



Telemedicine usage among ayurvedic physicians: Current Scenario - A Cross-Sectional Study













Nyshu Abdul Azeez K K¹, Anupama Krishnan^{1*}, Shashirekha H K², Bargale Sushant Sukumar³, Neha Dattatraya Gadgil⁴, Akshar Ashok Kulkarni⁴ and Harshal Tare⁵

¹Department of Swasthavritta, VPSV Ayurveda College Kottakkal, Kerala University of Health Sciences, Kerala, India;

²Department of Samhita Sanskrit, Banaras Hindu University, Varanasi, UP-221005 India; ³Department of Swasthavritta and Yoga, Sri Dharmasthala Manjunatheshwara college of Ayurveda and Hospital, Hassan, Karnataka, India; ⁴Department of Kriya Sharir,

Parul Institute of Ayurved and Research, Parul University, Vadodara, Gujarat, India; ⁵Department of Pharmacognosy, Sharadchandra Pawar College of Pharmacy, Otur, Affiliated to Savitribai Phule Pune University, Pune, Maharashtra, India

E-mail/Orcid Id:

NA,  nyshuamjad@gmail.com,  <https://orcid.org/0000-0001-5139-7843>; AK,  dr.anupamakrishnan@gmail.com,  <https://orcid.org/0000-0001-9595-1711>; SHK,  dr.shashirekha10@gmail.com,  <https://orcid.org/0000-0002-1421-2886>; BSS,  dr.sushant99@gmail.com,  <https://orcid.org/0000-0002-9780-9070>; NDG,  vdnehak@gmail.com,  <https://orcid.org/0000-0003-1127-5934>; AAK,  draksharashok@gmail.com,  <https://orcid.org/0000-0002-9382-5591>; HT,  harshaltare51@gmail.com,  <https://orcid.org/0000-0002-4404-5396>

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Abstract: Pandemic and advancing technologies have surged the use of Telemedicine services in every medical care field. Its implications have been in the arena of Ayurveda as well. The extent of practice and knowledge among Ayurvedic physicians is yet to be studied. Study to determine how much and what kind of knowledge Ayurvedic physicians have about Telemedicine. Google form survey-based cross-sectional study among Ayurvedic physicians in Kerala via WhatsApp. The questionnaire was developed based on in-depth interviews among Ayurveda physicians from each speciality, which is pretested to confirm reliability and validity tested using Split half and Cronbach's alpha test (alpha coefficient = 0.48). Cross tabs of the variables and various factors of telemedicine practice were worked out to see the relationship. More than half of the participants (54.8%) do not practice telemedicine. Among those practising telemedicine, 90% of participants commenced during the pandemic. All the practitioners in the government sector started with telemedicine due to the pandemic, while a small share of private practitioners (5.9%) cast off it before. The majority had not gone through the guidelines issued on telemedicine. 54% of government practitioners are dissatisfied, while 60% of private practitioners are content. Practices like consent-taking hardly apply. Acceptability and applicability of Telemedicine among Ayurveda physicians are slow. Addition of Medico-legal and technological education as a part of the curriculum is the need of the hour to catch up with the cumulative numeral of "e-patients".

Introduction

Amid the current COVID-19 pandemic, the healthcare system encountered multiple challenges in terms of safety and accessibility (Razu et al., 2021). Throughout the pandemic, mandatory social distancing, avoiding unnecessary exposure, and the difficulty in reach of treatments have made telemedicine the innocuous

interactive system between patients, both infected and uninfected, and physicians. Telemedicine and virtual technologies promise potential in encountering pandemic situations and in utmost necessities (Bokolo, 2020).

The pandemic is gearing the transition to a new model of remotely delivered healthcare that embraces the benefits of digital and data technologies (Jazieh,



2020). In India, it began with the initiative of ISRO which has effectively linked hospitals and healthcare centers in remote rural areas with specialty hospitals through INSAT satellites, followed by Karnataka Telemedicine project which linked the Narayana Hrudayalaya, a super specialty hospital for cardiac care in Bangalore. Projects such as National Cancer Network (ONCONET), Integrated Disease Surveillance Project (IDSP), National Rural Telemedicine Network, National Medical College Network, and Digital Medical Library Network are noteworthy examples of effectively established telemedicine services in India (Chellaiyan, 2019).

The world's first Ayurvedic website is known to be by Jiva Ayurveda, founded by Dr. Pratap Chauhan in 1995. It has effectively established an array of 80 clinics all over India. With the help of 500 Ayurvedic doctors, Jiva provides free consultations to over 8000 patients daily and has a remarkable position in Telehealth services (www.aninews.in). Multiple applications for ayurvedic telemedicine exist, AyurVAID- Telemedicine and eHealth part of life cycle engagement and evidence building, Nirog Street, Prescribe to enlist few. CCIM had issued practical guidelines for Telemedicine practice for AYUSH doctors (www.ayush.gov.in).

The pandemic has witnessed an explosion of Ayurvedic initiatives in various dimensions (Mittal et al., 2020; Talwar et al., 2020). Efforts are also being made to integrate the traditional interventions along with the standard treatment protocols for COVID-19 at the international level (Nesari, 2020). Unfortunately, the versatility of Telemedicine as a patient-physician interface could not be hitched well for its technical complexities and the unpreparedness of institutions and individuals (Rastogi, 2020). Hence there is a need to explore the overview of ayurvedic physicians' concepts regarding Telemedicine, this study is probably the first attempt.

Method

Study design

In this cross-sectional study, we administered a Google form survey to Ayurvedic physicians in Kerala in December 2021 via WhatsApp under a convenient sampling technique. The questionnaire was developed based on an in-depth interview among Ayurveda physicians from each specialty who were asked about challenges and advantages specific to their field of specialization, which is pretested to confirm reliability and validity tested using Split half method and Cronbach's alpha test (alpha coefficient = 0.48).

This study focused on registered Ayurvedic physicians practising in Kerala for more than 6 months. The first section of the survey collected informed consent, baseline demographic Information, and characteristics of the healthcare workers, including age, gender, email, employment status, department of work, and status of Telemedicine practice. The second section contained several general questions related to telemedicine experience. The Response rate for the survey was 62%. Whatsapp Informed consent was obtained from all study participants.

Ethical consideration

The study procedures comply with the ethical standards of the relevant national and institutional committee on human experimentation, with the Helsinki Declaration of 1975. Ethical approval (approval IRB/CL/10/21 dated 6/12/21) for this study was obtained from the Institutional Review Board, VPSV Ayurveda college Kottakkal. The survey was conducted by providing written informed consent before participating in the study.

Statistical analysis

The data were analysed using the Statistical Package for the Social Sciences (SPSS) Version 26. Cross tabs of the variables and various factors of telemedicine practice were worked out to see the relationship and pattern that prevailed among practitioners.

Result

Amongst the participants, 45% practice Telemedicine and 55% do not. A good majority, which is 64% of doctors who don't practice telemedicine plan to start, hesitating for various reasons. The pandemic has forced practitioners to choose telemedicine as an alternative, with more than 90% of participants indicating practising it during the pandemic. The pandemic forced all the practitioners in the government sector to move to telemedicine. A small share of private practitioners (5.9%) indicated using telemedicine practice before the pandemic. Telemedicine guidelines are not read by many. Almost 60% of Government practitioners and 53% of private doctors had not read through the guidelines issued on telemedicine. Consent, one of the key requirements of online consultation, is hardly practised. Only 47% of government doctors and 41% of private practitioners take consent before teleconsultation. The main concern of practitioners while using teleconsultation is the difficulty of treating patients. Reduced health risks due to exposure and undisrupted (carry-on practice) during pandemic situations are the benefits highlighted by the participants. Almost all practitioners, irrespective of the sector, are

Table 1. Variables and various factors of telemedicine practice were worked out to see the relationship

Variable	Sector	
	Government	Private
How long are you been practising telemedicine?		
During Pandemic	13 (100 %)	32 (94.12 %)
Before Pandemic	0 (0 %)	2 (5.88 %)
Have you gone through the guidelines issued on telemedicine?		
No	8 (61.54 %)	18 (52.94 %)
Yes	5 (38.46 %)	16 (47.06 %)
Do you take consent before teleconsultation?		
No	3 (23.08 %)	11 (32.35 %)
Yes	6 (46.15 %)	14 (41.18 %)
Not Always	4 (30.77 %)	9 (26.47 %)
Face the challenge of difficult to treat		
No	4 (30.77 %)	12 (35.29 %)
Yes	9 (69.23 %)	22 (64.71 %)
Face the challenge of dispensing medicines		
No	7 (53.85 %)	27 (79.41 %)
Yes	6 (46.15 %)	7 (20.59 %)
Face the challenge of poor network/connectivity		
No	9 (69.23 %)	22 (64.71 %)
Yes	4 (30.77 %)	12 (35.29 %)
Face the challenge of cannot do emergency medical care		
No	11 (84.62 %)	26 (76.47 %)
Yes	2 (15.38 %)	8 (23.53 %)
Benefits - Carry on practice from Remote		
No	9 (69.23 %)	24 (70.59 %)
Yes	4 (30.77 %)	10 (29.41 %)
Benefits - Expand the patient circle		
No	9 (69.23 %)	18 (52.94 %)
Yes	4 (30.77 %)	16 (47.06 %)
Benefits - Increased Accessibility		
No	4 (30.77 %)	13 (38.24 %)
Yes	9 (69.23 %)	21 (61.76 %)
Benefits - Reduced Health Risk		
No	10 (76.92 %)	23 (67.65 %)
Yes	3 (23.08 %)	11 (32.35 %)
Will you carry on with telemarketing even after the pandemic?		
No	1 (7.69 %)	3 (8.82 %)
Yes	12 (92.31 %)	31 (91.18 %)
Do you think training in telemarketing is required?		
No	3 (23.08 %)	13 (38.24 %)
Yes	10 (76.92 %)	21 (61.76 %)
How do you rate your satisfaction with teleconsultation?		
Not at all Satisfied	1 (7.69 %)	4 (11.76 %)
Not Satisfied	6 (46.15 %)	8 (23.53 %)
Satisfied	4 (30.77 %)	19 (55.88 %)
Very Satisfied	2 (15.38 %)	3 (8.82 %)
Suggestion for a more customized App		
No	6 (46.15 %)	17 (50 %)
Yes	7 (53.85 %)	17 (50 %)
Suggestions for creating awareness of telemedicine		
No	6 (46.15 %)	20 (58.82 %)
Yes	7 (53.85 %)	14 (41.18 %)

Suggestions for Advanced Technology		
No	12 (92.31 %)	24 (70.59 %)
Yes	1 (7.69 %)	10 (29.41 %)
Suggestion for Facility for dispensing medicine		
No	7 (53.85 %)	27 (79.41 %)
Yes	6 (46.15 %)	7 (20.59 %)

inclined to continue teleconsultation even after the pandemic. Fifty-four percent of government practitioners have voiced dissatisfaction with telemedicine and more than 60% of private practitioners are happy with teleconsultation. A better and new customized app specifically for Ayurveda and creating awareness of telemedicine were new suggestions that popped up in the discussion.

Discussion

The pandemic on slots has forced the medical world to switch to telehealth services. The use of Telemedicine among Ayurvedic physicians is not much, as only less than half of the participants indicate using it. No comparison with earlier reports is conceivable as no such studies are available. But while assessing the period of run-through it indicates that the pandemic has surged the practice. No interruption in ongoing management of chronic diseases, providing psychological support to patients and family members without getting exposed to the infection, reducing the burden on the tertiary hospitals by providing diagnosis and treatment to patients in their geographical location, help in providing training to the care providers of sick and disabled children and elderly are the expected benefits (Agarwal et al., 2020). Apart from these telemedicine offers chances to exchange information between practitioners, education and research (Wilson et al., 2015). Private practitioners outnumber telemedicine practitioners compared to government doctors. It may be the reason that telemedicine can assist physicians in refining and improving their private practice (Brindha, 2013). Barriers in Telemedicine practices like lack of process for reimbursement of the services may be the reasons for government practitioners in set backing (Haleem et al., 2021). Most physicians who have not gone through guidelines issued by the Ministry of Health and Family Welfare show that they are either unaware or are least exasperated with the rule. Physicians are liable to know about prohibited Medicines: A Physician providing telemedicine consultation cannot prescribe medicines containing *Vishadravyas* (Drugs with poisonous contents) as these medicines have a high potential of abuse and could harm the patient. Also, psychotropic substances listed in the Narcotic Drugs and Psychotropic Substances Act of 1985

are restricted. Any exploitation, if dispensed through teleconsultation, may cost high. Awareness about the pitfalls shall be brought about among physicians (Nittari et al., 2020).

A review article identifies 33 challenges which major ones are technically challenged staff (11%), followed by resistance to change (8%), cost (8%), reimbursement (5%), age of the patient (5%), and level of education of patient (5%) (Kruse et al., 2018). Additionally, in this study, it has been reported that telemedicine is limited in certain clinical conditions and clinical examination of patients (Monsudi et al., 2012).

Challenges regarding medicine dispensing are a major concern that was indicated by most of the participating doctors. It has been suggested that a concept of an "Automated Medical Machine" (AMM) is a remedy for this. AMM stores essential and frequently used drugs with other medical supplies. It is also connected online to a doctor, on-call. The doctor consults and prescribes the medicines, which are required and dispensed to the user (Prabhakaran et al., 2016). This method can also be adopted in Ayurvedic practice, which may employ few too.

Even though Emergency medicine is said to be inappropriate through telemedicine in this study, it has been considered a bridging gap on both a global and locoregional scale, making obtainable the highest level of expertise and care to the most remote settings (Li, 2013). Smart home technology is a future and advancing option. With the latest sensor technologies, a person's vital data can be collected in a smart home environment. The bio-information can then be transferred wirelessly to medical databases and healthcare professionals. Patients, elderlies, and people with disabilities can have their health signals and information examined on a real-time and archival basis using the appropriate sensing apparatus in a smart home setting. The recovery process can be regularly charted (Brar et al., 2012).

Ayurveda's emphasis on *dasavidhpariksha* (ten diagnostic criteria) and *trividhpariksha* (three diagnostic criteria) (Akhtaret al., 2018) for patient examination, which is not feasible through telemedicine is mentioned as a disadvantage. Even though there are telemedicine-assisted facilities, it shows poor concordance with face-to-face examination in the emergency department

(Laskowski et al., 2020) gives about anticipation. A framework for the virtual musculoskeletal physical examination developed may help Ayurvedic physicians as this is a thrust area in Ayurvedic medical practice (Rastogi et al., 2020). Arthritis clinic at Gathiya Clinic at State Ayurvedic College and Hospital, Lucknow, reports patient's recognition and the possibility of indirect examination of joints and their mobility by focusing the camera on particular joints that formed a larger part of the indulgence (Sangavi et al., 2013).

Recommendations

Even though the use of telemedicine is advancing, the results of the current study showed that the physicians' knowledge and practice of telemedicine technology were limited, which may have influenced their perception of the technology. Inclusion of Telemedicine practice and its medico-legal importance should be included in the academic curriculum before this technology is deployed. Its capabilities and benefits are better than being comprehensive. To assist in adopting telemedicine, a proper training program must be available for doctors in all hospitals. It is also imperative to update the knowledge of working doctors through continuous medical education. Domain-based questionnaires can be developed in further studies. Patient satisfaction may be assessed as it is the key factor in medicine

Conclusion

Ayurvedic practitioners are gradually accepting telemedicine but lack awareness regarding its rules and medico-legal issues, which are to be dealt with through technological and legal education. As an extension of Digital India, every medical care field has its implication which could be expected in the Ayurvedic sector too, which may help to surge its global acceptance and to prevent isolation from mainstream health services.

Conflict of Interest

None

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