Dissertation NT 3

by Dr Nalini

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Executive summary

Telemedicine is a latest buzzword in healthcare and is making a key contribution during current covid 19 pandemics in India. Because of the enormous number of cases during the COVID-19 pandemic, a clever tool was required to manage all positive cases in a timely manner, such as utilizing technology and employing telemedicine for triage. It being used over the word from few decades but in India come to spotlight with onset of covid -19. Telemedicine is usually defined as a combination of both technologies and device able to remotely gain information about "patient health status".

The coronavirus disease 2019 (COVID-19) outbreak spread to over 100 countries in the first week of March, with over 100,000 cases. Health-care authorities around the world have also started raising awareness and preparing for disasters. Same scenario which is created in India also, as our cases get increased numbers get into lacs in India, government and private both systems get collapsed. death rate is increased and patient don't get proper services private and government sector, both are in panic situation, they are start finding way to decrease the rush into the hospital, with the help of telemedicine service.in this study we are doing assessment of role and effectiveness of telemedicine in both aspects registered medical professional and patient.

Telemedicine is effective and sustainable solution during the current pandemic by bridging the gap between patients, doctor and health system. With the issuance of the Telemedicine Guidelines ion 25 March 2020 by MoHFW in collaboration with the NITI Ayog, telemedicine has gained the legal sanctity for being practiced in India. However, this is just the beginning and their lot to be done before we can leverage.

The study is an attempt to measure the effectiveness of telemedicine during the second wave of the COVID-19 pandemic. The Study was carried out in two Phases.

Phase 1: A semi-structured questionnaire was fielded to the patients using the telemedicine.

Phase 2: A semi- structured questionnaire was fielded to the practitioners /doctors practicing the telemedicine

The response and the data were collected and analysed there by helping to identify the gaps and opportunity, also give us a way forward to design a

quality assessment /audit system to help policy and decision maker to adopt measure to improve usage of telemedicine.

INTRODUCTION

Telemedicine is a broad term that covers many functions of remote health treatment. The feature of telemedicine is the use of telecommunications technology to provide health information and services in the broadest sense. It is the transfer of data from one point to another with the help of an electrical system. It is most commonly used to refer to remote clinical vehicles. Facts have proved that using telemedicine to evaluate and transport patients is very beneficial for treating a large number of positive cases in a short period of time. By complying with the established agreement, the patient's medical needs can be determined, necessary medical advice can be provided, and isolation or hospitalization can be arranged according to the patient's clinical condition. Communication technology. Or in other words, telemedicine is a term. A registered physician is an individual registered in the National Medical Registry or the Indian Medical Registry under the Indian Medical Council Act of 1956; however, the terms telemedicine, telemedicine, teleconsultation, and health are used in the field of health.

Telemedicine practice recommendations in 2020:

➢ Practical guide for telemedicine was released on March 25, 2020. These recommendations finally clarified India's position on the legality of remote consultations. If the requirements are met, it is now legal to provide remote consultations to patients living in any part of India Telemedicine guide.

➢ In fact, the telemedicine guidelines specifically enable doctors to conduct remote consultations for drug prescriptions, advice and health education.

➢ Doctors can use any digital mode (text/audio/video) to consult patients, such as telephone, mobile phone or landline, chat platforms such as WhatsApp, Facebook, Messenger, etc., and other mobile digital platforms Skype/email used for telemedicine or data /Fax and other transmission systems. The telemedicine practice guidelines do not prohibit the use of social media in the suggested situations. The Indian government should seek help from the last person in the remote village. The use of social media makes this movement a necessary condition to influence the public.

➢ The telemedicine guide uses various methods to achieve reliable remote consultation while protecting the interests of patients. It forces doctors to verify their identity before consultation, provide registration numbers, and provide the same standard of patient care in a safe place. -Personal advice and limited medications that can be prescribed through remote consultations.

➢Indians will now be able to obtain high-quality healthcare services remotely, and doctors will be able to extend their services to more patients in need.

LITERATURE REVIEW-

COVID-19 pandemic has led to the surge in telemedicine usage and has clearly demarcated before and after for the vital healthcare industry as shares of Zoom video communications and Microsoft shot up by more than 150% and 140% respectively since the start of 2020. Telehealth visits are booming as doctors and patients are embracing distance amidst the corona virus crisis and has been casted Asia tool for professionals to prevent exposure to the COVID-19 and keep the vulnerable and healthy confined to their homes. To reduce transmission, travel restrictions have been appointed and enforced around the world, and most cities have been quarantined. People who are not infected with COVID-19, particularly those who are at a higher risk of getting the disease (e.g. the elderly) are at a higher risk of getting the disease. Individuals and those with underlying conditions) should be able to get daily treatment without fear of being exposed to other hospital patients.

The Coronavirus Disease 19 (COVID19) outbreak is a health emergency of international concern. This is an effective way to deal with the COVID19 outbreak. The purpose of this systematic review is to determine the role of telemedicine services in disease prevention, diagnosis, treatment and control during the COVID19 outbreak.

OBJECTIVE-

The objective of this study to measure the role and effectiveness of telemedicine during COVID-19 pandemic in India and look into the possibility of optimizing it is utilization against impending third wave of the pandemic by alleviating the overall burden on the hospitals by

➢ Screening of the patients care at home

➢ Containing the spread of virus by limiting the exposure of the frontline workers, and increase their availability health workers in telemedicine.

➢ Facilitation of the healthcare providers to attend a greater number of patients seeking medical assistance and upgrading and equipping digital tool of practicing telemedicine.

METHODOLOGY-

The study, the sole objective of which is to determine role and effectiveness of telemedicine during COVID-19 pandemic in India is based on various procedures such as the comprehensive review of journals such as

- Covid-19 transforms health through telemedicine by Devin M Mann, Ji Chenn.
- Telemedicine in the era of COVID-19 by Miho J. Tanaka, Luke S. Oh
- Telehealth and the COVID-19 Pandemic: International Perspectives and a Health Systems Framework for Telehealth Implementation to Support Critical Response by Arindam Basu, Craig Kuziemsky, Magdala de Aroujo Novaes.
- Telehealth and COVID-19: Using technology to accelerate the curve on access and quality healthcare for citizens in India by Ridhi Bhatia

Study design-

Two sets of questionnaires were targeted to sample size of 100 patients and 10 doctors.

- **Tools for data collection**: Google forms, telephonic interview, and personal interviews.
- **Time of study:** May '21 to June '21

Prerequisites-

- **Consent:** The informed consent was obtained from the randomly drawn sample size.

Points covered-

Questionnaire to patients:

i. Would they like to give their consent to participate in survey?
ii. Age.
iii. Gender.
iv. Were they benefitted from telemedicine?
v. Was scheduling of appointment appropriate?
vi. Ease of taking appointment.
vii. Behaviour of the service provider / RMP.
viii. Waiting time to consult the doctor.
ix. Was detailed medical history and consent been taken before treating you?

x. Amount of time spent in consultation.
xi. Was there any interruption or disturbance during consultation?
xii. Communication and quality of consultation.
xiii. Were they satisfied with the treatment given through telemedicine?
xiv. Medicine prescription was provided through.
xv. Availability of doctor after telemedicine
xvi. Satisfaction level with telemedicine.
xvii. Would they recommend telemedicine to others?
xviii. Did they find telemedicine service feasible?
xix. Personal cost incurred on monthly basis on telemedicine.

Questionnaire to Doctors:

i. Would they like to give their consent to participate in survey?
ii. Degree of doctor.
iii. Gender.
iv. How many patients they benefited via telemedicine in last one year.
v. Does telemedicine provide desirable results in their patient's diagnosis/treatment?
vi. Do patients turn for the follow up check up?
vii. Patient flow for telemedicine consultation in a day.
viii. According to them which one is the Best medium for telemedicine
ix. On which platform were they practising telemedicine?
x. Which kind of Difficulties did they encounter on applying telemedicine during COVID-19?
xi. Do they think telemedicine achieve same result as physical face to face consultation does.

Ethical consideration

Research ethics is a core aspect of any primary research work, regarding which; following aspects have been kept in mind while preparing questionnaires for both patient and the doctor-

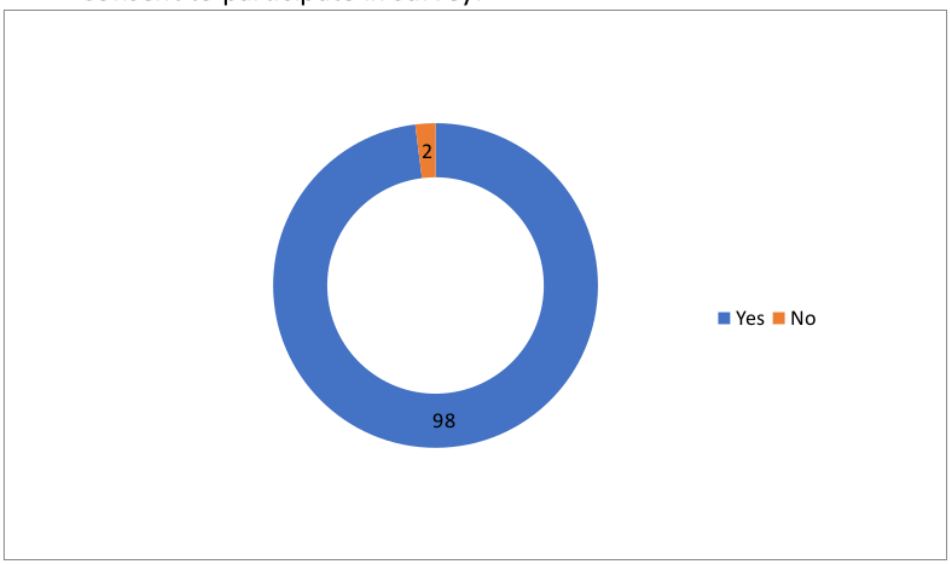
- Each patient and doctor was asked for the consent before conducting the survey or interviews.
- The data confidentiality aspect of participants was strictly adhered with, as during this COVID -19 pandemic, telemedicine is the platform which keeps all the data of the patient, which should be totally encrypted.
- It was taken care of any risks posed to the privacy or identity of any participant during and after the completion of the study.
- The duration of each survey was designed for not more than 10 to 15 minutes so as to avoid mental fatigue for the participants.
- The data collected during the study will solely be used for the particular informed study and will not be distributed in any circumstances without the consent of the participant.

RESULTS AND OBSERVATIONS-

The data acquired from patients and Doctors is plotted in form of bar and pie charts.

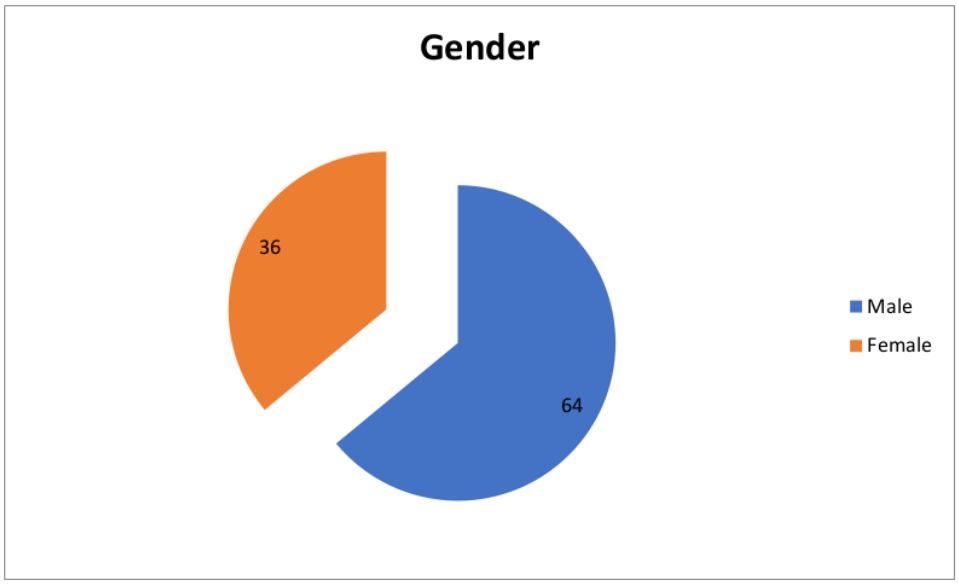
Feedback of the patients:

- Consent to participate in survey:



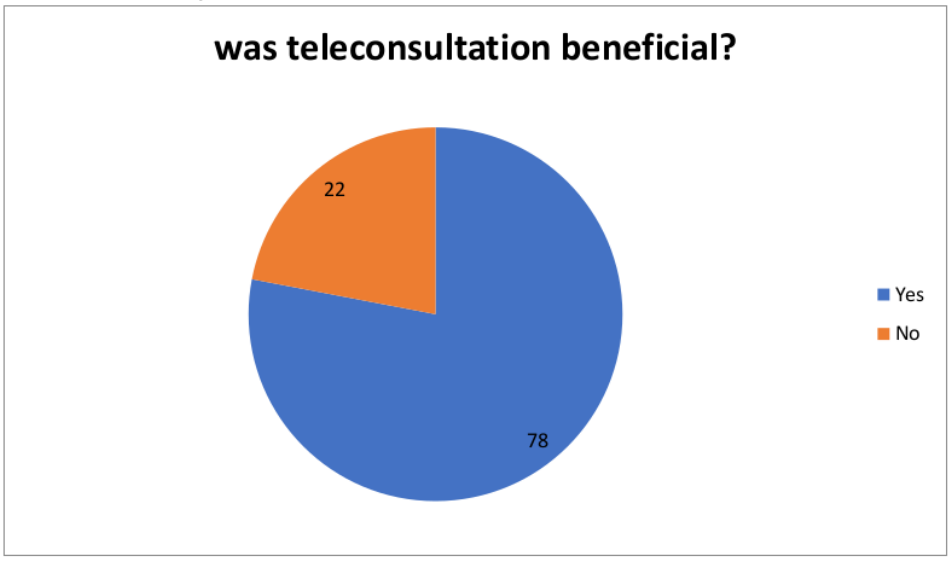
98 out of 100 patients provided consent to participate in the survey.

- Gender:



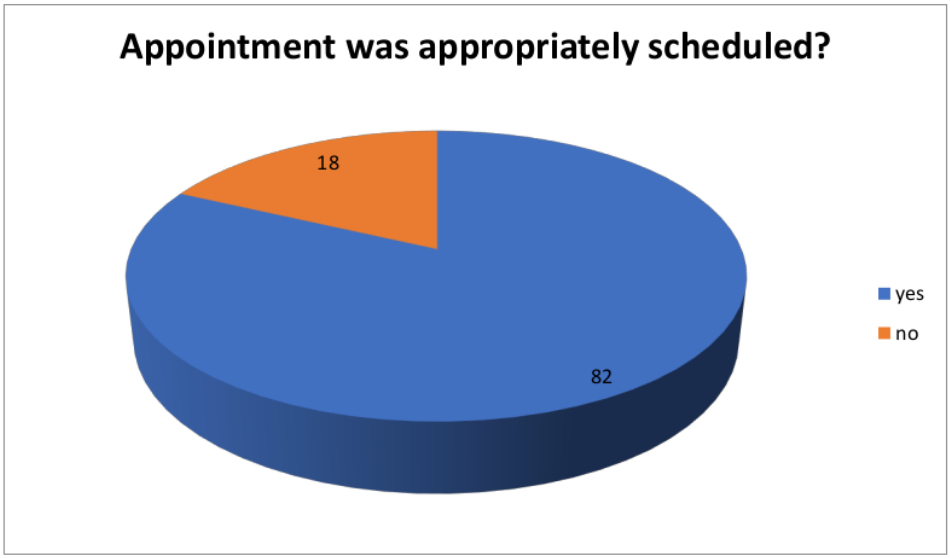
Out of 100 patients, 64 were males and 36 were females.

- Were they benefitted from telemedicine?



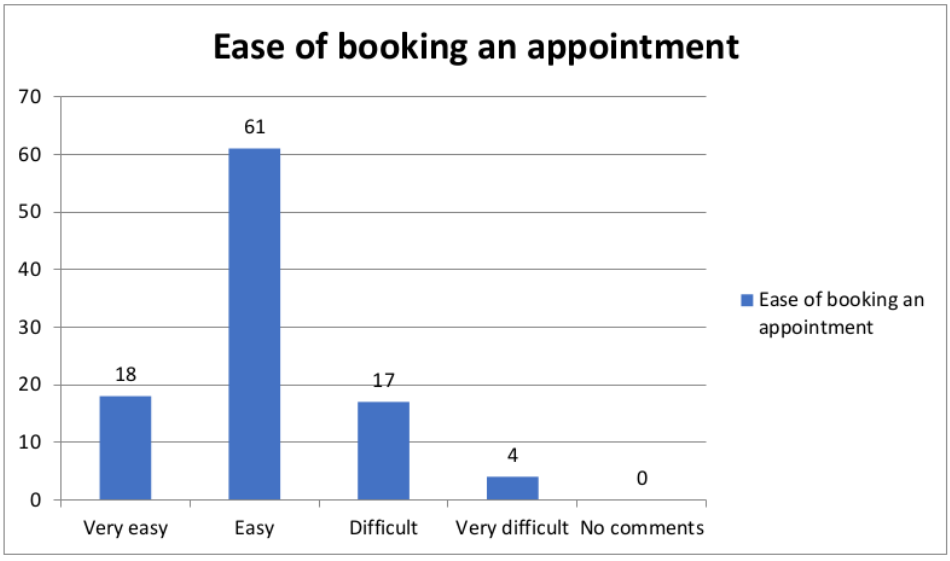
78 out of 100 patients found the telemedicine beneficial during this pandemic.

- Was scheduling of appointment appropriate?



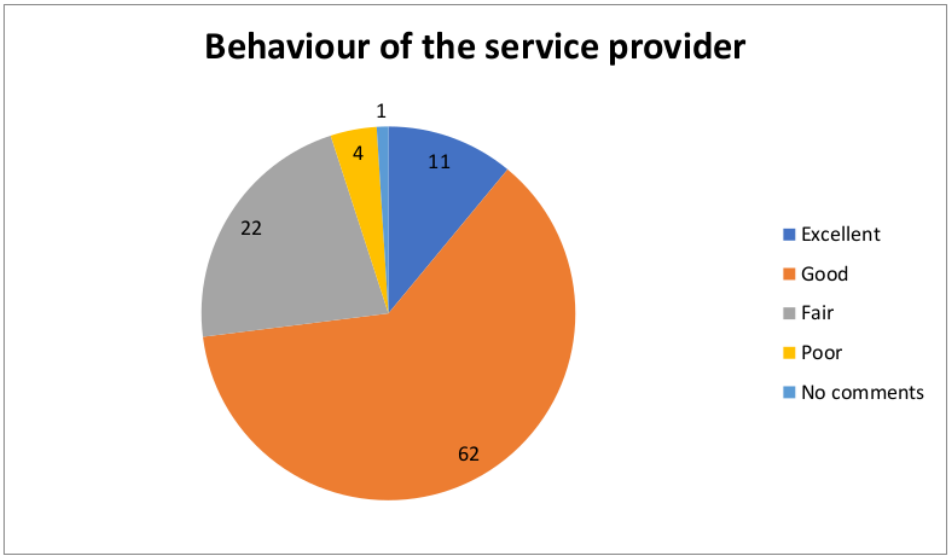
82 out of 100 patients were satisfied by the scheduling of their appointments.

- Ease of taking an appointment.



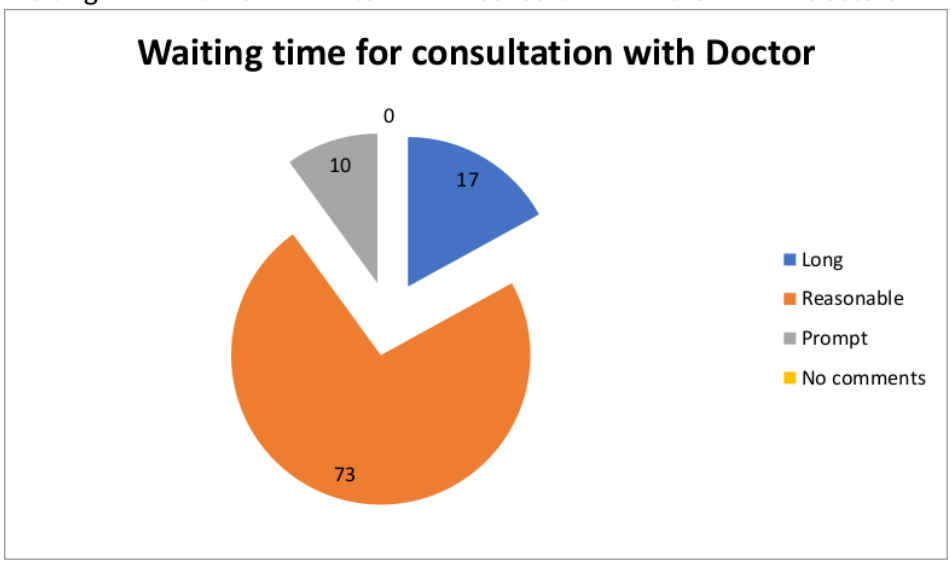
Out of 100, majority of patients found it as an easy process to book an appointment for telemedicine.

- Behaviour of the service provider / RMP.



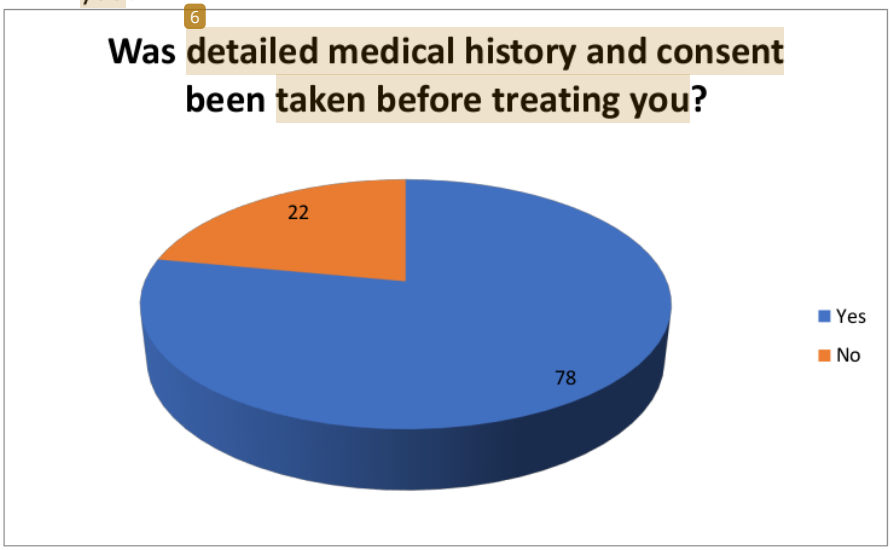
62 out 100 participants reported the good behaviour of service providers, while 22 and 11 of them rated the behaviour as fair and excellent respectively.

- Waiting time to consult the doctors:



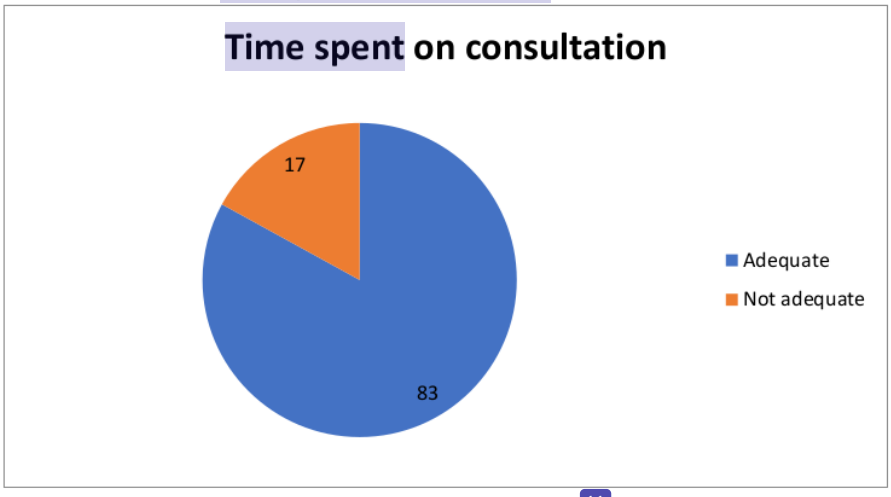
73 respondents rated the waiting time for doctors' consultation as reasonable, while 17 and 10 found it long and prompt respectively.

- Was detailed medical history and consent been taken before treating you?



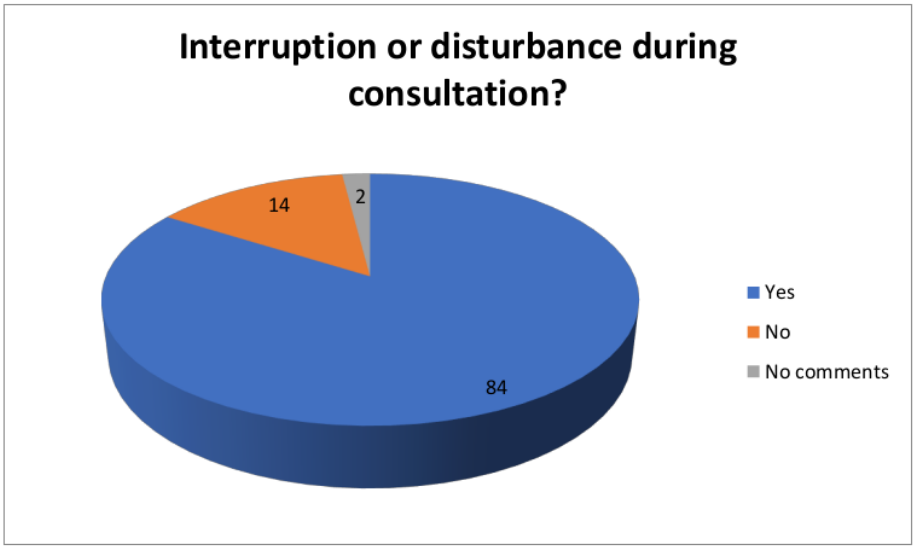
78 participants felt that detailed medical history and consent was taken before starting any treatment.

- Amount of time spent in consultation.



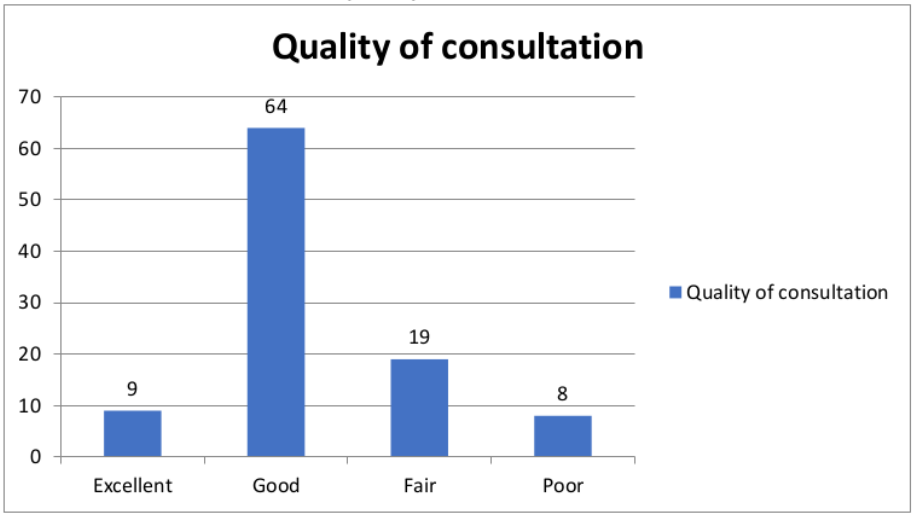
83 respondents out of 100 rated the amount of time spent in consultation as adequate.

- Was there any interruption or disturbance during consultation?



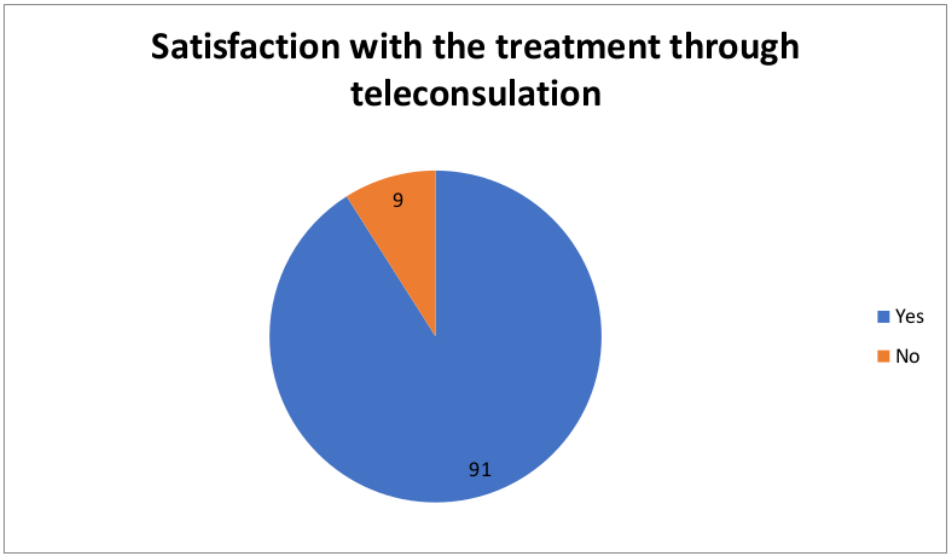
84 participants rated the telemedicine as smooth with no interruptions or disturbances.

- Communication and quality of consultation.



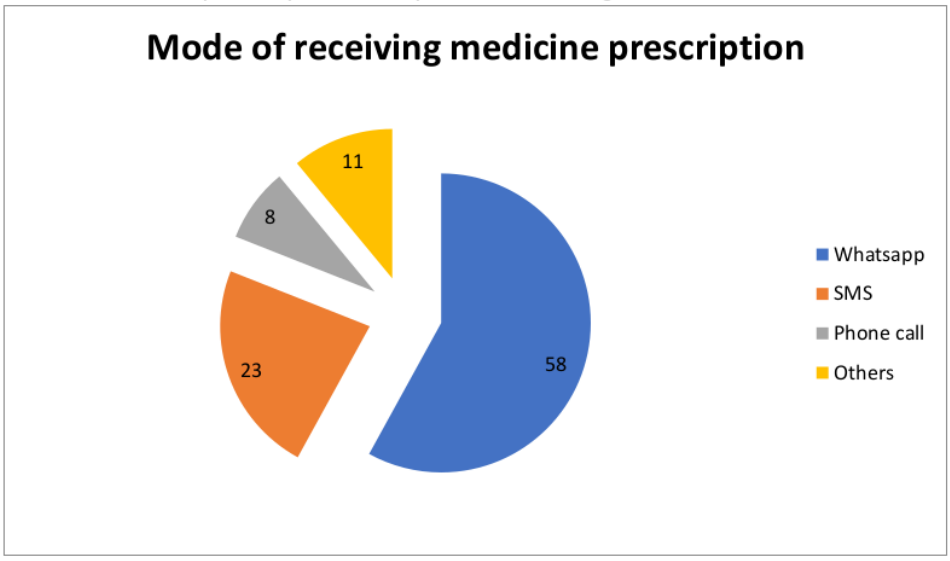
64 participants rated the communication and quality of consolation as good, while 19, 9 and 8 respondents rated it as fair, excellent and poor respectively.

- Were they satisfied with the treatment given through telemedicine?



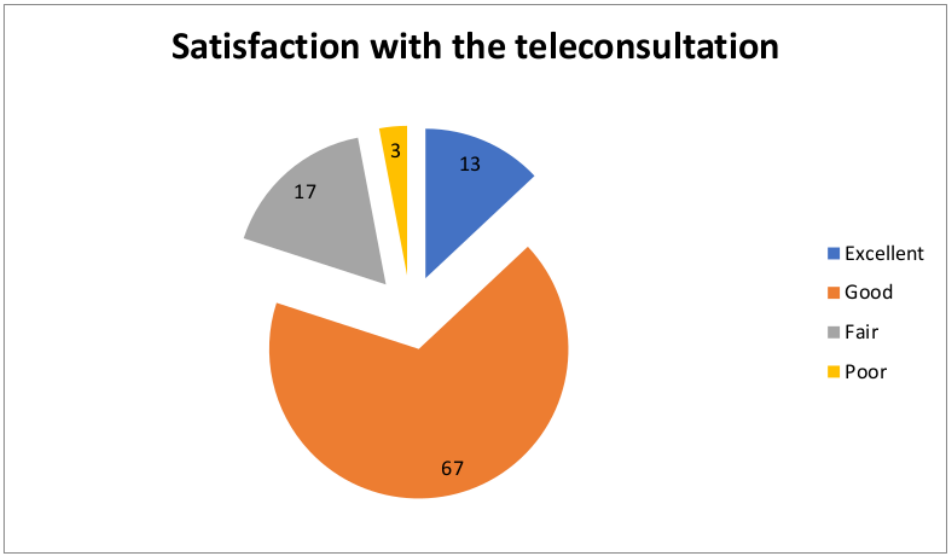
91 participants agreed to be satisfied by the telemedicine they received.

- Medicine prescription was provided through:



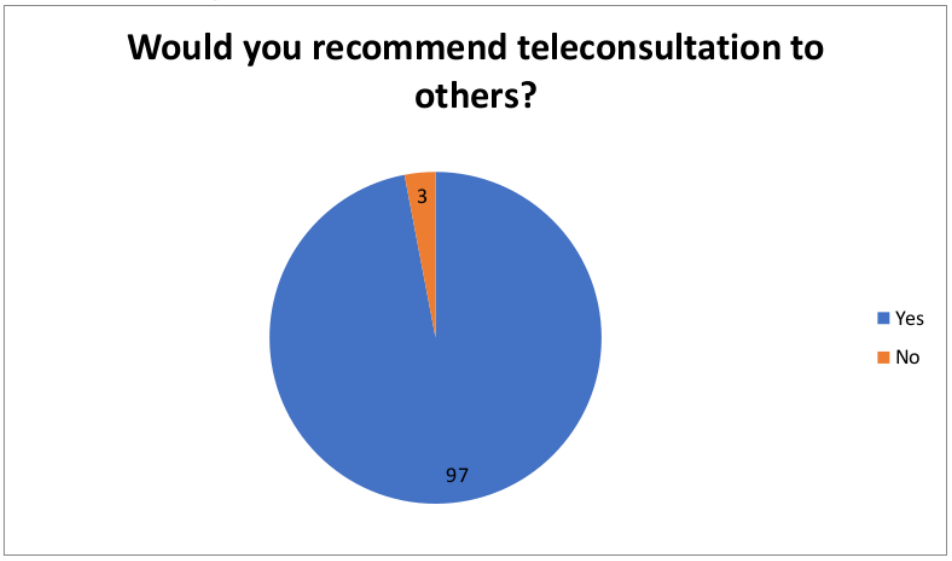
58 out 100 respondents chose Whatsapp to receive the prescription while 23, 11 and 8 by SMS, other modes and phone calls.

- Satisfaction level with telemedicine.



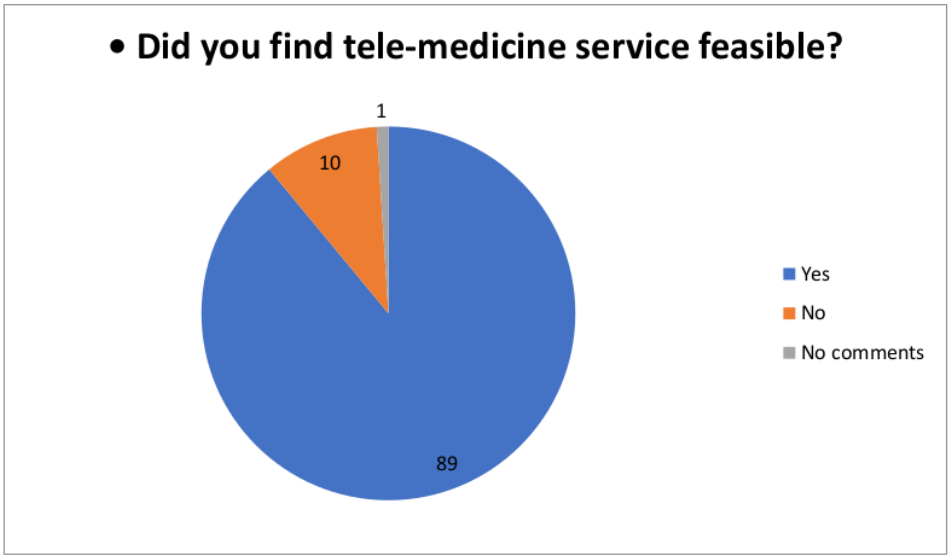
67 participants rated the telemedicine services as good while 17 and 13 rated it fair and excellent respectively.

- Would they recommend telemedicine to others?



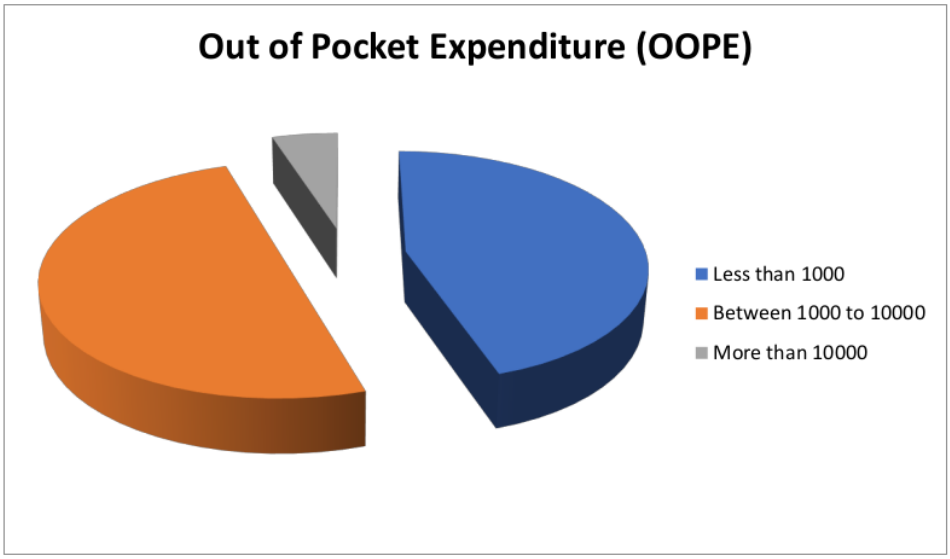
97 participants were happy with the telemedicine services and would like to recommend it to others.

- Did they find telemedicine service feasible?



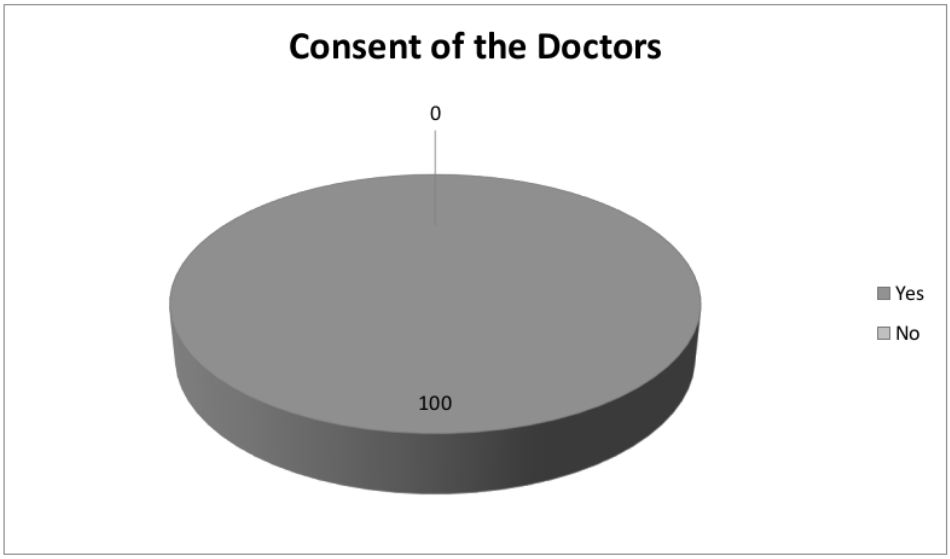
89 respondents found the telemedicine service feasible.

- Personal cost incurred on monthly basis on telemedicine:



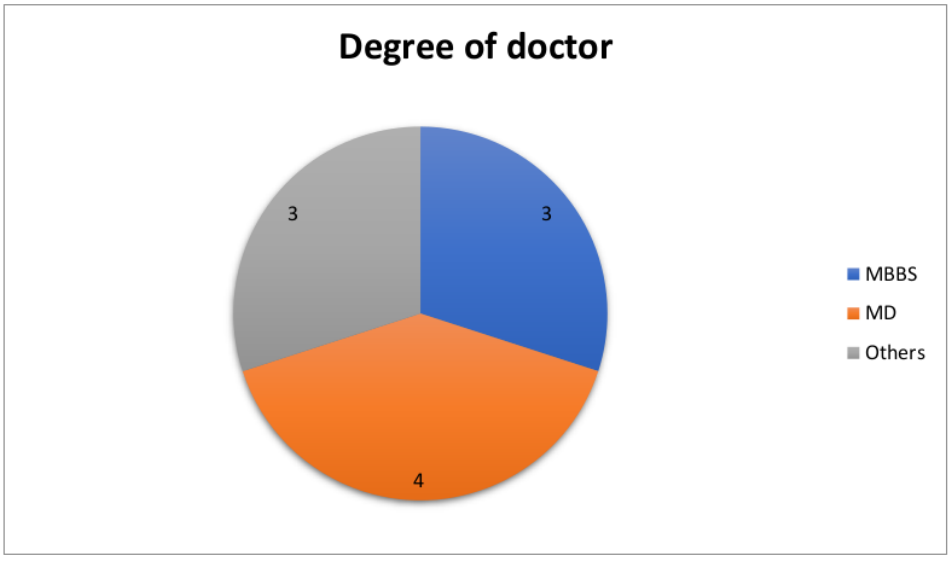
Feedback of the Doctors:

- Would they like to give their consent to participate in survey?

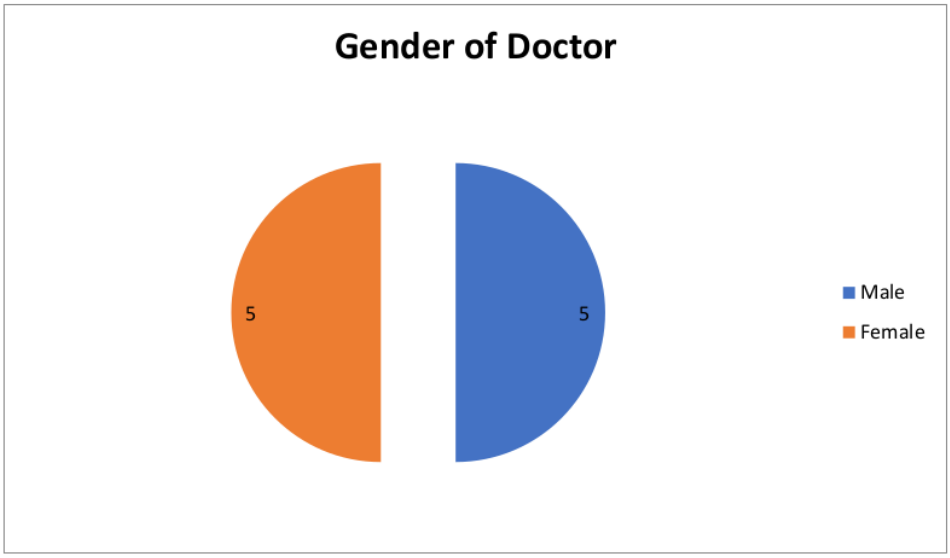


100 percent Doctors gave their consent to participate in the survey.

- Degree of doctor:

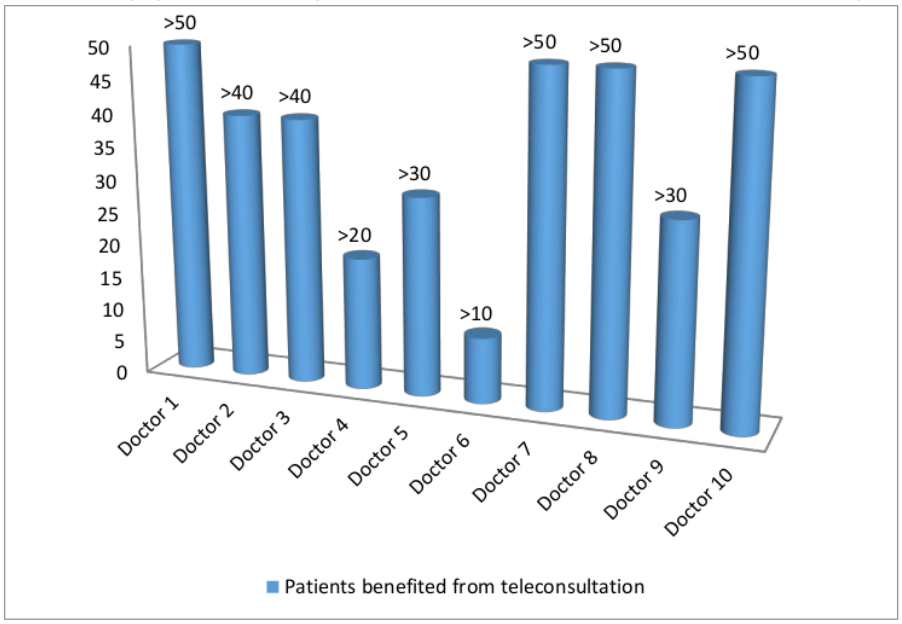


- Gender:

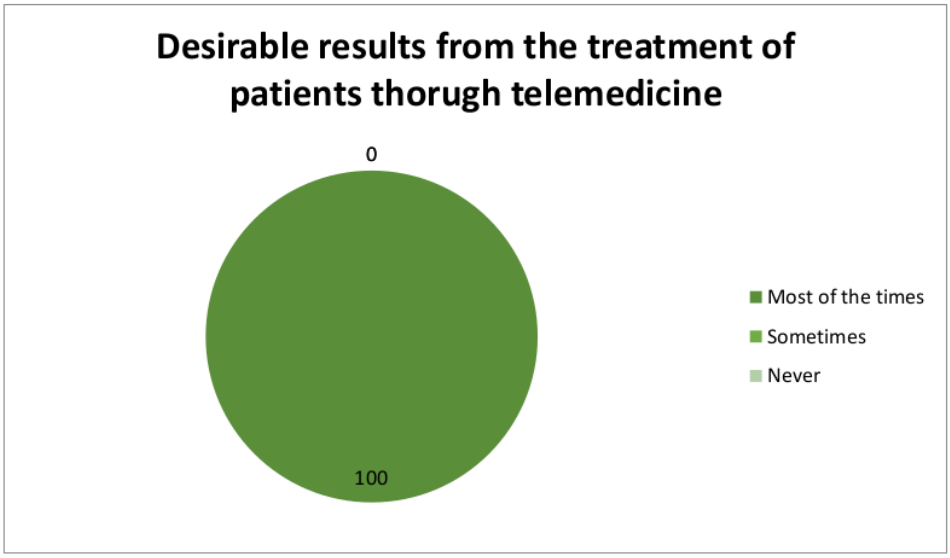


50% Doctors were male and 50% were females.

- How many patients they benefited via telemedicine in last one year

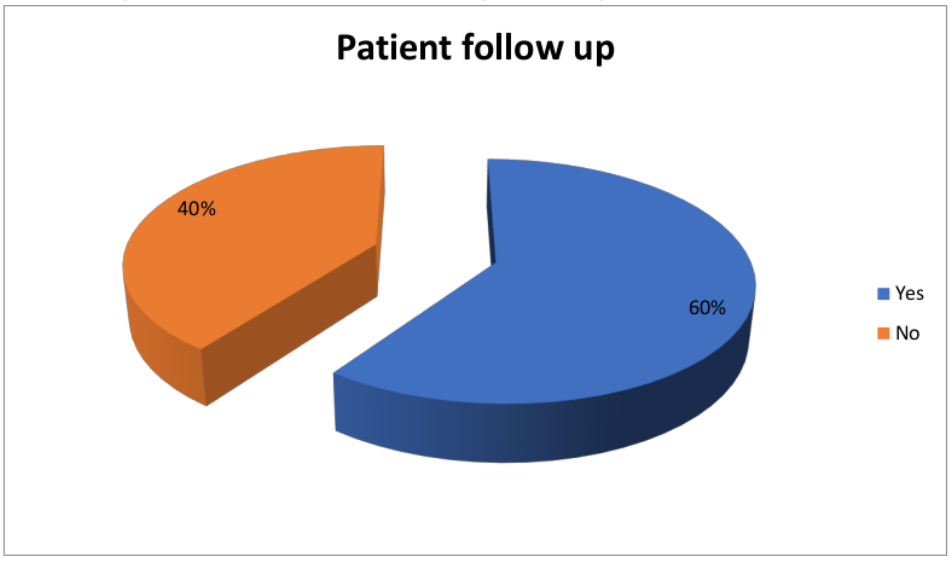


- Does telemedicine provides desirable results in their patients' diagnosis/treatment?



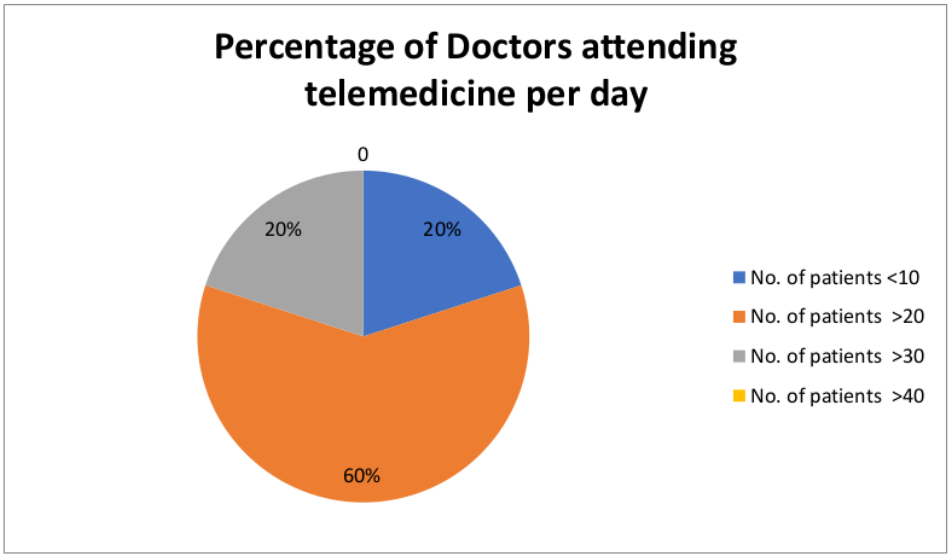
All Doctors agree to get desirable results from the telemedicine.

- Do patients turn for the follow up check up?



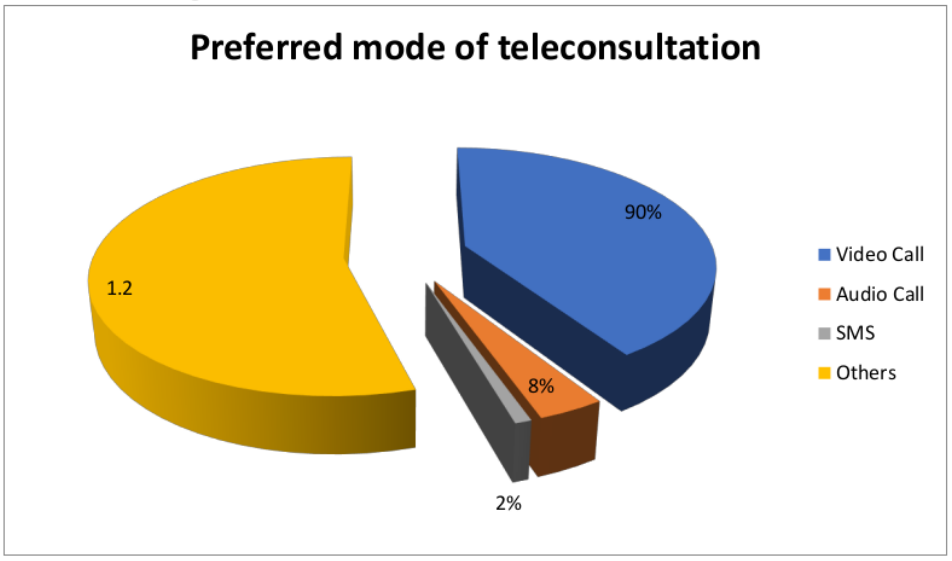
Nearly 60% patients turn back for the follow up check up.

- Patient flow for telemedicine consultation in a day:



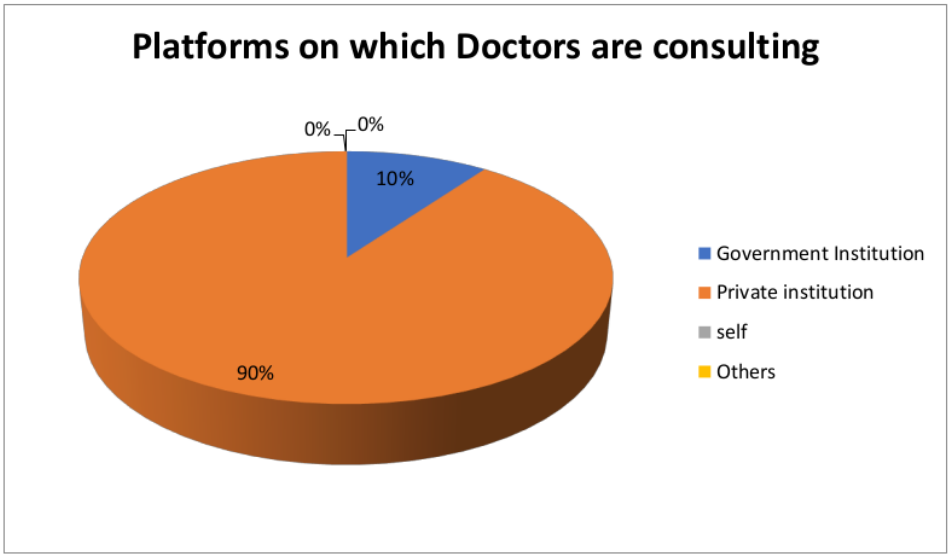
60% of Doctors got patient flow of more than 20 patients per day for telemedicine during this COVID 19 pandemic.

- According to them which one is the Best medium for telemedicine?



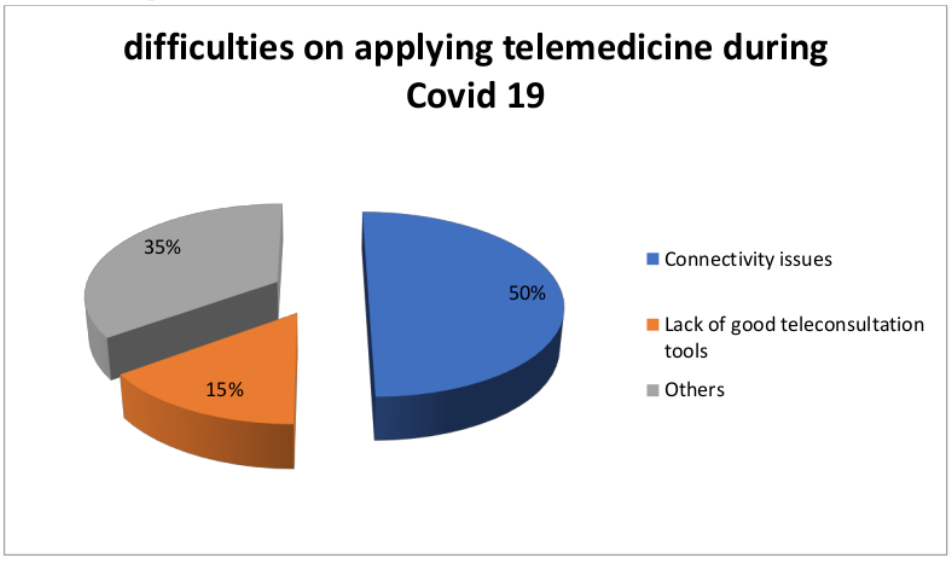
90% Doctors preferred the video call mode for telemedicine.

- On which platform were the practising telemedicine:



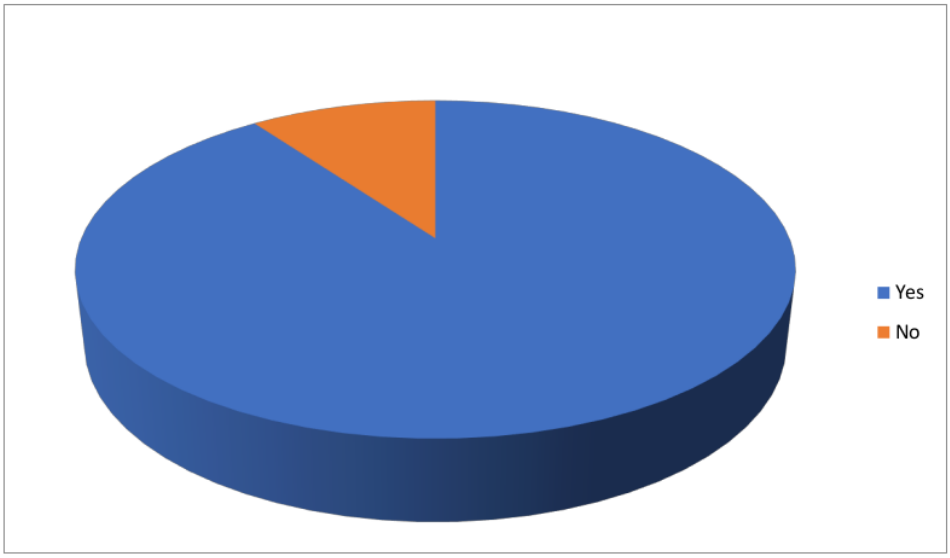
90% Doctors were found to be consulting on platforms by private institutions.

- Which kind of Difficulties did they encounter on applying telemedicine during COVID-19?



Connectivity issues posed the major difficulty for Doctors while applying telemedicine.

- Do they think telemedicine achieve same result as physical face to face consultation does?



90% Doctors believe that telemedicine is able to achieve same results as physical face to face consultation does.

DISCUSSION:

The review, aim of which is to determine the role and effectiveness of telemedicine during COVID-19 pandemic in India explains the benefits and advantages of the system which has helped patients and health care workers to communicate and provide with the healthcare at home, thus improving the management of COVID-19 infections. The data and report extracted from the study demonstrates the transformational impact of COVID on telemedicine-driven health care at the epicentre of the pandemic.

In addition to clinical benefits and more effective use of providers in very atypical situations, the changes initially triggered by the COVID19 pandemic may have irreversibly changed the status of telemedicine in our health system. The replacement of personal care by telemedicine may seem futuristic, but it has now become a reality in many health systems around the world. With the use of telemedicine platforms, healthcare providers and patients are aware of a new standard, which includes communication between them through video and audio.

During the fight against COVID-19, when it has become a necessity to maintain social distancing and avoid the crowded places, then in an over populated country like India, telemedicine could be an invaluable tool to not only divert an overwhelming volume of patients from the emergency rooms, but also transform the work practices of thousands of providers, across multiple specialties.

The youth and educated people of this country need to be encouraged to use telemedicine services to avail better healthcare facilities for themselves as well as their family members. Telemedicine companies and healthcare providers should also identify and target those geographic areas which have higher potential for telemedicine services and government on the other hand should make a robust infrastructure for the growth of the telemedicine system (Bhatia, 2021).

CONCLUSION

The study aiming to know about the effectiveness and role of telemedicine during COVID-19 pandemic has shown the possibilities and potentials associated with the futuristic system. It has emerged as a solution to avoid crowding at hospitals, thus making space for the more effective handling of the emergency situations.

From the study it could be determined that the satisfaction of the healthcare workers and patients with the telemedicine services is an indicator of the change in the healthcare system of India. Thus, this study is an effort in the direction towards analyzing how using technology platforms, India can accelerate the curve of accessibility and provide quality healthcare to its citizens.

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2. Telemedicine in the Era of COVID-19 Miho J. Tanaka, MD,[1,2,a] Luke S. Oh, MD,[1,2] Scott D. Martin, MD,[1,2] and Eric M. Berkson, MD https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7224627/
3. Telehealth and COVID-19: Using technology to accelerate the curve on access and quality healthcare for citizens in India RidhiBhatia https://www.sciencedirect.com/science/article/pii/S0160791X20312689
4. Telehealth and the COVID-19 Pandemic: International Perspectives and a Health Systems Framework for Telehealth Implementation to Support Critical Response Arindam Basu Craig Kuziemsky Magdala de Araújo Novaes https://www.thieme-connect.com/products/ejournals/html/10.1055/s-0041-1726484
5. https://www.mohfw.gov.in/pdf/Telemedicine.pdf
6. The role of telehealth during COVID-19 outbreak: a systematic review based on current evidence Elham Monaghesh1 and Alireza Hajizadeh2* https://bmcpublichealth.biomedcentral.com/track/pdf/10.1186/s12889-020-09301-4.pdf
7. Covid-19 lockdown 2.0: telemedicine in India to see continued growth https://health.economictimes.indiatimes.com/news/health-it/covid-19-lockdown-2-0-telemedicine-in-india-to-see-continued-growth/75172147

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ORIGINALITY REPORT

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SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	Ridhi Bhatia. "Telehealth and COVID-19: Using technology to accelerate the curve on access and quality healthcare for citizens in India", Technology in Society, 2021 Publication	3%
2	bmcpublichealth.biomedcentral.com Internet Source	2%
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