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Perceptions on Tele-Consultation among Adults from General Population in South India: A Cross Sectional Survey

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ABSTRACT

Introduction: Teleconsultation is a feasible method of delivering health care due to its convenience and accessibility. This paper aims to study the perceptions on tele-consultation among adults from general population in South India.

Methods: A cross sectional study was conducted among 230 adults residing in South India who had access to smart phones. A validated pretested online questionnaire was used to collect data from the participants regarding their perceptions. Likert scale to grade their experiences on tele-consultation if they have used any or if not, the reason as to why they haven't.

Results: Out of the 230 study participants, 42.6% had availed tele-consultation facility at least once. Voice phone calls as the main mode of consultation (34.3%). Out of the 98 participants who had used teleconsultation, ease of access healthcare (63.7%), comfort (74.4%), effectiveness (78.7%), ease of communication (72.4%), simplicity for use (81.6%), clarity of communication (81.6%) and reliability (62.2%) were the common perceptions of the study participants. More than half the study participants (132; 57.4%) had never used teleconsultation. Common reasons for not using teleconsultation was lack of perceived need (87.5%), preference for face to face consultation, lack of awareness (28%), lack of trust (21.9%) and lack of clarity on legal issues involved (12.1). Half (46.2%) of those who had never used teleconsultation reported that they would have used teleconsultation If proper education on its usage were to be provided.

Conclusion: Teleconsultation is an accepted method of seeking health consultation among the general population. While some people still prefer

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face to face consultation over teleconsultation, those who used the mode of teleconsultation were able to meet their health care needs. Proper education on the usage of teleconsultation and necessary digital developments in the needed.

KEYWORDS

• Tele consultation • South India • General population

INTRODUCTION

The World Health Organization (WHO) defines telemedicine as, "the delivery of healthcare services, where distance is a critical factor, by all health care professionals using information and communication technologies for the exchange of valid information for the diagnosis, treatment and prevention of disease and injuries, research and evaluation, and for the continuing education of healthcare providers, all in the interests of advancing the health of individuals and their communities.[1]

Teleconsultation is a feasible method of delivering health care due to its convenience and accessibility. It reduces travel time and improves access to specialist care.[2] The need for teleconsultation was highlighted during the COVID 19 pandemic when a nationwide lockdowns led to a shutdown of outpatient departments of government as well as private medical college hospitals in the fear of secondary transmission of corona virus.[3] Guidelines by the erstwhile Medical Council of India (MCI) now rechristened as National Medical Commission (NMC) provide a framework for ethical practice of telemedicine in India.[4]

The use of tele-consultation has increased in many countries. Research of topics related to tele-consultation for specific diseases including the factors responsible for its adoption, patient satisfaction, limitations are available from many developed countries and form India.[5–7] There is a dearth if literature on tele-consultation among general population in South India. This paper aims to study the perceptions on tele-consultation among adults from general population in South India.

METHODS

A cross sectional study was conducted from March to October 2022. Adults above 18 years of age residing in South India who had access to smart phones were invited to participate in the study. Participants who were not able to comprehend the questions in English language were excluded. Permission to conduct the study was obtained from the Institutional Ethics Clearance committee. (Study No. 383 / 2021) The purpose of study was explained in subject information sheet and digital consent was obtained from all participants of this study.

Operation definition of teleconsultation for the purpose of the study was any digital contact with a doctor with the purpose of seeking health care including calling up or messaging the doctor.

Sample size for our study was estimated with reference to the study done by Athreya *et al* who reported that 82% of the patients accessing tele-consultation gave positive response towards its use. Using this estimate, at an absolute precision of 5% and at a confidence level on 95% we estimated that the sample size required for our study to be 227 which was rounded of to 230.

A validated pretested online questionnaire was used to collect data from the participants regarding their perceptions. The questionnaire used Likert scale to grade their experiences on tele-consultation if they have used any or if not, the reason as to why they haven't.

The data collected using google forms were extracted to Microsoft Excel and analysed using standard statistical packages. Sociodemographic details on study population and morbidity profile was described using frequency, proportion and measures of central tendency. Proportion of people using tele-consultation was expressed in percentage. Perceptions of study population were measured using questionnaire scored in Likert scale. Factors associated with use of teleconsulation was analysed using Chi square

test of association. A p value of less than 0.05 was considered significant for all analyses.

RESULTS

Out of 230 participants above 18 years, majority (75%) belonged to the age group 18-45 years. More than half of the study participants belonged to urban areas (53%), were females (56%), had an educational level of undergraduate degree or below (63%), were gainfully employed (54%). Most of the study participants availed regular medical care from private hospitals only (51%) while very few accessed care from only government hospitals (5%). Hypertension (8.3%) was the most common morbidity followed by diabetes mellitus (7.4%). Sociodemographic profile of the study participants is depicted in Table 1.

Table 1: Sociodemographic profile of the study participants (N=230)

Variable	Categories	Number	Percentage
Age (in completed years)	≤ 45	173	75.2
	> 45	57	24.8
Gender	Male	101	43.9
	Female	129	56.1
Place of stay	Rural	41	17.8
	Semi-urban	67	29.1
	Urban	122	53.0
Educational status	UG and below	145	63.0
	PG and above	85	37.0
Occupation	Unemployed	20	8.7
	Students	86	37.4
	Employed	124	53.9
Type of hospital	Government hospitals	12	5.2
	Private hospitals	117	50.9
	Both	101	43.9

Out of the 230 study participants, 42.6% had availed tele-consultation facility at least once. Voice phone calls as the main mode of consultation (34.3%) followed by messaging and sharing reports (23%), video consultation (11.3%) and app based platforms (8.7%).

Out of the 98 participants who had used teleconsultation, 89.7% perceived it to be time saving. Ease of access healthcare (63.7%), comfort (74.4%), effectiveness (78.7%), ease of communication (72.4%), simplicity for use (81.6%), clarity of communication (81.6%) and reliability (62.2%) were the common perceptions of the study participants regarding teleconsultation. Half of the study participants (42.8%) reported that teleconsultation was similar to the regular face to face consultation. Majority (74.4%) were satisfied with teleconsultation and felt their health care needs were met (97.9%) through teleconsultation. Most of the teleconsultations were free of cost (67.3%) and Rs 500/- (Indian Rupees) was the most commonly paid amount when a payment was made. Table 2 depicts the perceptions of the study participants who had used teleconsultation regarding its use.

Table 2: Perceptions of study participants who had used teleconsultation (N=98)

Perceptions	Number (out of 98)	Percentage
Accessibility	66	67.3
Time saving	88	89.7
Comfort	73	74.4
Ease of communication	71	72.4
Effectiveness	77	78.7
Clarity of communication	80	81.6
Similarity with regular face to face consultation	42	42.8

Reliability	61	62.2
Satisfaction	73	74.4
Healthcare needs met	69	70.4

Around one third of those who had used teleconsultation (33.7%) reported that they are highly likely to continue its use in the future and are highly likely to recommend its use to friends and relatives (36.8%). Only a small proportion (10.8%) reported that they are highly unlikely to use it again. Very few (15.8%) faced technical challenges during their teleconsultation.

More than half the study participants (132; 57.4%) had never used teleconsultation. The most common reasons for not using teleconsultation was lack of perceived need (87.5%), preference for face to face consultation, lack of awareness (28%), lack of trust (21.9%) and lack of clarity on legal issues involved (12.1). In addition, 36.3% of those who had not used teleconsultation felt that they could not express themselves in a teleconsultation, 21.5% felt that the doctor could perform an examination during consultation and 27.7% felt that they would not be satisfied with a teleconsultation.

Half (46.2%) of those who had never used teleconsultation reported that they would have used teleconsultation If proper education on its usage were to be provided.

DISCUSSION

Our study shows that teleconsultation is a an accepted method of seeking health consultation with 42.6 % of the study participants having used the facility.

In our study, a large majority of those who had used teleconsultation had positive perceptions regarding its use A study on patient and physician satisfaction with the use of tele-consultation in urology during the COVID-19 pandemic found Tele-consultation to be a "good experience" for 88 patients (83.8%) and for four physicians (80%). Ninety-four patients (89.5%) considered that their medical issue was solved during the tele consultation. The level of added stress was low with 10% of responders concerned.[8]

A study by Sayani *et al.*, addressing the cost and time barriers chronic disease management through telemedicine, found telemedicine to be economically beneficial not only by reducing the socioeconomic barriers to cost and access but also by increasing the uptake of services. Another systematic review of studies conducted on costs of home-based telemedicine programs from 2000 to 2017 found that home telemedicine programs reduced care costs, although detailed cost data were either incomplete or not presented in detail.[9] Reduced cost being one of the advantages of teleconsultation was reflected in our study also. Research conducted by Mishra *et al.*, concluded patients perceive telemedicine to be useful and better suited for the delivery of health-care services especially during the COVID pandemic. Patients found extrinsic motivators such as reduced cost and reduced need for travel and perceived less complexity in the use of telemedicine post-COVID-19 outbreak.[12] Similar findings were reflected in our study.

A retrospective study done among patients aged 18 years and older pandemic reported a an 87% increase in video visit utilization during the COVID-19 pandemic compared to the same period the previous year and high patient satisfaction level.[10]

A case study highlighting the role of technology in enhancing outreach of healthcare system to maintain treatment avenues highlights the role of internet and information technology to overcome barriers to treatment faced by a breast cancer patients reported that tele-consultation addresses patient concerns and sought to educate patients in self-care by virtually connecting them to their treating doctors, share their reports digitally and schedule their visits to hospitals online.[13]

A research done by Capozzo *et al.* on delivering care to patients with Amyotrophic Lateral Sclerosis reported that all patients were uniformly satisfied with telemedicine consults with neurologist (85%), and the possibility to interact directly with the clinician, being at home (85%). Many patients underlined also for the cost reduction resulting from not having to travel to the clinic. Most of subjects expressed their willingness to continue to be placed in the telemedicine program.[14]

A study on impact of Telemedicine in the postoperative care of neurosurgery patient by Ravi Dadlani et al demonstrated in their article that in developing countries, especially those where the rural masses are separated from tertiary care centers by vast geographic distances, telemedicine can play exceptional economic and psychosocial roles in the management of the postoperative neurosurgical patient.[15]

CONCLUSION

We conclude that teleconsultation is emerging as an accepted method of seeking health consultation among the general population. While some people still prefer face to face consultation over teleconsultation, those who used the mode of teleconsultation were able to meet their health care needs. Proper education on the usage of teleconsultation and necessary digital developments in the field could definitely be one of the major mode of consultation where healthcare needs be easily delivered to the general population.

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