Original Article

Impact of COVID-19 Pandemic on Dermatology Practice in India

Abstract

Background: COVID-19 pandemic has disrupted healthcare systems throughout the globe. It has affected dermatology practice to a great extent. Since most of the consultations (except emergencies) in dermatology are deferred as a precautionary measure, dermatologists have taken the route of virtual appointments in order to continue treating patients in the present lockdown state. However, the concept of telemedicine is quite new for doctors as well as for patients in India. Material and Methods: An online questionnaire was circulated among Indian dermatologists which included participant demographics, changes in their practice and teaching during COVID-19, use of virtual or e-health technologies, and attitudes/opinions on their experiences. We also wanted to understand doctor perspectives on their own roles, wellness, and hospital responses to the pandemic. Results: A total of 260 responses from qualified dermatologists of different parts of India were received between 1st and 8th April 2020 and were analyzed. Two-thirds of the respondents were within 10 years of starting practice. Virtual consultations have increased by almost three-fold during the pandemic, which is a major change noticed in the practice when we compare before and during the pandemic. Earlier the focus of teledermatology (TD) was mainly for follow-up care (85%), whereas during the pandemic, both new and follow-up patients were provided virtual consultations. The number of patients coming to them for a consultation has drastically reduced. Only 2% of the responders are still performing minor procedures with proper care. Almost two-thirds do not have systems in place to train their residents and fellows due to the disruptions caused by the pandemic. The rest of them have started to take the virtual route of teaching through webinars, virtual rounds, and providing access to online journals to continue their teaching. Only 18.6% of dermatologists at work were provided with personal protective equipment. TD has opened new doors to virtual consultation and it was evident that 54.4% of doctors are willing to continue it in the future even after the pandemic is over. Conclusion: TD platforms hold great promise to improve access to high-quality dermatologic care in the future. Results from this survey of Indian dermatologists suggest that TD is the future of dermatology as it will be accessed by patients in remote areas and it is a cost-effective move for the patients.

Keywords: Covid-19, dermatology, India, telemedicine

Introduction

Coronavirus Disease 2019 (COVID-19) is a viral respiratory disease caused by the 2019 novel coronavirus (SARS-CoV-2), which has caused the pneumonia pandemic worldwide.^[1] As of 12th April 2020, a total of 1.8 million confirmed cases with over 110,000 deaths have been reported across the globe. This pandemic has disrupted healthcare systems all over the world and continues to impact outpatient consultations and procedures in dermatology practice. The current COVID-19 pandemic has forced the shutdown of many nonessential services in most of the high-risk countries. Routine out-patient consultations have been limited by various health

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms. authorities to reduce the spread of disease. Since most of the consultations (except emergencies) in dermatology are deferred as a precautionary measure, dermatologists have taken the route of virtual appointments in order to continue treating patients in the present lockdown state. However, the concept of telemedicine is quite new for doctors as well as for patients in India.

Teledermatology (TD) is a subspecialty of dermatology that utilizes information and communication technologies to diagnose, monitor, treat, prevent, research, and educate people from a distance.^[2] It was probably introduced for the first time mainly for rural communities or soldiers in faraway lands that had none or little access to physicians.^[3] TD has various benefits, like saving of cost and effort especially of rural patients as they

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need not travel long distances for obtaining consultation and treatment.^[4] Telemedicine appears to be the need of the hour in such trying times during the current COVID-19 pandemic as it can be conducted without exposing physicians and patients to the risk of transmission of the virus.^[5] A recent article has highlighted the use of messaging platforms such as WhatsApp as a useful TD tool during COVID-19.^[6]

Furthermore, the impact of the COVID-19 pandemic on dermatology training and teaching across the globe is unknown. Training of residents and fellows is an essential component in any academic medical institution, even during this pandemic. In order to maintain social distancing, emphasis should be laid on teaching trainees through webinars, virtual rounds, and also by providing them access to journals/textbooks which otherwise are not easily available to all trainees in India. During this difficult time, the well-being and mental health of all healthcare workers including doctors, nursing staff, and other helpers is the most important aspect to consider. Physicians delivering frontline medical care during the pandemic also need to be equipped with personal protection equipments (PPE) to protect them from infection while caring for critically ill patients. Unfortunately, even in the best of healthcare systems, a shortage of PPE has been noted, which can jeopardize the health of frontline physicians. In low-resource settings, such as in India, it is important to understand the level of preparedness of the existing healthcare system to inform the changes which may be required to better manage such outbreaks in the future.

Aims and objectives

The primary purpose of this study is to investigate the impact of Coronavirus disease (COVID-19) on dermatologic practice in India.

The objectives are to:

- 1. Evaluate changes in practice among dermatologists during the COVID-19 pandemic
- 2. Evaluate the training of residents and fellows during the pandemic
- 3. Understand clinician perspectives on their own roles, wellness, and hospital responses to the COVID-19 pandemic.

Understanding changes in practice, challenges, and global experiences during the current pandemic will inform clinicians and policymakers about current practices of dermatologists and help plan for disaster preparedness in similar situations in the future.

Material and Methods

Study design

This study involved an online survey of dermatologists practicing in India using Google Forms.

Study population

Dermatologists currently practicing in India at the time of the COVID-19 pandemic (March– April 2020).

Inclusion criteria

- 1. Qualified dermatologists
- 2. Currently practicing at the time of the COVID-19 pandemic (March-April 2020)
- 3. Access to the Internet to complete the survey.

Exclusion criteria

- 1. Non-qualified doctors who practice dermatology
- 2. Unable to access Internet or complete survey.

Sample size and recruitment strategy

This national survey recruited as many participants as possible throughout the COVID-19 pandemic. The authors shared the survey link and invitation to participate via email and social media (WhatsApp, Facebook, Twitter), and requested participants to also share the survey among their networks. The online survey link initiated e-consent using a standard survey cover page where participants were given the option to consent (proceed to survey) or not (exit from the survey).

Data collection

Participation in this study did not require any visits or in-person contact. The entire data collected through the online survey took approximately 10 min to complete. Questions included participant demographics, changes to their practice and teaching during COVID-19, use of virtual or e-health technologies, and attitudes/opinions on their experiences. All survey data were anonymous and only the study team had access to the data.

Data analysis

Descriptive and analytical statistics were used to analyze quantitative data. Thematic analysis was used to analyze qualitative responses.

Use of data

Results were prepared for publication/dissemination by the study team and may inform the design of future studies. Contact information for invitations was not shared outside the study team.

Results

A total of 260 responses from qualified dermatologists of different parts of India were received between 1st and 8th April 2020 and were analyzed. Demographics of the study population are depicted in Table 1. Two-thirds of the respondents were within 10 years of starting practice. Notably, almost 82% of respondents practiced in an urban setting and 50% had a private clinic of their own.

TD was not a routine mode of consultation before the pandemic in India. Virtual consultations have increased by almost three-fold during the pandemic, which is a major change noticed in the practice when we compare before and during the pandemic. Earlier the focus of TD was mainly for follow-up care (85%), whereas during the pandemic, both new and follow-up patients were provided virtual consultations. The phone call was the most preferred format for TD earlier, in contrast to messaging applications such as WhatsApp during the pandemic. Earlier, respondents mostly preferred in-person meetings and conferences, whereas they now are more likely to use virtual video calls for upcoming meetings. These major changes are evident and summarized in Table 2.

Dermatologists were able to provide consultations to patients very freely before the COVID-19 outbreak, and their data has been summarized in Table 3 along with changes in practice management during the pandemic. Most of the practicing dermatologists (62%) were consulting up to 200 patients in a week, whereas approximately 7% of doctors were seeing upward of 500 cases/week. 35.8% of doctors performed 11-20 procedures on average in a week. Presently, during the pandemic, most of the states in India are under complete lockdown and only essential services are permitted. Little more than quarters (27%) of dermatologists are consulting in-person, 7% of them are seeing patients as before, whereas 20% are treating only the emergency cases in their practice. The number of patients coming to them for a consultation has drastically reduced. Only 2% of the responders are still performing minor procedures with proper care. 56.2% of the doctors are aware of permission granted by the Board of Governors, National Medical Commission, for TD and virtual patient consults in India. Merely 13.2% of the doctors are able to bill for all of their virtual visits, whereas 17.3% billed sometimes; hence, majority of the doctors are unable to bill for their virtual appointments. Despite the guidelines, more than half of the respondents are not providing a scanned written prescription for the virtual visit. Regarding upcoming meetings and conferences, some doctors would like them to be cancelled but a majority (58.8%) would like them to be merely postponed till after the pandemic ends. An almost equal number of responders (51.9% and 48.1%) want the meetings to happen virtually over video calls and phone calls respectively.

Training of residents and fellows is an integral part of any academic institution. Half the respondents work in a private practice set-up without any obligations of training and teaching residents or fellows were excluded from the analysis. Out of the remaining responders working in academic institutions, almost two-thirds (85/129) do not have systems in place to train their residents and fellows due to the disruptions caused by the pandemic. The rest of them have started to take the virtual route of teaching through webinars (19, 43.1%), virtual rounds (3, 6.8%), providing

Table 1: Demographic attributes of survey respondents					
Parameters	Number (%)				
Practicing Dermatology post qualification (in years)					
<5 years	108 (41.5)				
6-10 years	59 (22.7)				
11-15 years	31 (11.9)				
16-20 years	29 (11.2)				
>20 years	33 (12.7)				
Setting of primary practice					
Private Clinic	131 (50.4)				
Combined private and hospital practice	96 (36.9)				
Tertiary Care hospital	27 (10.4)				
General Hospital	6 (2.3)				
Primary practice location					
Urban	213 (81.9)				
Suburban	38 (14.6)				
Rural	9 (3.5)				

 Table 2: Variation in usage of teledermatology in practice before and during the COVID pandemic

Parameters	Before the	During the					
	pandemic <i>n</i> (%)	pandemic <i>n</i> (%)					
Number of Dermatologists	61 (23.5%)	174 (66.9%)					
using teledermatology for							
virtual consultations							
Format used for virtual							
appointments							
Phone call	54 (88.5%)	26 (14.9%)					
WhatsApp	7 (11.5%)	124 (71.2%)					
Zoom	-	4 (2.2%)					
Others	-	20 (11.7%)					
Kind of patients consulted							
virtually							
Follow-up	52 (85.2%)	64 (36.8%)					
Both follow-up and new	9 (14.8%)	110 (63.2%)					
Format of meetings/							
conferences preferred							
In-person	235 (90.3%)	-					
Phone call	6 (2.3%)	125 (48.1%)					
Virtual video calls	19 (7.4%)	135 (51.9%)					

access to online journals and textbooks (7, 15.9%) and 34% doctors are using all of these to continue their teaching. The results have been summarized in Table 4.

Since dermatologists who have their own private setup are not working during the lockdown in India, they have been excluded from the evaluation of hospital preparedness during the pandemic which is tabulated in Table 5. Respondents working in teaching institutes are mostly not expected to come to the hospital (56, 42.1%), and only (17, 30.3%) of those who do have been allotted a non-dermatologic duty. PPE is available to only 18.6% of dermatologists at work.

Table 3: Dermatology pract	tice before and during COVID-19 pandemic	
B	efore the Pandemic	
Parameters		Number (%)
No. of patients consulted in 1 week	<100	80 (30.8)
	101-200	81 (31.2)
	201-300	39 (15)
	301-400	21 (8.1)
	401-500	21 (8.1)
	>500	18 (6.9)
No. of procedures performed in 1 week	<10	81 (31.2)
	11-20	93 (35.8)
	21-30	44 (16.9)
	31-40	17 (6.5)
	41-50	13 (5)
	>50	12 (4.6)
Durin	ng COVID-19 Pandemic	
Routine outpatient clinics are stopped in the	Yes	189 (72.8)
hospital/private clinic during COVID-19 pandemic	No	19 (7.3)
	No but seeing just emergency cases	52 (19.9)
How many patients are observed in a week	<5	21 (29.5)
	6-10	12 (16.9)
	11-15	10 (14.1)
	16-20	5 (7)
	21-25	7 (9.8)
	>25	16 (22.5)
Are the procedures still being performed?	Yes	5 (2)
	No	255 (98)
Are you able to bill for the virtual visit?	Yes	23 (13.2)
	No	121 (69.5)
	Sometimes	30 (17.3)
Are you able to provide scanned written	Yes	54 (31.1)
prescription after virtual visit?	No	95 (54.6)
	Sometimes	25 (14.3)
Do you know that National Medical Commission,	Yes	146 (56.2)
Govt. of India has permitted virtual consultations?	No	7 (2.6)
	Don't know	107 (41.2)
During COVID-19 pandemic, should conferences	Cancelled	107 (41.2)
be?	Postponed	153 (58.8)

A few general questions were asked to evaluate physician wellness and mental status, their thoughts about the pandemic, the role of online learning programs (webinars), and the scope of TD once the pandemic ends. The results are shown in Table 6. The majority of the respondents (149, 57.3%) are ready to work on the frontline if asked to do so and almost 84% are willing to fill in their time to refresh their knowledge through webinars and online teaching. TD has opened new doors to virtual consultation and it was evident that 54.4% of doctors are willing to continue it in the future even after the pandemic is over. 43.4% responders would like to have a quarter of their practice to be virtual in the future

as it would save time for patients coming from rural areas for just follow-up visits.

Discussion

During trying times like the current pandemic, when there are high chances of transmission of infection from patient to physician and vice versa, dermatologists in India are adjusting their practice to embrace the virtual format of providing consultations to patients, by leveraging technology such as telemedicine. Telemedicine is defined as delivery of health care services, where distance is a critical factor, by all health care professionals using information and communication technologies for the

Table 4: Training of residents/fellows by dermatologists in academic institutions during COVID-19 outbreak						
Parameters	Number (%)					
Do you have systems in place to ensure that						
trainees and Fellows continue to access training						
Yes	44 (16.9)					
No	85 (32.6)					
NA	131 (50.4)					
What are those systems						
Webinars	19 (43.1)					
Virtual rounds	3 (6.8)					
Providing access to online journals and textbooks	7 (15.9)					
All of the above	15 (34)					

Table 5: Data regarding hospital preparedness during

the pandemic						
131 dermatologists are involved in exclusive private practice; hence <i>n</i> =129						
Questions for the participants	Number (%)					
Are you expected to come to the hospital daily?						
Yes	56 (42.1)					
No	73 (57.9)					
Are you allotted a non-dermatologic duty?						
Yes	17 (30.3)					
No	39 (69.7)					
Has your hospital provided any guidelines regarding emergency/routine management on COVID-positive patients?						
Yes	67 (51.9)					
No	35 (27.1)					
Don't know	27 (21)					
Are Personal Protection Equipments (PPE) easily available in your hospital?						
Yes	24 (18.6)					
No	72 (55.8)					
Don't know	33 (25.5)					

exchange of valid information for the diagnosis, treatment and prevention of disease and injuries, research and evaluation, and for the continuing education of health care providers, all in the interests of advancing the health of individuals and their communities.^[7] Telemedicine should not be confused with telehealth, which is a broader term. Telehealth is the delivery and facilitation of health and health-related services including medical care, provider and patient education, health information services, and self-care via telecommunications and digital communication technologies.^[7] TD is an upcoming subspecialty of dermatology and provides an alternative to face-to-face doctor-patient consultation using an electronic communication tool to diagnose and treat the pathology. The best format of TD ideally would be a hybrid of the store and forward (SAF) and real-time consults (RTC) in which images and basic patient data/history are sent to the dermatologists, who later gives an appointment for an RTC.^[8] Apart from consultation, it can be used to educate, research, prevent, or monitor medical conditions. It was first described in 1995 to provide care in the rural population of Oregon, US.^[9] More recently, it has been used to combat the lengthy wait times for in-person evaluations in the USA.^[10,11] The evidence to date supports the accuracy and cost-effectiveness of TD as well as its ability to facilitate and expedite medical attention.^[12]

TD is not without its disadvantages. One very obvious con is the lost opportunity to show empathy to the patient, to understand their needs, and to counsel them adequately. It is also dependent on good Internet speed and availability and also the patient's skill in capturing good quality photographs. Third, there is always a danger of missing or delaying the diagnosis of incidental pathologies, especially skin malignancy.^[13] The positive face of TD comprises its easy reachability to patients in remote areas or in practices with long waiting lists.^[14] It also increases the number of patients consulted, and patients approved for lesion removal/biopsy and other procedures can be directly referred to surgical day.^[15] The traditional way of practicing medicine is non replaceable, but TD will surely help to manage populations that are getting more vulnerable and older. Due to the limited number of qualified dermatologists worldwide and their skewed urban clustering, a face-to-face consultation with each patient is not always feasible.^[16] Due to high risk of cross infection of COVID between the patient and the treating dermatologist, most of them are restricting themselves to consult only the emergency cases. After the announcement of complete lockdown on March 25th 2020 during the study period, responders in the private practice (131/260) had to completely seize their face-to-face consultations and the procedures. Even the patients were not permitted to visit the doctor for minor ailments. Hence, due to its accessibility, equity, and cost efficiency, TD holds a bright future even in the developing parts of the world and will reduce the burden of in-person consultation for minor illnesses.[17,18]

In India until now, the use of telemedicine was discouraged and registered medical practitioners (RMP) were expressly forbidden from using mobile applications such as WhatsApp and web-based platforms to provide consultations to patients by existing provisions under the Indian Medical Council Act 1956, the Indian Medical Council (Professional Conduct, Etiquette and Ethics Regulation) 2002, and the Information Technology (Reasonable Security Practices and Procedures and Sensitive Personal Data or Information) Rules 2011, which primarily govern the practice of medicine and information technology. Gaps in legislation and the uncertainty of existing rules posed a risk for both doctors and patients. Finally on March 25th 2020, the Board of Governors, National Medical Commission, which supersedes the Medical Council of India, has circulated Telemedicine Practice Guidelines which enables

Questions for the participants		Number (%)
Do you feel your healthcare system is equipped to deal with this pandemic?	Yes	48 (18.6)
	No	132 (50.7)
	Not sure	80 (30.7)
Are you willing to volunteer your services on the frontline, if asked?	Yes	149 (57.3)
	No	111 (42.7)
Do you feel overwhelmed with the amount of information you are receiving	Yes	210 (80.7)
about the pandemic?	No	50 (19.3)
Do you feel panic/anxiety/fear?	Yes	141 (54.2)
	No	119 (45.8)
Would you like to attend online webinars/online training to fill in your time?	Yes	219 (84.2)
	No	(15.8)
Are you willing to volunteer your time to conduct webinars/online teaching?	Yes	105 (40.3)
	No	155 (59.7)
Do you think you will use Teledermatology in future?	Yes	141 (54.2)
	No	119 (45.8)
Hat percentage of your practice in future would you like to be virtual?	<25%	113 (43.4)
	25%-50%	23 (8.8)
	50%-75%	5 (1.9)
	75%-100%	-
	0%	119 (45.8)

Table 6:	General	questions	to understand	state of	mental	health,	willingness	to involve in	online	teaching/l	learning an	d
				future of	of telede	rmatolo	ogy in India					

RMP to provide healthcare using telemedicine.^[7] The guidelines state that telemedicine includes text, audio, or video calls using phone calls, chats, and various other portals. It should be avoided in cases of emergency cases when alternative in-person care is available. RMP should identify themselves and ask for patient identification before the consultation. The prescription must include the name, medical registration number, and qualification of the RMP. Prescriptions can be given for online consultation with the same professional liability and patient confidentiality should always be maintained. The RMP can charge fees for the consultation but needs to provide a receipt. It is mandatory to record date, time, and type of consultation in the prescription. TD is easier and more practical to implement because dermatology is more or less a visual branch and most of the pathologies can be picked up by mere inspection and few leading questions. Palpation and detailed physical examination are less required to diagnose and treat dermatological problems. TD is a valuable tool in accessing our patients at this time of public health emergency when venturing out is to be deferred and social distancing to be practiced in order to prevent acquisition and transmission of Covid19 infection. It is expected that these newer guidelines will continue to grow and be adopted by more healthcare practitioners and patients in a wide variety of forms, and will be a key enabler in fostering its growth.

As our survey showed, before the pandemic, hardly 23% dermatologists were using TD for consultation and that

too mainly for follow-up cases. Interestingly during the pandemic, two-thirds of doctors adopted TD as a mode of consultation for the benefit of patients, indicating a three-fold increase in utilizing TD. More than half the respondents (54%) even see a future for TD in their routine practice long after the pandemic is over. This shows that TD in India has good potential for being universally adopted due to its cost-effectiveness and easy accessibility. The TD format used most commonly before the pandemic was phone calls mainly for follow-up cases, whereas during the pandemic, mobile messaging and Voice over IP (VoIP) services such as WhatsApp Messenger have become extremely popular. WhatsApp Messenger is a free, cross-platform messaging service which permits users to send text messages and voice messages, make voice and video calls, and share images, documents, user location, and other media. With 400 million active users in 2019, representing 20% of the total worldwide users. India is the largest consumer market for WhatsApp. But an ideal system requires a linkage of consultation with a retrievable, secure, electronic medical record with free access to the patient. The patient must be able to procure medication directly from the linked pharmacists and also should have a secure payment gateway. Due to the technology illiteracy among the citizens, it is difficult to implement this system immediately but sooner or later, it is going to become the part of future consultations. Dermatologists in India have started consultations for new patients as well through these portals and they are pretty satisfied in treating patients this way. However, guidelines laid down by the National Medical Commission regarding patient confidentiality and proper documentation of cases need to be followed assiduously to protect the physician from medico legal consequences and the patient from harm. The inability to bill patients for consultations may also serve as a deterrent for widespread implementation. Virtual consultations can be delivered mainly in three ways.^[8]

- Patient operated system using easily available applications which have obvious advantage of patients being familiar in using them to interacting with the dermatologists in real time
- Trained assistant operated system in which the assistant helps to mediate the exchange of texts, images, audio and video facility between patient and doctor in real time
- SAF system where images, videos, and information are uploaded by patient or assistant and forwarded to the healthcare system via cloud storage. It can be retrieved by the dermatologists later for further management.

TD also plays a salient role in physician education. It includes resident training, exchange of knowledge and opinion between various dermatologists, training of other medical specialties for basic dermatological conditions, and also conducting TD-based meetings for learning on a global level in the form of podcasts and webinars.^[19] TD e-learning can definitely improve interpersonal and communication skills, such as understanding cultural and ethical issues in international settings.^[20,21] Various centers have already added these modes of learning as residents are evaluated using this tool.[22,23] It also connects dermatologists from very different ethnicities and cultures to exchange knowledge with each other.^[24] In India, while virtual teaching was not much practiced till now, this pandemic has opened doors to various webinars and virtual rounds. An overwhelming majority of the respondents (85%) have agreed to fill their time learning through webinars actively, whereas 40% have shown their willingness to volunteer their time in conducting them. Our results have demonstrated beautifully how dermatologists are ready to be involved in e-learning which is the future of medicine. For continued medical education, digital podcasts and blended learning concepts as well as inverted classroom approaches give the much-needed remedy in this trying time.^[25] Editors of various prestigious journals are elated to witness almost three-fold increase in the number of submissions to their journal during this lockdown due to the draconian pandemic. Authors are having more time in hand to complete their pending academic work and share it with the world for better learning.^[26] Most of the major dermatology meetings are either postponed or cancelled; the scope of virtual meetings and webinars has been drastically elevated to replace the conventional medical conferences.^[27] Healthcare professionals have happily adapted themselves to the format of teleconferencing for meetings which was

not very popular earlier, and they expect most meetings and conferences to be conducted through virtual video calls or webinars in the future saving both the time and expenses with optimal benefits.^[28]

Preparedness of the healthcare system to deal with surge capacity and protection of frontline healthcare workers is an important consideration during a global disaster. It is expected that low-resource countries with weakened healthcare systems are likely to get overwhelmed with a sudden surge of cases due to exponential growth and community transmission. Only 18.6% of our respondents felt confident that the existing healthcare system is equipped to deal with the pandemic. A similar number mentioned that PPE kits were freely available for healthcare workers due to limited resources. A little more than half the respondents mentioned that their hospitals had provided clear guidelines regarding routine and emergent management of COVID-19 positive cases. Given this information, it becomes all the more imperative to consider measures such as social distancing and complete lockdowns with a great deal of seriousness, in order to "flatten the curve" and prevent hospitals from being overburdened. While dermatologists are not considered frontline physicians during this pandemic, they may likely be called upon to provide back-up assistance to medical intensivists and critical care specialists as the number of hospitalized patients rise over the next few weeks.^[29] 57% of the respondents would consider consenting to redeployment in COVID-19 "hot zones" if the need arose to augment the medical workforce. This confirms the altruistic nature of medical doctors who are not averse to stepping outside of their comfort zones for the greater good of society, without any consideration for financial recompense. Public and private hospitals must take urgent steps to provide all necessary PPE to healthcare workers to prevent them from getting secondarily infected and depleting the healthcare workforce. Hospitals must also provide training courses and clear guidelines to redeployed staff in the management of COVID-19 positive cases.

There is a constant barrage of information on the COVID-19 pandemic on news channels, websites, and social media sites. It is thus not unexpected that over 80% of our respondents felt overwhelmed with the amount of information they are subjected to daily. More than half of the respondents confessed that they experience panic, anxiety, and fear as they try to cope with various uncertainties of the pandemic. Hospital and professional organizations must take steps to provide counseling to doctors in stress-management and mental health issues that are likely to get aggravated during the pandemic. This will enable them to provide better care for their patients.

Conclusion

In conclusion, TD platforms hold great promise to improve access to high-quality dermatologic care in the future. Results from this survey of Indian dermatologists suggest that TD is the future of dermatology as it will be accessed by patients in remote areas and it is a cost-effective move for the patients.

Declaration of participant consent

The authors certify that they have obtained all appropriate participant consent forms. In the form, the participants have given their consent for their images and other clinical information to be reported in the journal. The participants understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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