to patients. We must avoid giving telemedicine through phone calls but encouraged via video calls and give prescriptions in the standard format through email. We must

have a good liaison among tertiary care clinics and primary health centers, it had done with the Village source centers established by the Indian Space Research Organization.

If the physician even faces communication difficulty, he or she can document the problem and dismiss the conversation. A physician should become easy to use with the natural method by giving proper treatment, but in the present situation of the COVID-19 pandemic, a short-term change is necessary. As many healthcare specialists are affected, the physician–patient ratio will further decline. Telemedicine will be the only hopeful solution accessible. Moreover, the usage of telemedicine is high in India, and many problems regarding medical aspects may emerge, which may be considered by the medical community. Although attention is necessary for pediatricians, the benefits of telemedicine should be welcomed. We should discover the importance of the traditional way of performing medicine. These factors have to be analyzed, and careful optimization has to be structured to reveal the hassle-free implementation of telehealth among pediatricians.

4.1. Limitations

Like other survey and questionnaire-based research, the study has the following limitations. Initially, this analysis was observed to be based on the respondent's self-reports, and hence, there is a possibility of recall error or social desirability error. Then, the survey was limited to regional pediatricians and their own telehealth experiences, which influenced the results. The sample size was small and has to be optimized in future studies.

5. CONCLUSION

Telehealth is a multibeneficial tool connecting children to various aspects of health care providers. This technology might include live video, interactive online sessions, and specialized diagnostic tools. Additionally, it also allows caregivers and families to access healthcare facilities during times of emergency and pandemic situations. Meanwhile, pediatric professionals in developed cities can facilitate their service to children belonging to remote and small communities. However, the paper recommends strong and careful optimization to overcome various barriers associated with telehealth in a pediatric domain, such as cost, diagnostic bias, and understanding of the severity of the disease from acute to chronic conditions.

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Declaration of competing interest

There is no conflict of interest for any of the participants.

Author Contribution statement

SJ conceived and designed the study, conducted research, provided research materials, and collected and organized data. UPS analyzed and interpreted data. BNC wrote initial and final draft of article, and provided logistic support. All authors have critically reviewed and approved the final draft and are responsible for the content and similarity index of the manuscript.

Ethics approval

There is no Ethical Approval for this paper.

Data availability

There are no data available for this paper.

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