STUDY ON COVID-19 IMPACT ON 3A'S of TELE-ONCOLOGY

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CHAPTER 1

INTRODUCTION

- A recent profound impact which is being confronted through everyone globally is ongoing pandemic. Coronavirus lockdown confined movement all through the world. (SARS-CoV-2) infection bringing about Coronavirus Disease in 2019 (COVID-19) has caused a worldwide pandemic driving a massive burden on medical care globally.

- The entire world was isolated and countless population faced distressing circumstances

- the impact is likewise profoundly evident in oncology as cancer growth patients are potentially at higher risk of disease due to compromise immune system yet additionally for the individuals who may require clinical consideration during the pandemic.

- As per the recent National Cancer Registry Programmed (NCRP) report 2020, cancer burden in India was 1.26 million cases in 2016, 1.39 million in 2020 and expected to increase to 1.57 million cases by 2025

- During this basic circumstance, telemedicine administrations reemerged and turn into a resource, with more noteworthy significance to the oncology services conveyance range to keep in touch with the regular patient's checkups to limit their dangers of direct contact.

RATIONALE

The purpose of this study is to examine the impact of the coronavirus pandemic on tele remote oncology services for cancer patients during COVID-19 pandemic as abundance of information exists regarding the advantages and capability of telehealth, yet most information is from the viewpoint of the provider. Therefore, this study aims to evaluate these changes with the help of 3 dimensions towards the healthcare delivery namely Affordability, Availability, Accessibility.

LITERATURE REVIEW

As per Wainstein L. 2018 Telemedicine can give clinical information as well as allow for consultation and discussion between doctors and patients. It can cut travel costs, save time, minimize medical costs, and make it easier for ordinary people, regardless of where the patient is. They can see a doctor without disrupting their everyday routine responsibility.

With regarding in view of Portnoy J 2020 Telemedicine has been shown to be a safe and effective substitute for physical help. A Cochrane review looked at the impact of telemedicine paired with remote monitoring or video conferencing, as well as face-to-face or phone interviews, on chronic illnesses such as diabetes and congestive heart failure and found that the health results in both circumstances were equal.

According to Ateriya N. 2018 In India, where access to affordable health care is a problem, telemedicine will be of great benefit to the public. Telemedicine enables a new form of interaction between doctor and patient, which requires mutual trust and acceptance.

Penchansky R The five dimensions of health services: The relationship between the qualities and expectations of the patients who use the health service is reflected in affordability, availability, accommodation, accessibility, and acceptance. All these criteria are interconnected and have a crucial role in determining access to medical treatments.

RESEARCH QUESTION

How the telemedicine administrations have been being used to give distant oncology care to the patients deprived during this critical time.?

OBJECTIVE

To evaluate how the Tele-oncology service has been used to provide remote care for cancer patients who need it during the crisis.

To illustrate the perception of oncology patients towards tele-oncology services use during the era of COVID-19.

METHODOLOGY

STUDY AREA: Apex hospitals

STUDY PERIOD: 1st April 2021- 30th June 2021

STUDY TYPE- cross sectional descriptive study.

SAMPLE SIZE- 100 respondents were taken above age group 18 years.

SAMPLING METHOD- Convenient sampling

INCLUSION CRITERIA

Patients who previously or currently had a cancer.

Cancer Patients who had experienced tele oncology service at least once during the covid-19 era.

Both COVID-19 patients and non-COVID-19 patients are included.

EXCLUSION CRITERIA

Physicians, Consultants, and healthcare workers were excluded from the study.

DATA COLLECTION

- Study was a questionnaire-based survey,
- Primary data was collected using self-structured questionnaire questions in English and Hindi languages.
- Self-structured Questionnaire- 5 point Likert scale was used to score each parameter: strongly agree, agree, neutral, disagree, strongly disagree.
- 100 responses were received. Data was exported, analyzed, and interpreted.

DATA ANALYSIS

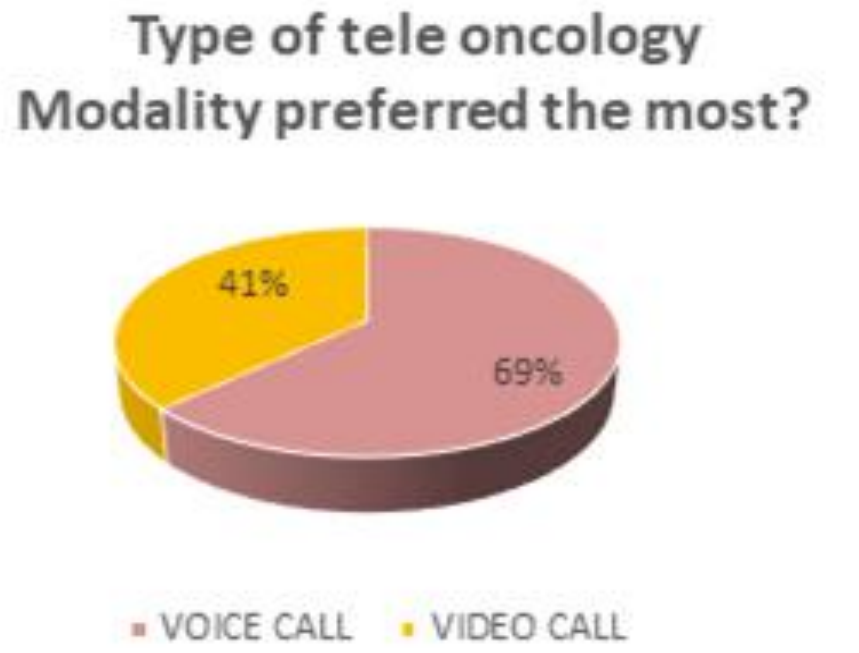
Data collected using online google form was further export to the MS Excel and interpretations of the data collected was done using graphs and tables.

TABLE 1 Socio Demographic Characteristics of respondents

RESULT

Total of (n=100) responses were received, Male study participants were 59%(n=59) whereas female participants count for 41% (n=41). (Table 1)

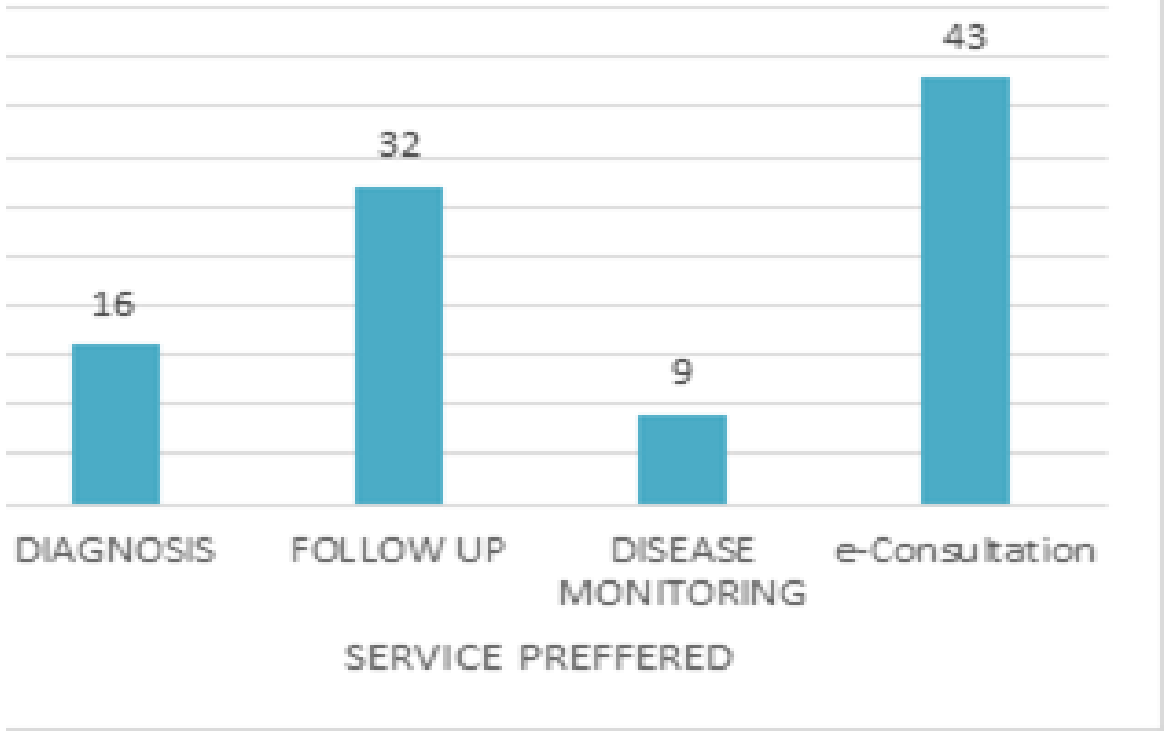
CHARACTERISTICS	RESPONDENTS n=100
GENDER (%)	
MALE	59(59%)
FEMALE	41(41%)
RESIDENCE (%)	
URBAN	42(42%)
RURAL	58(58%)



Response to Question type of tele oncology Modality you preferred the most during COVID-19. (n-100)

1. MODALITY USED

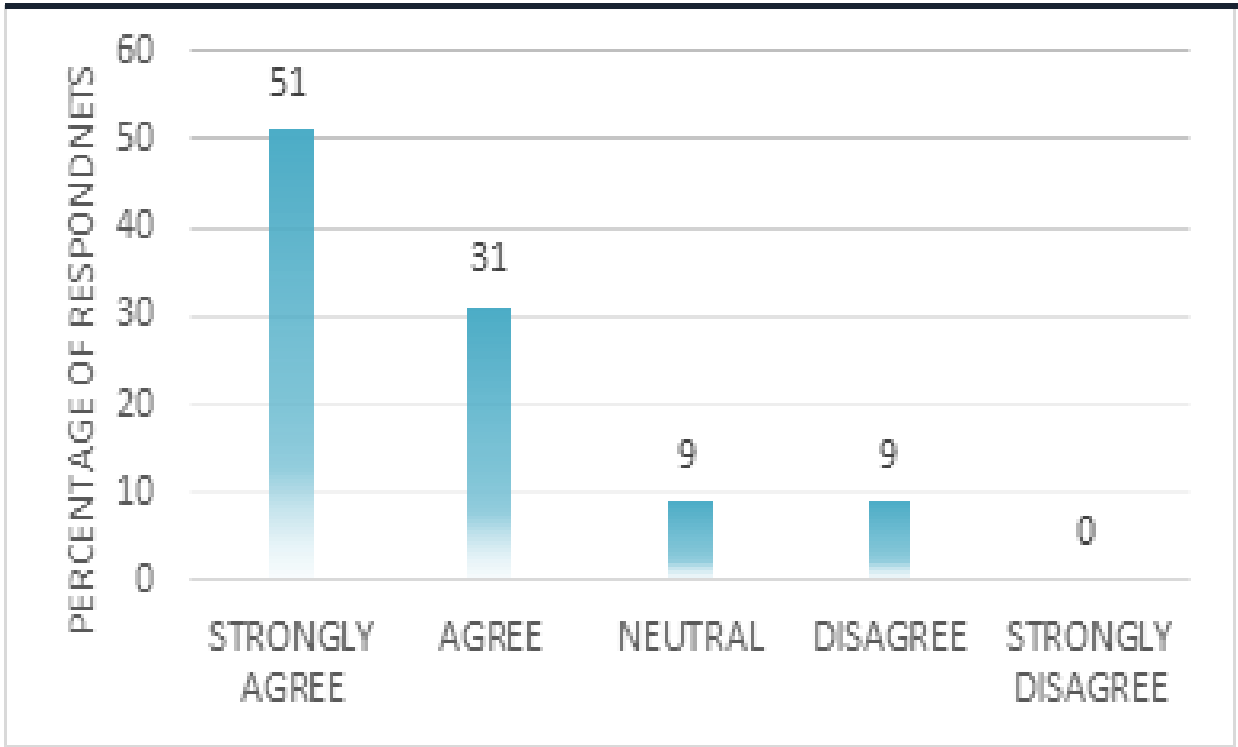
interpret that most of respondents 69% preferred using voice call modality during the pandemic, whereas 41% used video aid during COVID -19 as a mode of communication to seek healthcare.



For what, tele oncology services you have been using?

1.TELE-ONCOLOGY SERVICE PREFFERED

illustrates that respondent have used e-consultation (43%) service followed by follow up 32%, diagnosis 16% and disease monitoring 9% for the e-interaction with the health professionals for the prevention and treatment aspect.

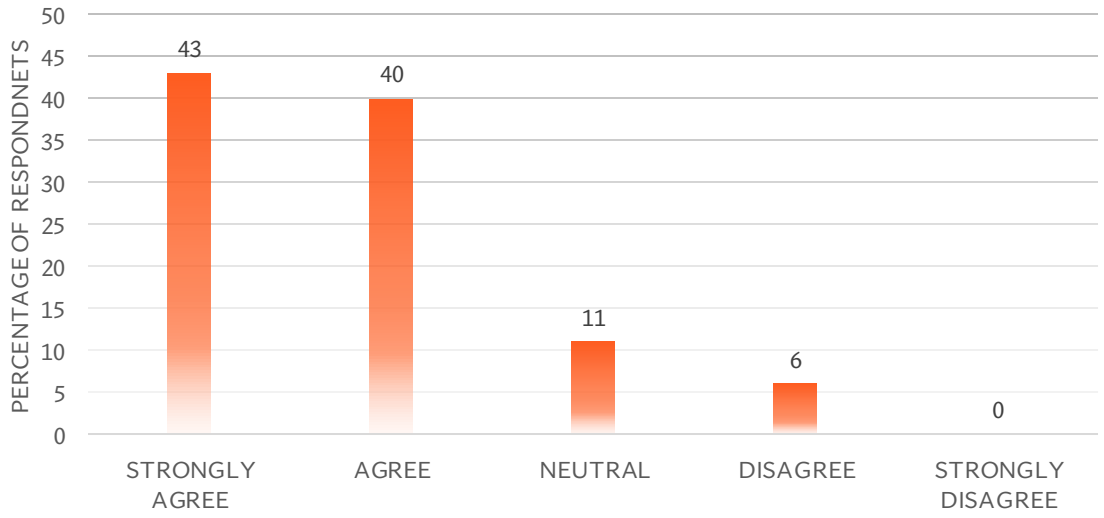


AFFORDABILITY OF TELE ONCOLOGY SERVICE

Price or charge of tele-oncology service was reasonable with respect to financial gain attained amid COVID-19.

shows affordability of tele oncology regarding income earned which shows 51% of the response strongly agree and 9% of the response denotes neutral and disagree that users were able to manage the price or charge of tele oncology service during pandemic,31% agree that remote tele oncology services were cheap, which lead to the conclusion that telemedicine is affordable during the period of infection.

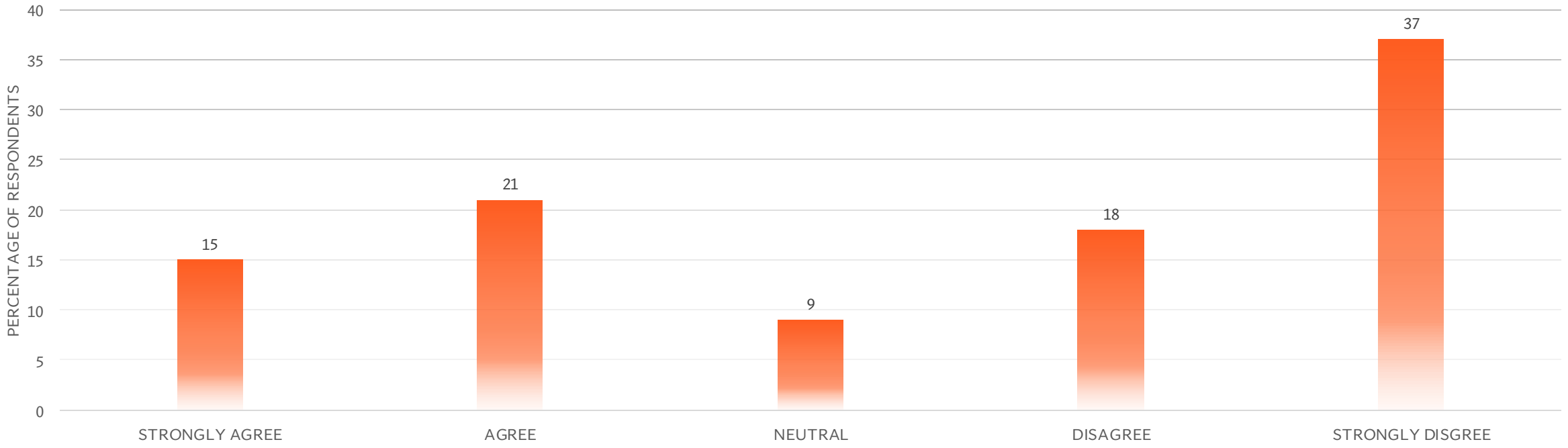
The use of tele oncology service is worth my time, and it saves my expenses like OPD, transportation, treatment cost, toll charge, fuel, travel distance and reduce exposure to virus.



Many respondents (43%) strongly agree that tele oncology saves expenses on transportation, fuel, tolls, OPD cost, escort cost and other costs, while 11% are neutral, and 6% of the Answered disagreement in terms of savings costs. It shows that most people find it cheap during the COVID-19.

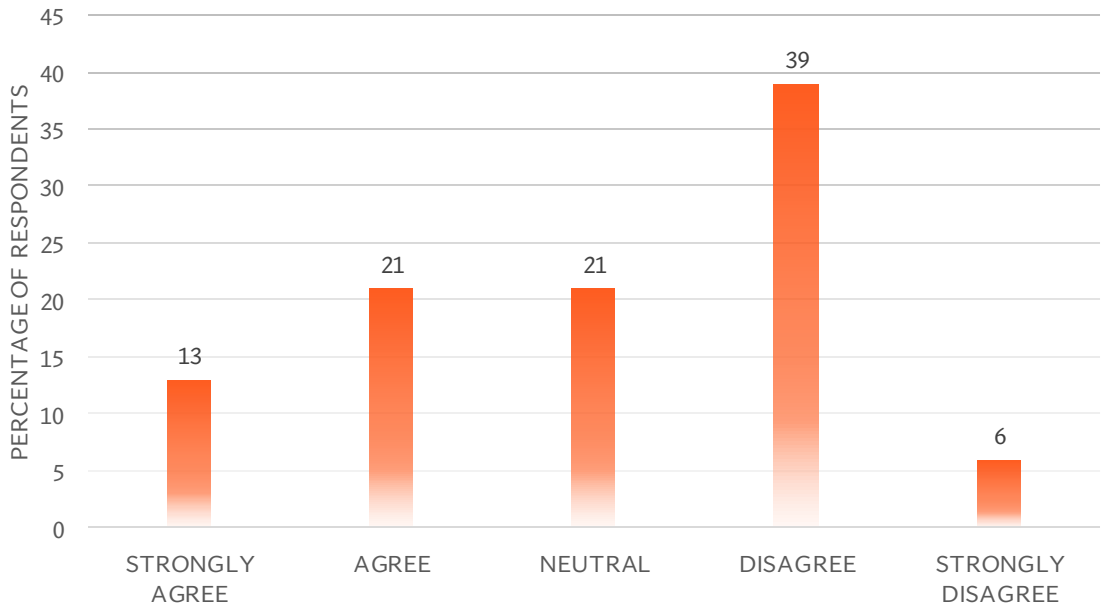
After COVID-19 onset, I purchased new device to get Tele Oncology service.

there are 37% of people strongly opposed of not purchasing a new device to receive tele-oncology services and 15% strongly agree that they have purchased a new device to receive tele-oncology service.



New schemes were introduced by insurance companies to provide reimbursement for the services.

34% of people agreed that there are new insurance plans and reimbursement available for the expenses of tele oncology, whereas 45% disagree to the statement that no new insurance schemes and reimbursements introduce for tele health service by the companies and 21% are neutral which shows they are not aware about if any insurance scheme or policy being introduced during pandemic.



AVAILABILITY OF TELE ONCOLOGY SERVICE

Q5 was about usability of telemedicine not just for oncology care but also for COVID-19 and other ailments, most (25%) of respondents strongly agreed (47%) and agreed.

Q6, users were asked about telemedicine reduces hospital waiting times, 52% of respondents strongly agree with the statement while only 4% of disagree.

AVAILABILITY	STRONGLY AGREE %	AGREE %	NEUTRAL %	DISAGREE %	STRONGLY DISAGREE %
Q5 Have used telemedicine approach not just for oncology care but also for other diseases such as COVID-19, diabetes, general consultations etc.	25	47	8	13	7
Q6 With availability of Tele oncology approach my hospital waiting time is saved.	52	36	6	4	2

- **Q7** 38% of those surveyed agreed with the statement, while only 11% disagreed with the statement, showing COVID-19 does not affect the viability of telemedicine**.**

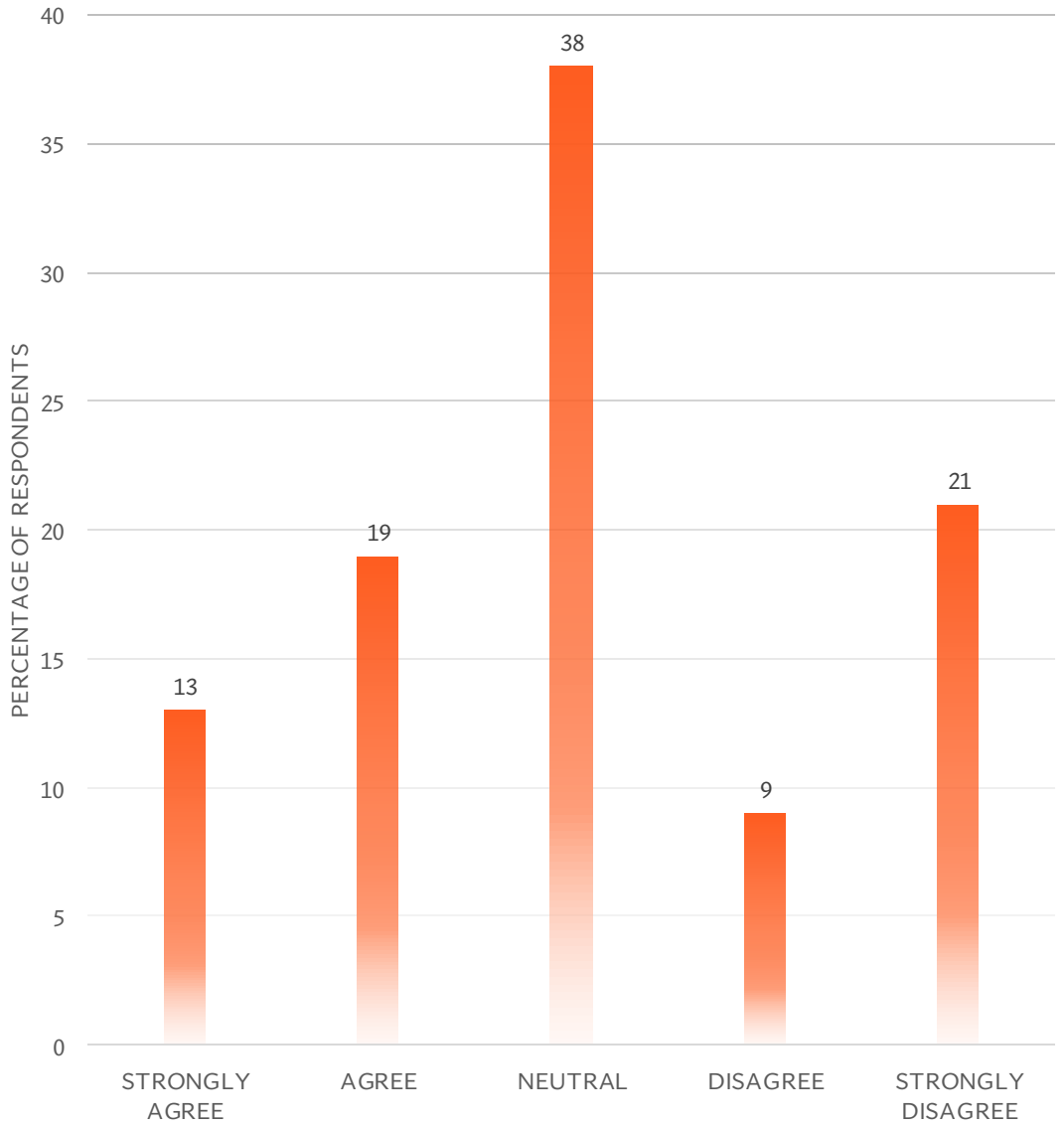
- **Q8**, 26% of respondents agree, whereas 27% disagree and 21% strongly disagree which means people were finding difficult to access medical care with tele oncology service and doctor was not available 24*7.

- **Q9** most respondents agree with the statement that specialists are available for oncology telemedicine services and Only 9% of respondents in this study disagreed with the affirmation, which means in India there are not only GPs assigned to remote oncology, but also the specialists in remote oncology facilities.

Q7 Post COVID-19 onset Tele oncology services were feasible even with less staff and support.	**15**	**38**	**13**	**23**	**11**
Q8 Tele oncology service was feasible and available 24*7 for patients post COVID-19 onset.	**12**	**26**	**14**	**27**	**21**
Q9 Specialist Doctor was available and was able to access pain, symptoms and discuss treatment plan with tele oncology service.	**34**	**42**	**5**	**9**	**10**

ACCESSIBILITY OF TELE ONCOLOGY SERVICE

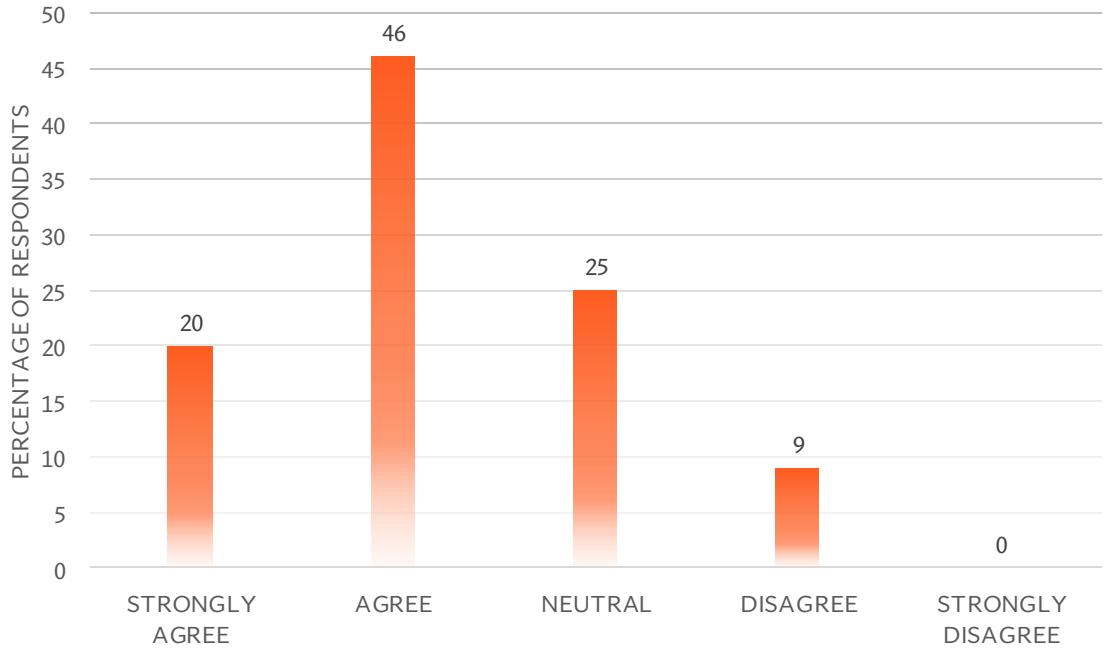
Apps available like WhatsApp, Google meet, Skype etc. are reliable for the interaction with the doctor.



13% strongly agree that the commonly used apps are reliable for communicating with physicians. However, about 9% of people disagree and 38% of people favor neutrality on whether these easy-to-use apps are trustworthy, which shows that people are skeptical and do fear of data leakage.

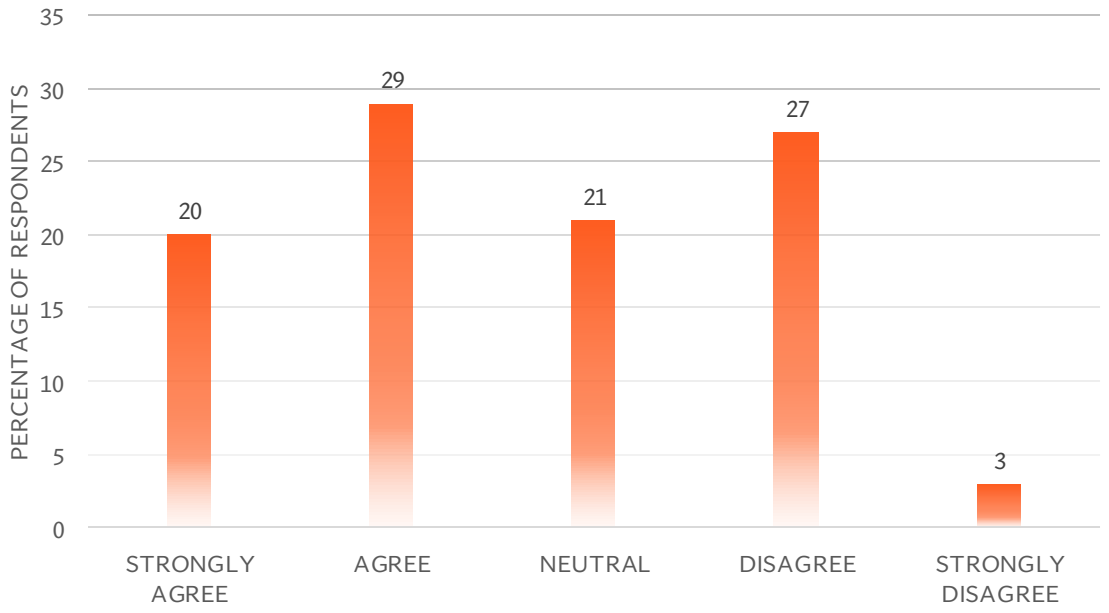
Technology and training is required to access such services and for better interaction with the doctors.

When asked about for Better interaction with doctors and to access tele oncology services, requires training and technology and 46% agree with this. Nearly 9% of people disagree with this statement.



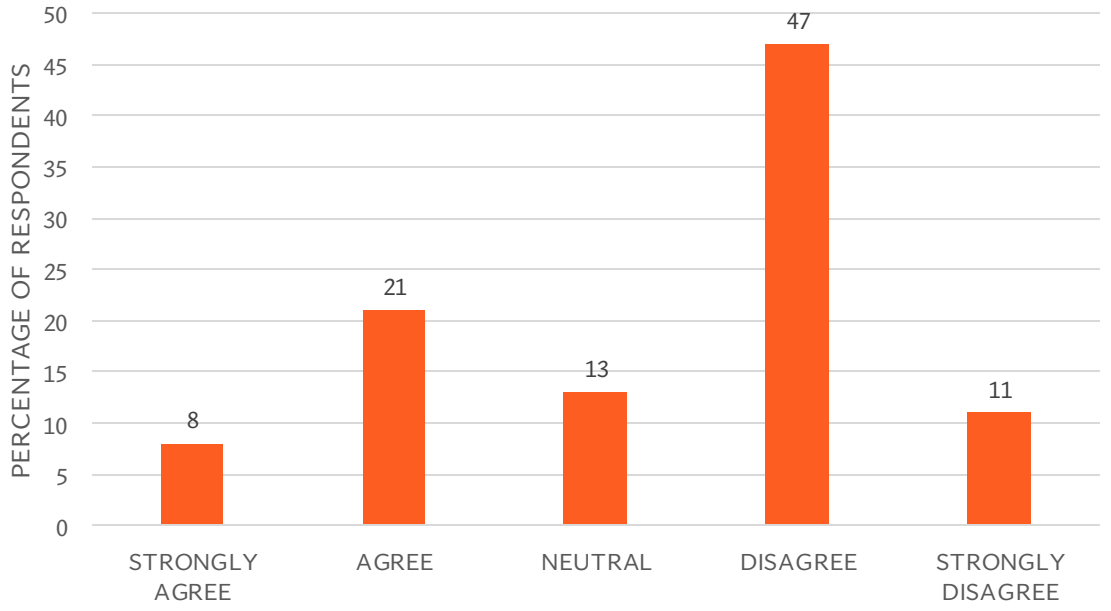
Heath records were easily shared with the doctors through tele oncology Service.

responses shows that 29% of respondents agree that health records were easily shared with the concerned doctor, whereas 27% respondents disagree to it.

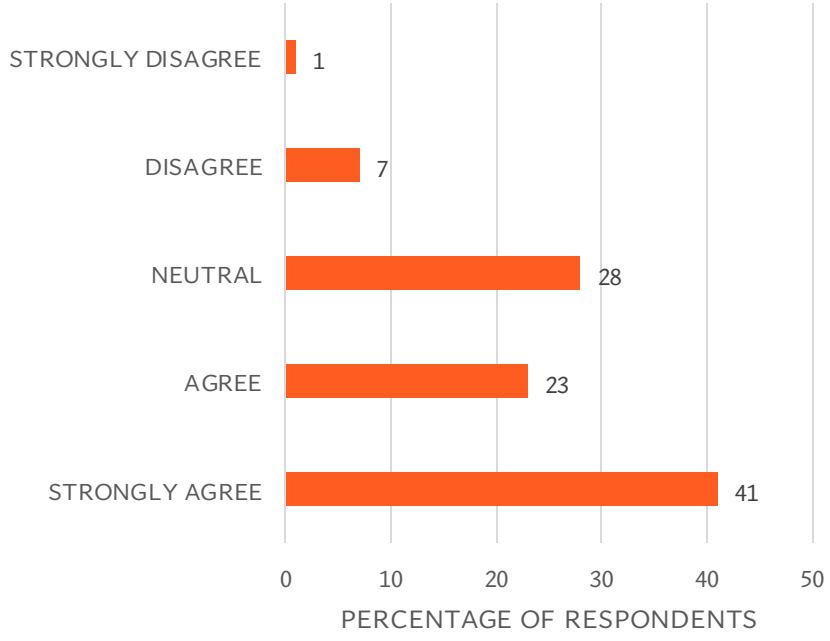


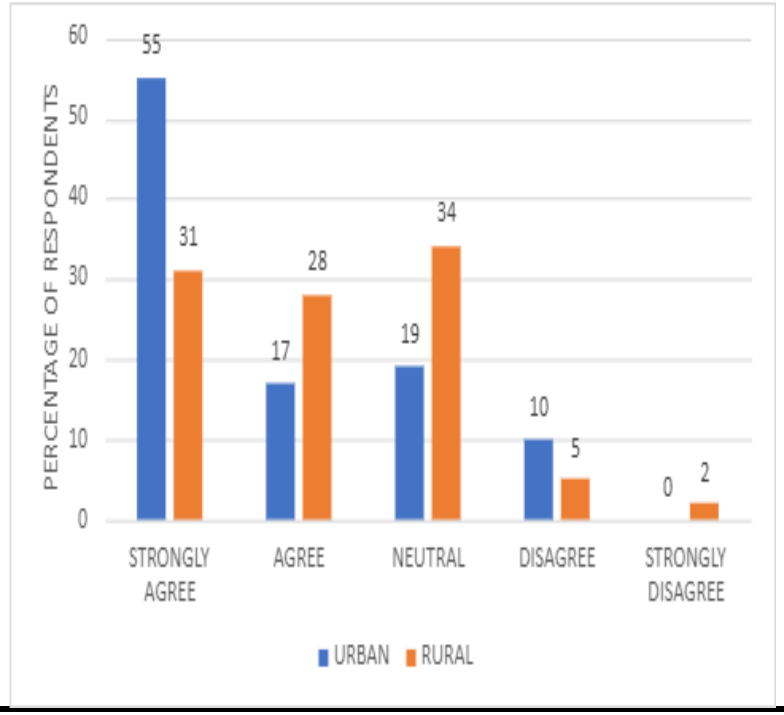
During COVID-19 period, while interacting with the consultant strong and steady internet connection was there.

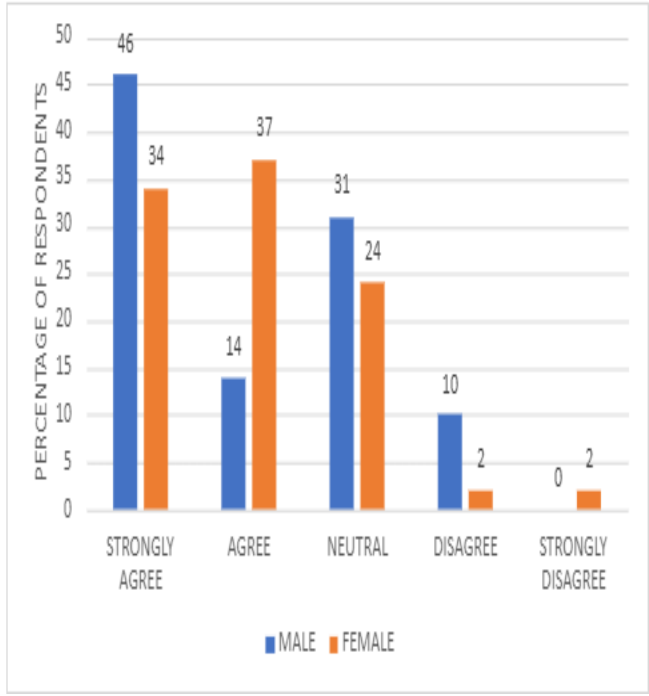
majority i.e., 47% of people disagreed with having a strong and stable internet connection to provide audio and video to interact with doctors, and about 21% agreed with having a good internet connection. This shows that most of them had trouble contacting the doctor.



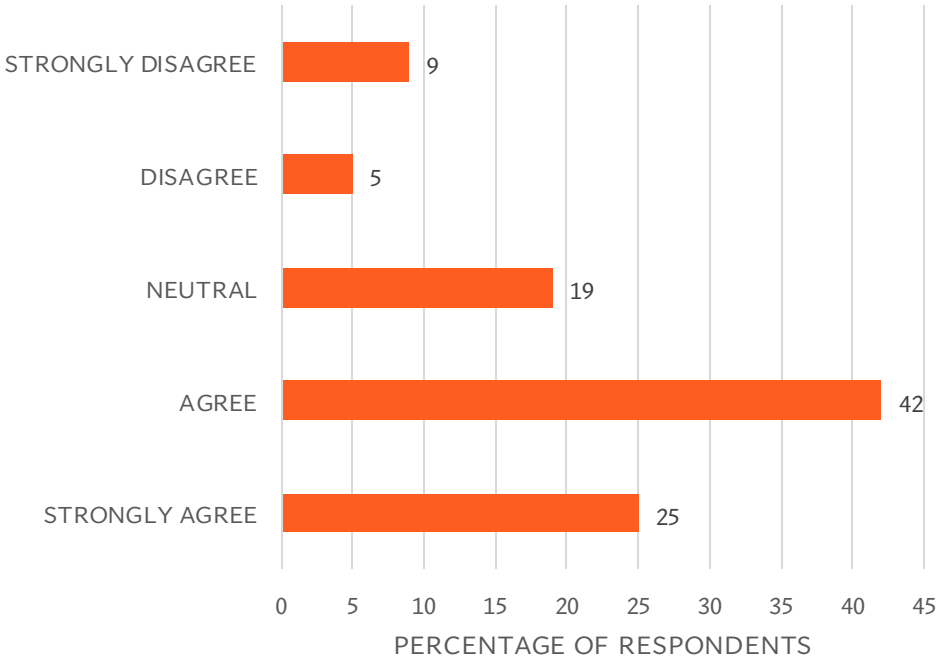
PERCEPTION TOWARDS USE OF TELEMEDICINE DURING COVID 19 PERIOD

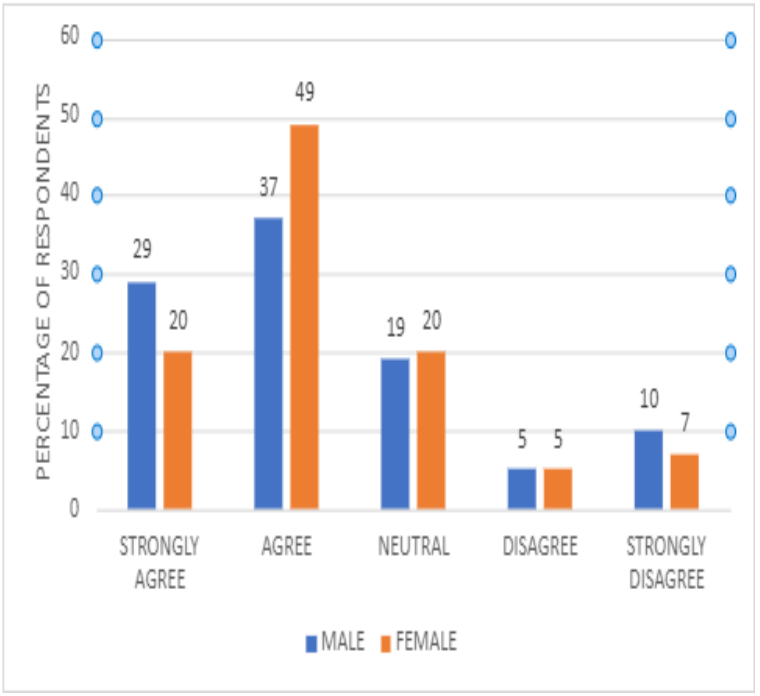


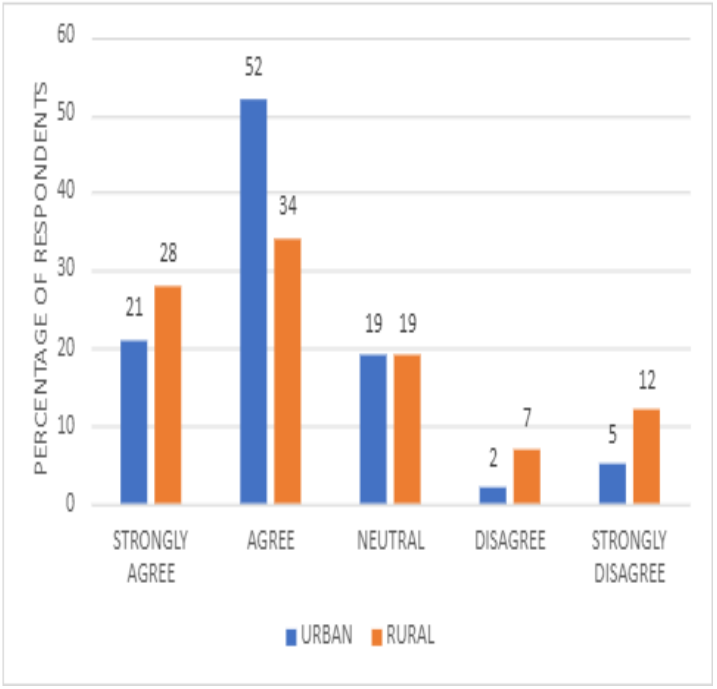




Once normality is restored would you still prefer to use telemedicine services for the treatment of the disease.







DISCUSSION

AFFORDABILITY

- Affordability varies or there are changes based on various aspects. Income, occupation bracket. Geographical location, etc. play a significant role in the decision to use telemedicine or to continue with the routine in-person visit to the hospitals.

- Explain the need for telemedicine and encourage a telemedicine approach, all health plans and big companies cover medical services in some way, Telemedicine is extremely useful for saving travel time and money Portnoy J et al in 2020. Navjit W et al. 2017 According to the study, telemedicine saved 5,345,602 miles of journey distance, 4,708,891 minutes of time, or 8.96 years of travel time, and the total travel cost was US$2,882,056.

- In our study, 38% of people disagree on the reimbursement offer for telemedicine services, indicating that they are unaware of the telemedicine schemes and policies, whereas IRDAI has set new rules for compliance with telemedicine guidelines during COVID-19, ensuring uniformity and a hassle-free process. Anyone who receives a telemedicine consultation from a doctor, for example, will be able to recover the charges.

- Telemedicine is very affordable, including technological advances and schemes and benefits, and most of the respondents agree that telemedicine is cost-effective .

AVAILABILITY

- Ghosh et al did a study in 2020 and mentioned the use of telemedicine for diabetic management, whereas in this study Q5, 47% of respondents were agreed to the statement that they have use telemedicine not just for oncology but for other disease as well and can consult their concerned doctors with telemedicine.

- Our study shows that Telemedicine does not depend on the presence of personnel as 38% of the respondents agreed that the availability of a small number of staff can make telemedicine or tele oncology service available for patients.

- Yildiz F et al 2020 has stated that in Turkey The medical oncologist conducted the evaluation through telemedicine., so 23% of patients avoid the waiting time required for face-to-face care at the medical oncology clinic in routine practice.

- whereas with the responses we received in our study In India, people can also consult their specialists through telemedicine, which, according to people, also reduces travel time and waiting time in hospital.

ACCESSIBILITY

- net connectivity is a crucial factor to consider Diagnostic imaging, treatment and consultation can only be carried out under a good network connection, and many people (47%) strongly disagreed to have a good and secure network connection while interacting with the consultant, 27% have faced issue while sending health records to the doctors. Therefore, Bagchi S mentioned in 2006 that ISRO has set up the Health SAT satellite, which can help people contact doctors without any network problems and help to send the patient's diagnosis details more easily to the doctor.

- After the pandemic started, the mindset of people to use telemedicine services has improved. Few respondents fully agree that they are willing to continue using the services after the pandemic, because this facility strengthen doctor patient relationship and give ease of care to people.

- The cost of cancer therapy is high. Traveling for follow-up appointments or to pursue referrals for specialized treatments incurs additional costs. As a result, many cancer patients, particularly in rural areas, go untreated, abandon therapy, or switch to less expensive or unproven methods, shortening their lives. Tele oncology allows cancer patients in rural areas to communicate with specialists who are located far away and has increased the likelihood of early detection.

RECOMMENDATION

- To guarantee data security, strong standard guidelines for sufficient oncology monitoring by phone or video in various subspecialties must be issued.
- Training on telemedicine tools to be require at both sides of the delivery.
- Recommendation for contractual doctors for 24*7 availability.
- Using triage methods to classify patients before arrival will make telemedicine services more accessible.
- Making people aware of the insurance that is available for teleconsultation in the face of COVID-19.

CONCLUSION

During this pandemic, tele-oncology has played a significant role in the treatment and care of cancer patients to lessen the potentially fatal risk of COVID-19 for cancer patients, it has begun to be widely used by the healthcare system. It is a terrific way to keep track of patients over time, especially those who live in rural locations, which further improves access to health care providers, reduce healthcare costs, readmissions and reduce geographical health disparities. Telehealth can help cancer patients live longer lives. According to a study presented at the 2017 Annual Meeting of the American Society of Clinical Oncology, patients with advanced cancer who utilized an online application to report symptoms between appointment sessions had a 5-month increase in survival rate, also improvement in their quality of life is also seen Healthcare professionals, especially doctors, nurses and senior managers are not tech-savvy and lack virtual awareness, expertise, and exposure to medical technology. And at last, any telehealth solution must ensure that patient data is kept private, secure, and confidential.

LIMITATION

Study was done during covid 19 pandemic


THANK YOU !