

A STUDY ON ACCEPTANCE OF TELEMEDICINE AT THE TIME OF COVID-19 OUTBREAK

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Literature Review

- Higor Leite and Ian R. Hodgkinson in their research paper discussed about the advantages of telemedicine . The research paper lays the enhancement which can be bought for telemedicine service and digital triage system. The study was also focused on various opportunities and challenges.
- According to Gerald-Mark Breen, and Jonathan Matusitz,as Its sector has developed a lot it have increased the acceptance of telemedicine .The authors also explained hazardous combats and methods which can help in improvement of telemedicine. The paper also focused on future utilization of telemedicine service and how It can bring more change.
- According to Forbes report published by John Osborn: With the help of telemedicine reaching to medical professionals its access has become prompt and convenient through laptop and computer and it has also help in avoiding the risk.

INTRODUCTION

- When covid19 begin in China and Asia ,internet-based option for diagnosis and treatment are more preferred..
- Gap between the patient and provider is a crucial factor.
- According to Indian medical council ‘disaster and pandemic will give rise to several distinctive challenges to bestow healthcare. Though telemedicine will not resolve all of them, But it will befit the condition in which consultants can access and oversee the patients.
- Use of information and technology plays an important role in providing such treatment
- Virtual consultation can be held without disclosing patient and healthcare to virus infection

According to the report in Lancet -

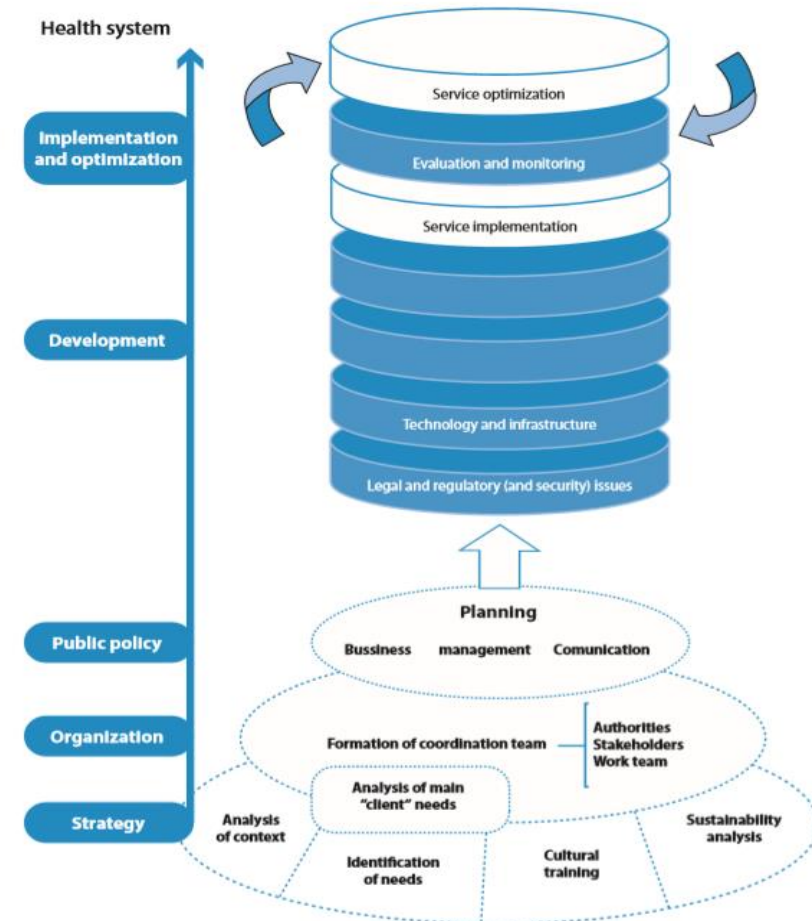
- China insurance system have adopted digital consultation
- After China, U.S. also followed the same culture by replacing the traditional care by virtual care many new services were added to enhance the telemedicine service
- In Italy, hospitals management faced a massive increase in virtual care.
- In India also healthcare providers also becoming preoccupied with virtual care

Framework For Implementation Of Telemedicine-

In May 2005, Health Ministers of the 192 Member Countries of the World Health Organization (WHO) met in Geneva for the 58th WHO Assembly and approved the eHealth Resolution

- **4 Primary Ehealth Component-** 1) Health Informatics 2) Telemedicine & Telehealth 3) eLearning 4) Electronic Commerce
- **Implementation Model Of telemedicine-** The model proposed for the implementation of a telemedicine service:
The “telemedicine hat”
- The Top level of the hat model consists of – Follow Up, Evaluation and optimization phase.
- **Basic Layer of the process of implementing a telemedicine service are –**
 - 1) Strategy
 - 2) Organization
 - 3) Public Policy

Figure 2. Telemedicine implementation model (“telemedicine hat”)



- **Barriers To Telemedicine Implementation –**

- Technological Environment .

Organizational Environment

- Human Environment

- Economic Environment

- **4 key Dimension of Development Of Telemedicine Service-**

- Legal Regulatory and security issue

- Technical and Infrastructure Issue

- Human Resource issue

- Financial Issue

Methodology

❖ Objective –

- 1) To understand the acceptance of virtual healthcare in Indian citizens at the time of covid-19 crises.
- 2) To understand the satisfaction level of Indian citizens towards virtual healthcare

❖ Design – Quantitative, Descriptive & Cross-Sectional Study

❖ Sample Size – 150 respondent between age group 18-50

❖ Duration Of study – 3 months

❖ Sampling Technique – Non-probability Convenient Sampling

- **Data Collection Procedure** – Population between 18-50 were provided a questionnaire based on the survey.
- The questionnaire was distributed among 180 people out of which 150 responded.
- Also, the participant was contacted via text message or calls to check the validity of the response.
- Pilot Study done on 20 respondent to check the validity of the study.
- **Data Analysis** -Through MS-EXCEL data was analysed and presented in the other part of the study.

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RESULTS

1) Gender

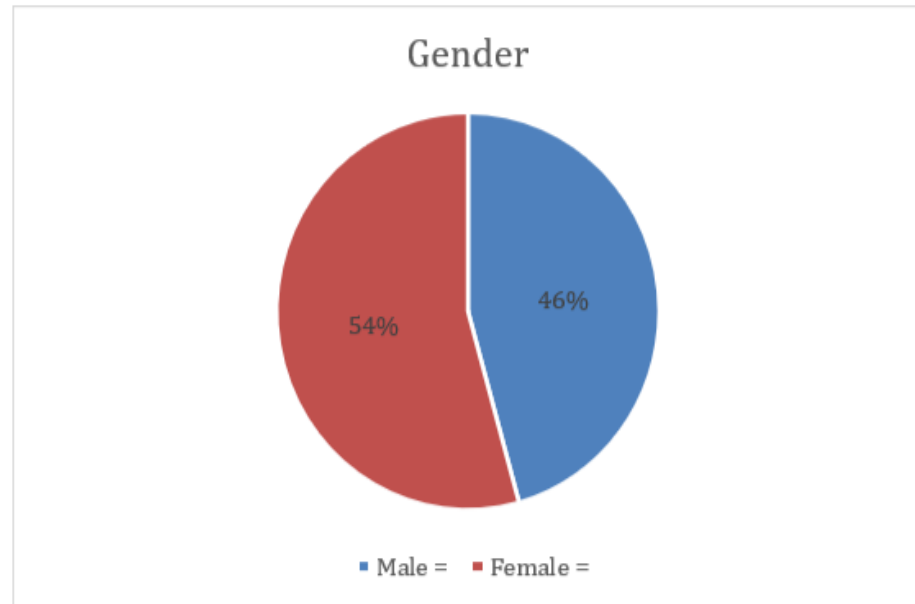
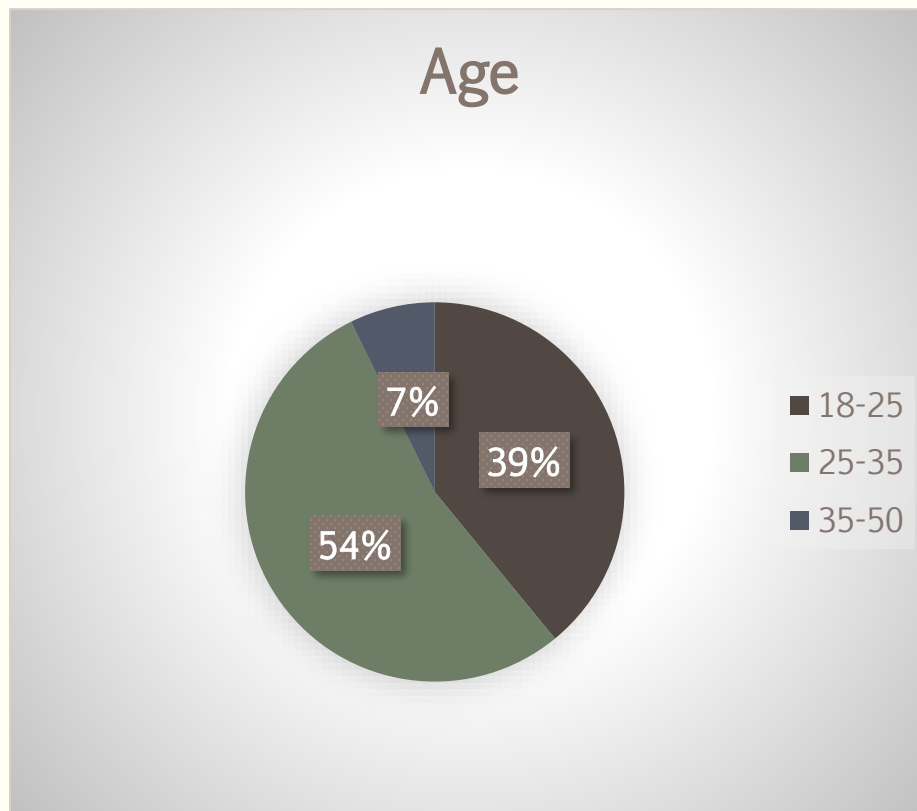


Figure 3) Gender of Respondent

Graph 1- Gender of respondent

- Among the 150 respondents 82 were females (54.7 %) and 68 were males (45.3 %) .

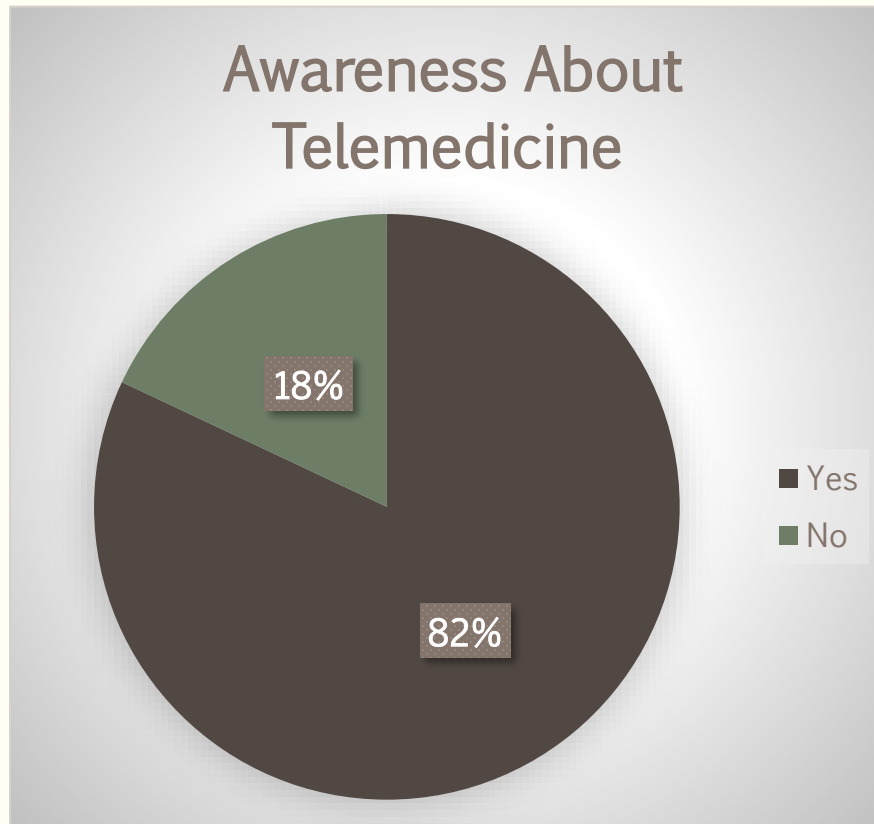
What is your age?



■ **Graph 2- Age of respondent**

The age is divided between 18-25, 25-35, 35-50, 35-50. In the age group of 18-25 there was 39 % respondent. In the age group of 25-35 there was 54 % respondent and in the age group between 35-50 there was 11% respondent.

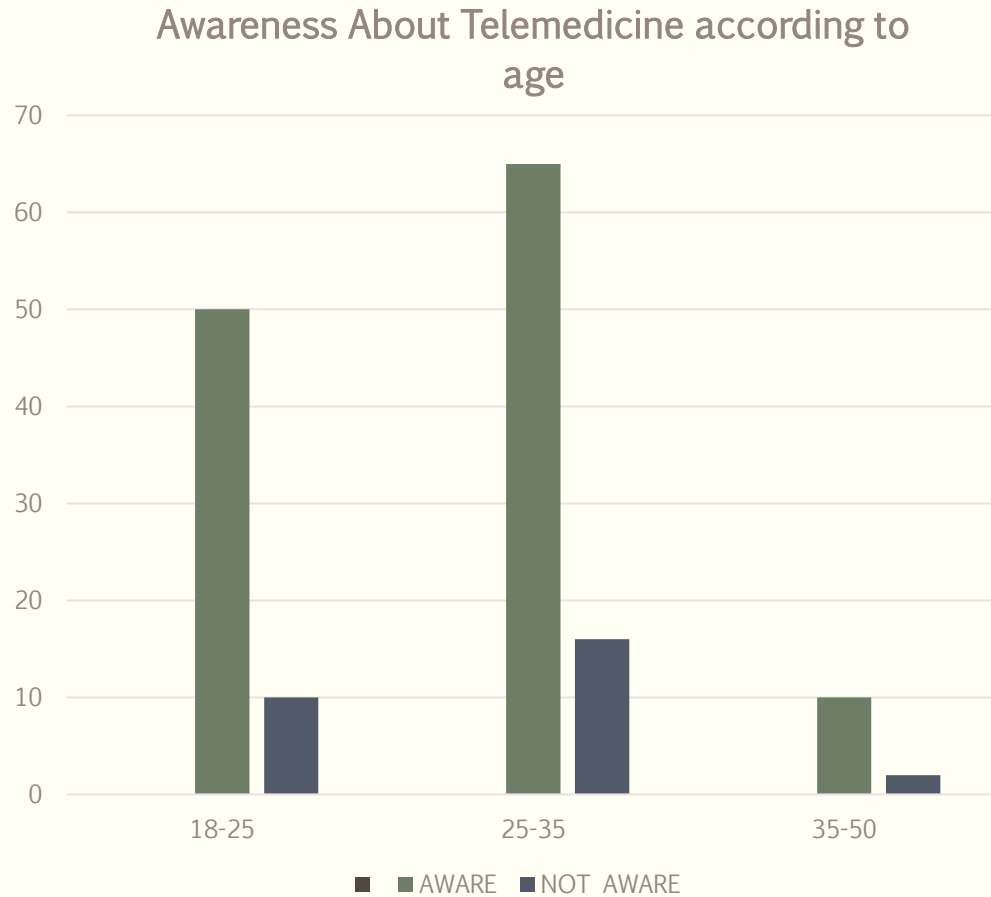
3) Are you aware about the telemedicine service provided by the hospitals?



Graph3-. AWARENESS ABOUT TELEMEDICINE AMONG THE RESPONDENTS

- Out of 150 participant 123 respondent (82%) are aware about the telemedicine services. Only 27 respondents (18 %) are not aware about such services.

Awareness about Telemedicine

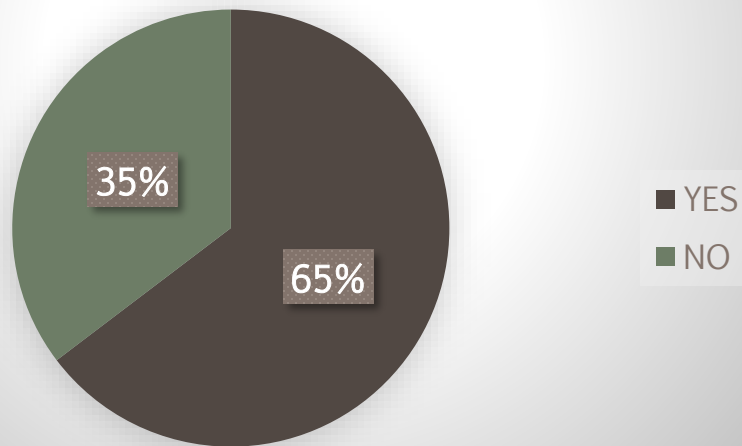


Graph 4– Awareness About Telemedicine according to age

- 18-25 – 50 respondent aware , 10 are not aware.
- 25-35 – 60 are aware, 16 are not aware
- 35-50 – 10 are aware, 2 are not aware

4) Does your hospital/consultant provide telemedicine facility during the lockdown period?

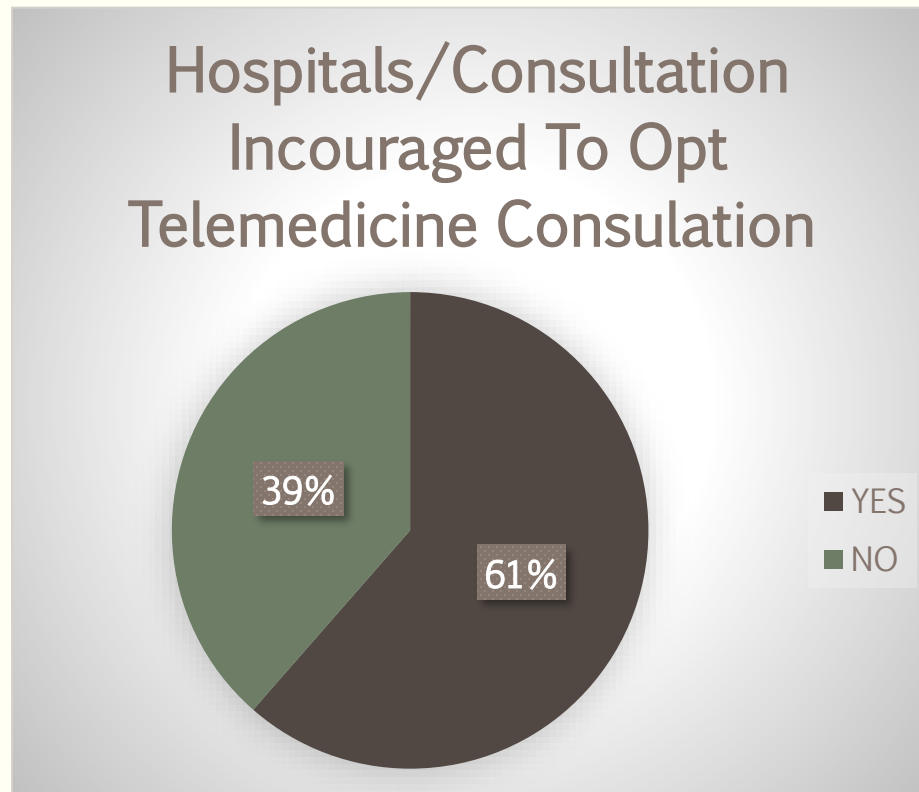
**Hospital/ Consultant
Provide Telemedicine
Consultation During
Lockdown**



Graph 5- Hospital / Consultant provide telemedicine during lockdown

- Out of 150 respondents, the consultants/hospitals of 97 respondent (65%) provide telemedicine consultation during lockdown.
- The consultants/hospitals of 53 respondent (35%) does not provide telemedicine consultation

5) Has your hospital/doctor encouraged you to opt for telemedicine service to reduce the risk of infection?

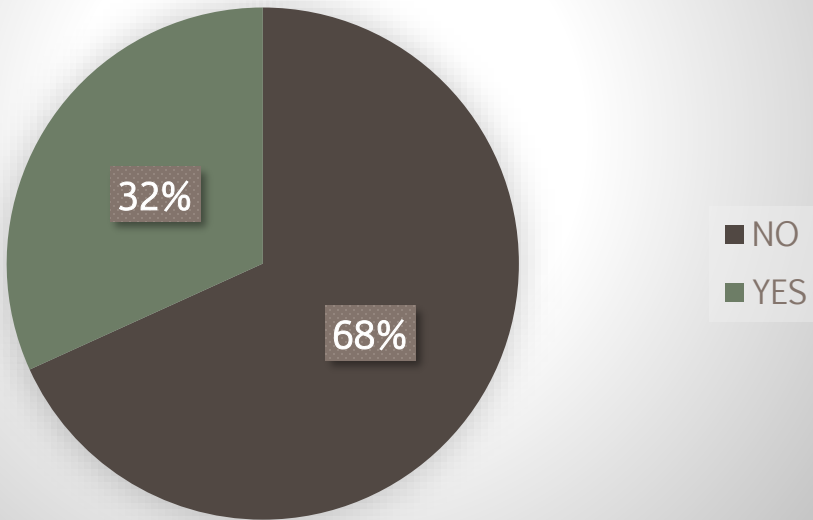


Graph 6 Hospitals / Consultation Encouraged To opt Telemedicine Consultation

- Among 150 respondent 97 respondent (61%) were encouraged by their consultants/hospitals to take telemedicine consultation during lockdown to avoid the risk of infection.
- 59 respondent (39%) were not encouraged by their consultants/hospitals to take telemedicine consultation .

6) Have you taken any telemedicine service during the lockdown period?

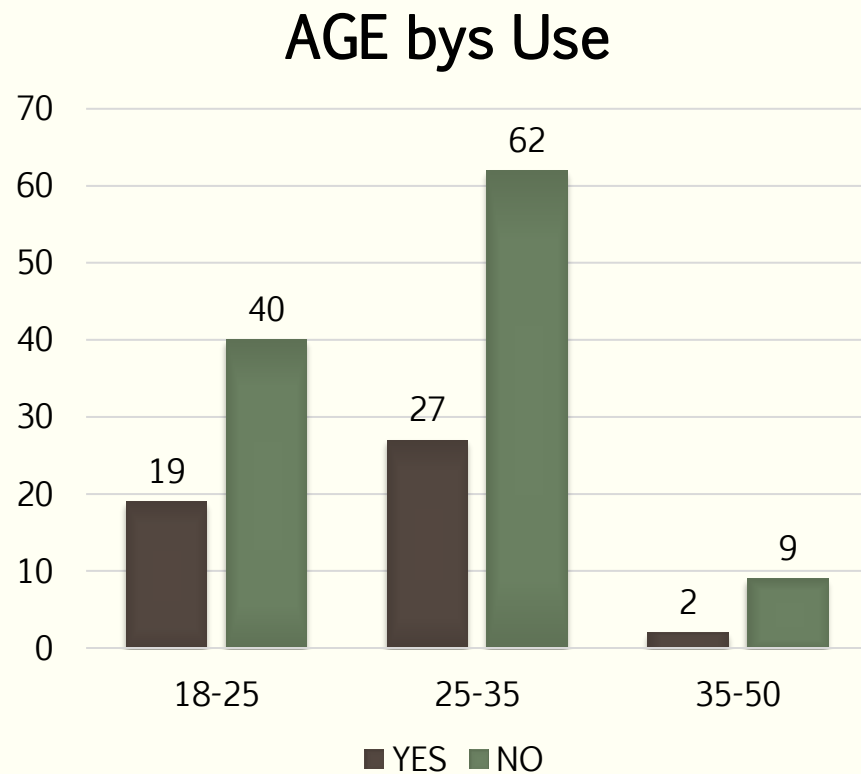
Taken Telemedicine Consultation During Lockdown



Graph 7– Taken Telemedicine Consultation During Lockdown

- Out of 150 respondent 103 respondent (68%) has not taken telemedicine service during lockdown
- 48 respondent (32 %) have taken telemedicine services during lockdown.

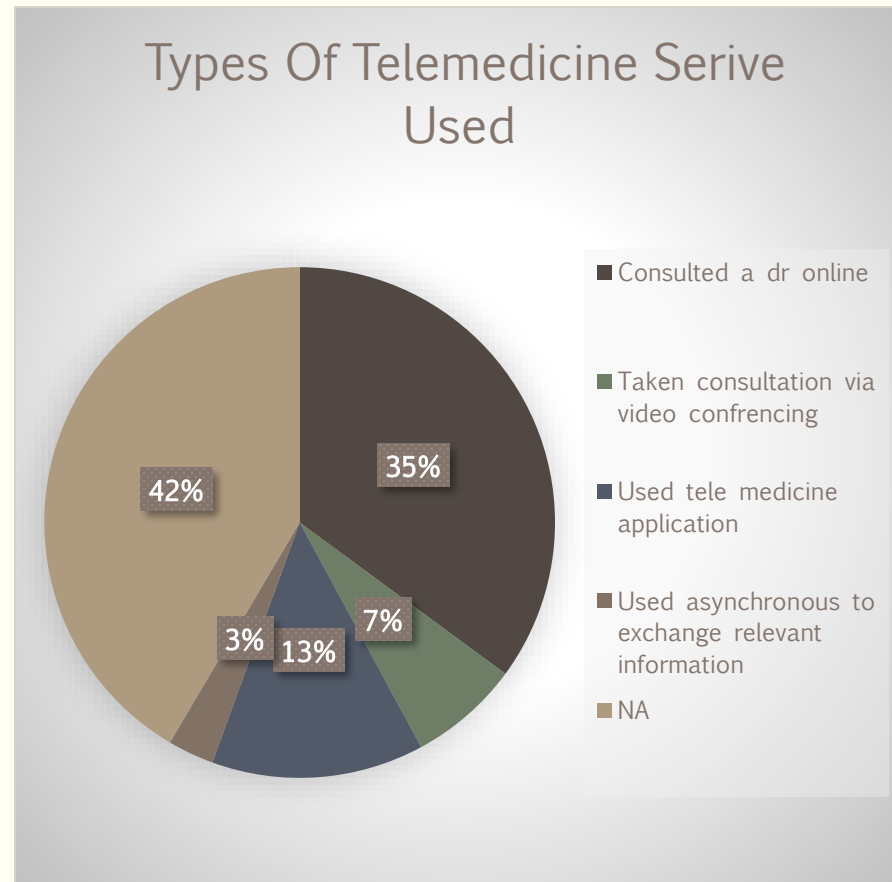
According to the age – Use Of
Telemedicine



Graph 8 - Age Wise Use Of Telemedicine during Lockdown

- **18-25** – 19 respondent have used, 40 have not used telemedicine service
- **25-35** – 27 have used, 62 have not used
- **35-50** – 2 have used , 8 have not used

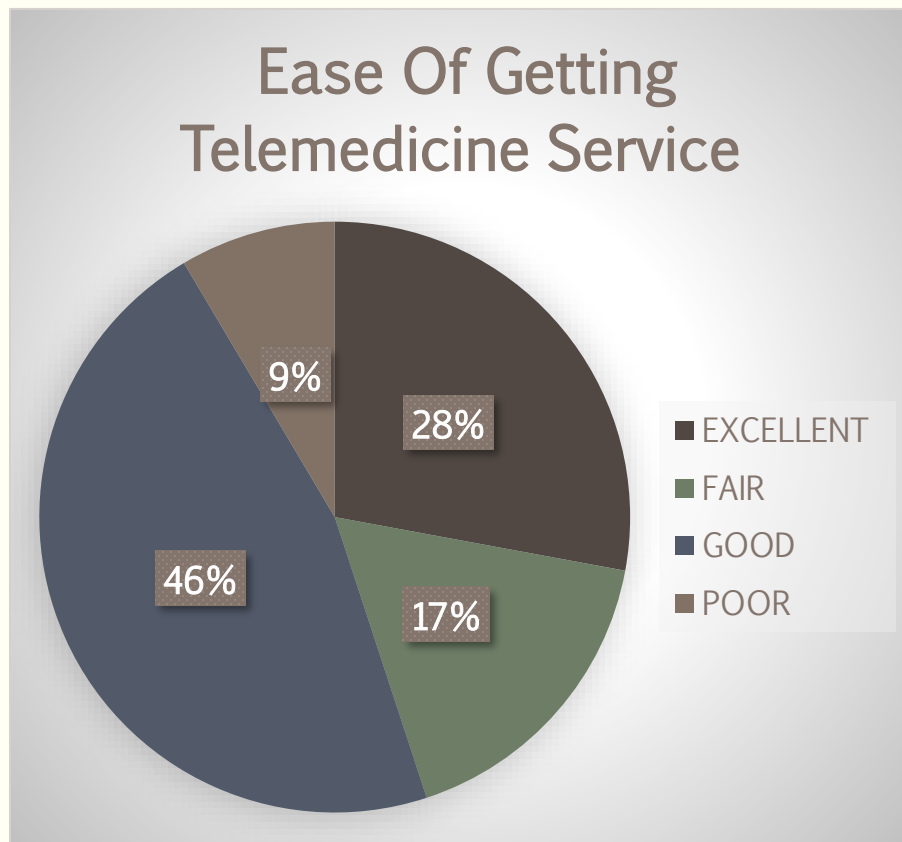
7) If yes, have you ever:



Graph 9-Different types of telemedicine service used by the respondent

- 35% consulted the doctor online
- 13 % of the respondent have used a telemedicine application,
- 7 % respondent have taken telemedicine consultation via video consulting,
- 3 % respondent have used asynchronous to exchange relevant information.

8) The ease of getting to telemedicine service.



Graph 10 – Ease Of Getting Telemedicine Service

- 36 respondent (28 %) had excellent experience in ease of getting telemedicine service
- 60 respondent (46 %) had good experience in ease of getting telemedicine service
- 22 respondent (17%) had fair experience in ease of getting telemedicine service

9) The length of time for getting an appointment for telemedicine service.

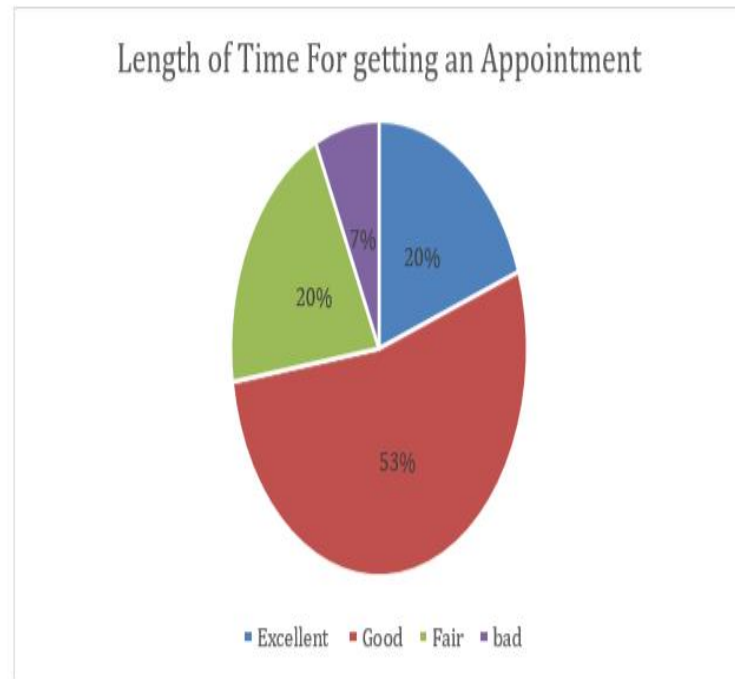
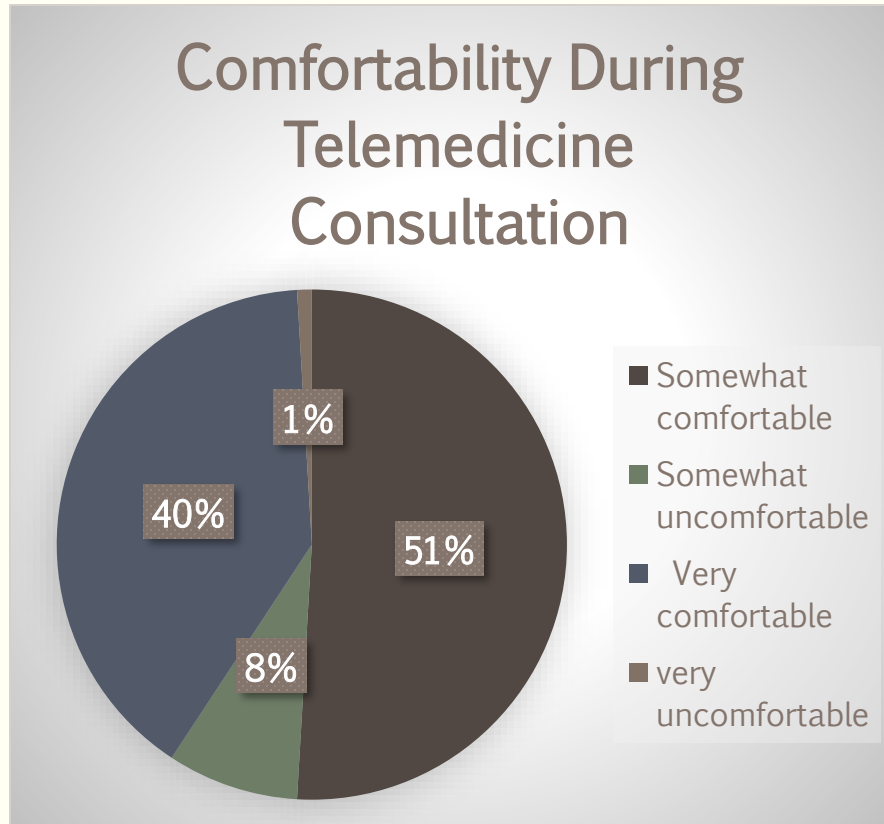


FIGURE 13. THE LENGTH OF TIME IN GETTING AN APPOINTMENT FOR TELEMEDICINE SERVICE.

Graph 11- Length of time in getting an Appointment for Telemedicine service

- 25 (20%) respondents have excellent experience in getting the appointment through telemedicine
- 68 (53%) of respondent have good experience in getting appointment through telemedicine
- 26 (20%) of respondent have fair experience in getting appointment through telemedicine
- 9 (7%) respondent have a bad experience in getting appointment through telemedicine

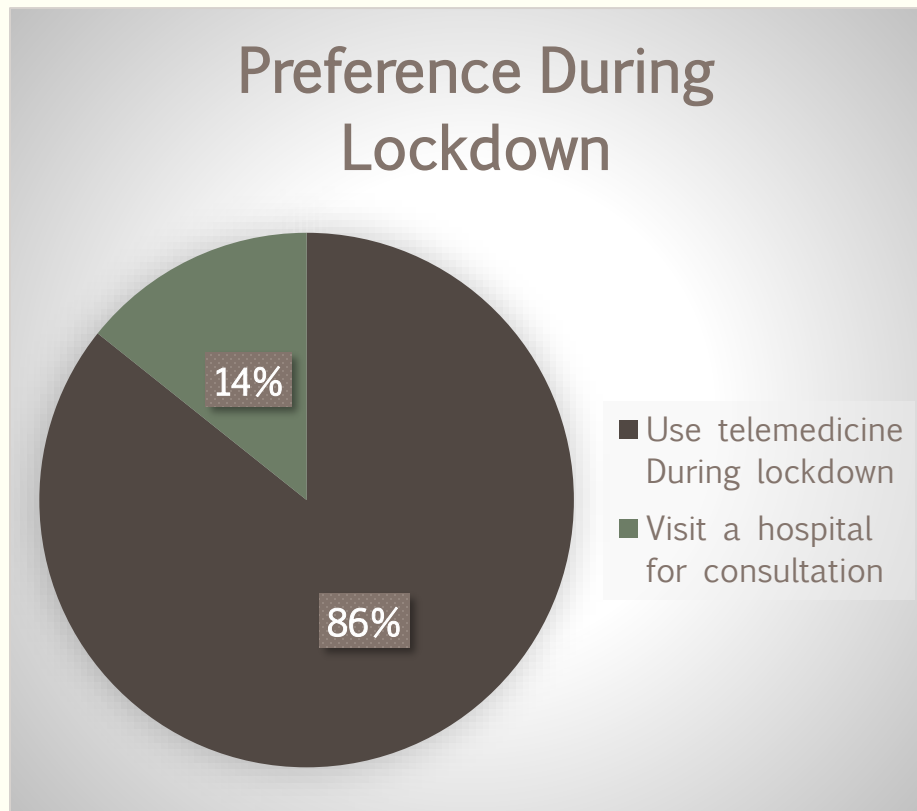
10) Were you comfortable during the telemedicine consultation?



Graph -12 Comfortability During Telemedicine Consultation

- 55 (51%) respondents were very comfortable during the telemedicine consultation
- 43% (40 %) respondents were comfortable during the telemedicine consultation
- 9 (8%) respondents were somewhat uncomfortable during the telemedicine consultation
- 1(1%) respondent was very uncomfortable during the telemedicine consultation .

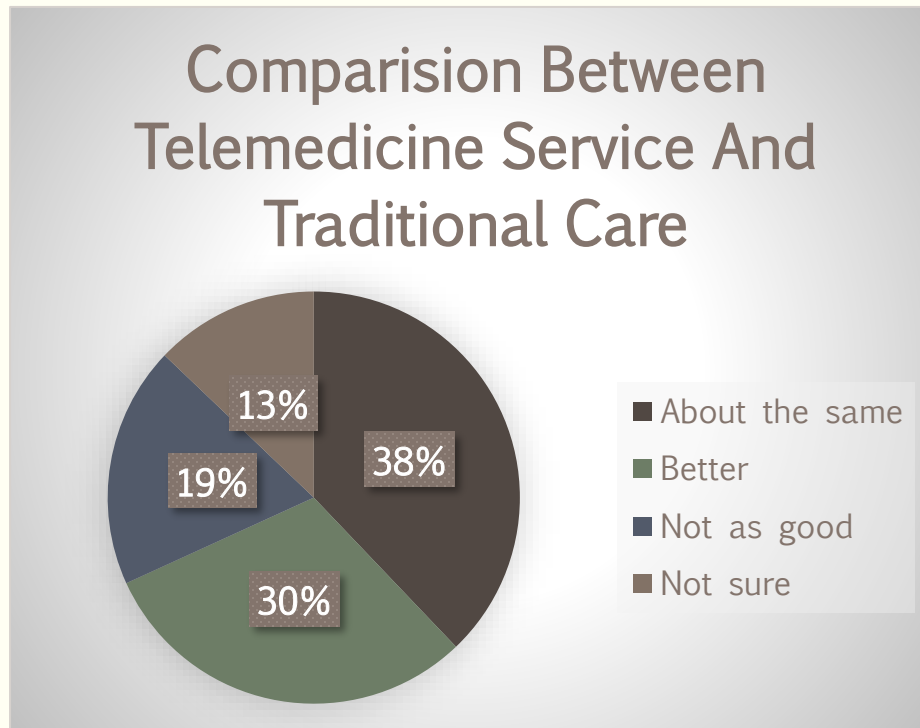
11) During the lockdown period, what would you prefer more?



Graph 13 – Preference During Lockdown

- 132(86%) respondent will prefer using a telemedicine survive during lockdown
- 22 (14%) will prefer going to visit hospitals during lockdown

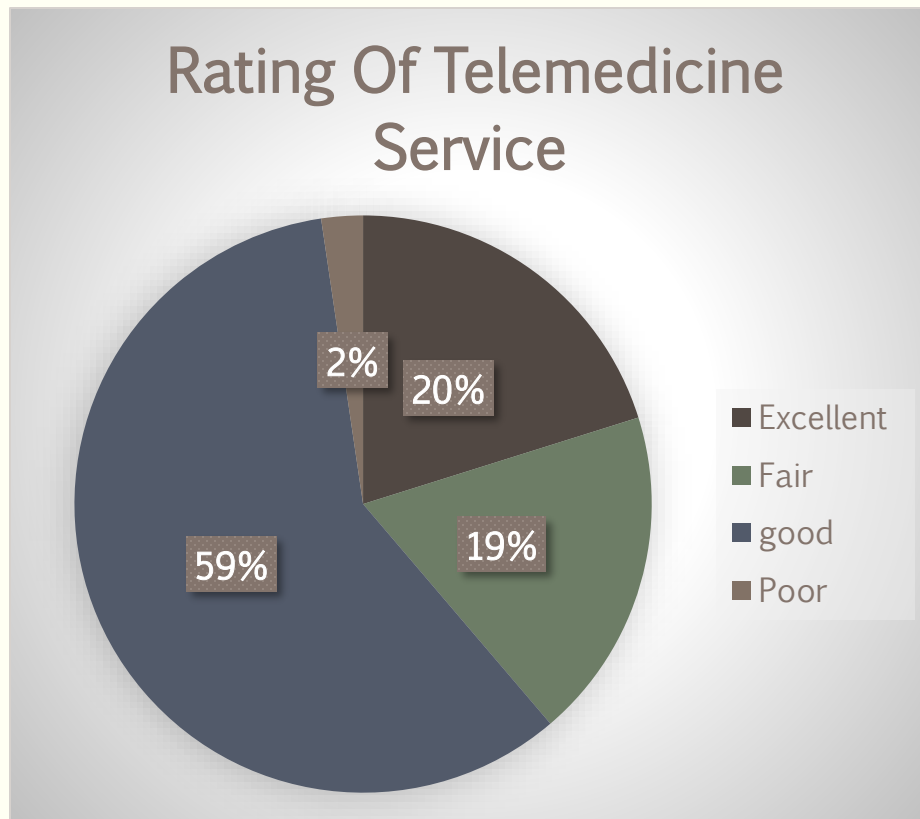
12) What rating would you like to give to the quality of care delivered by the telemedicine service when compared to the quality of traditional care?



Graph -14 Comparison Between the Traditional Care and quality of Service

- 50(38%) respondent believe that quality of both the service are about the same.
- 40 (30%) respondent believe that the quality of service of telemedicine is better as compared to traditional care.
- 25 (19%) respondent believe that quality of service of telemedicine is not as good as traditional care
- 17 (13%) respondent believe that they are not sure with comparing both the type of service

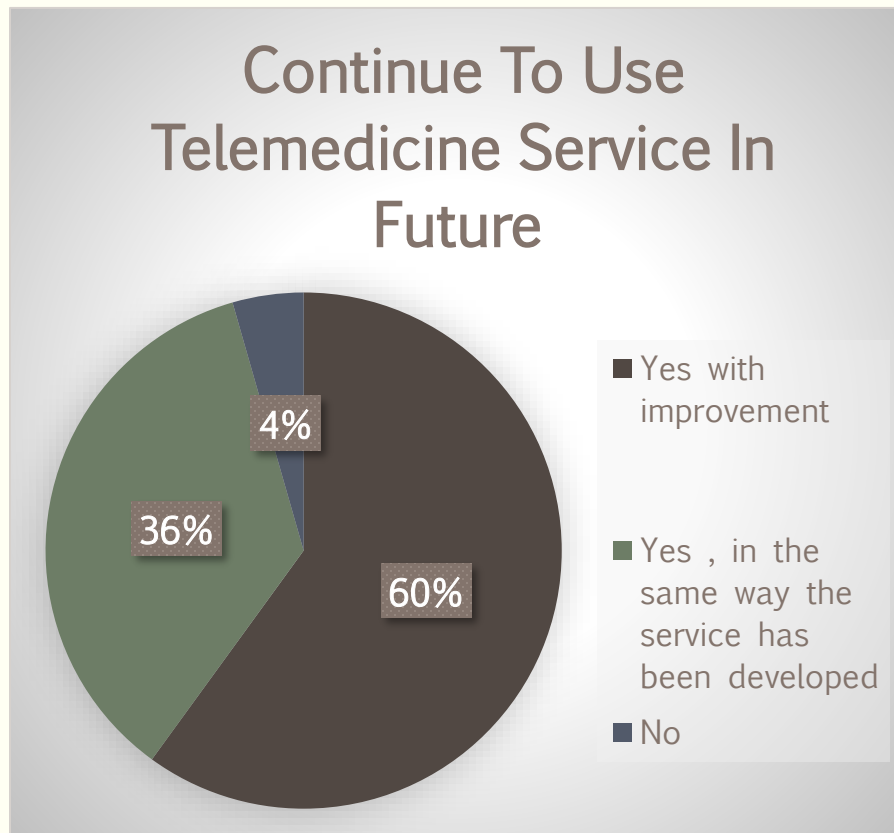
13) How do you rate the overall quality of the telemedicine consultation?



Graph 15- Rating Of Telemedicine Service

- 26 respondents (20%) have rated the telemedicine service excellent.
- 76 (59%) respondent have rated the telemedicine service good.
- 24(19%) have rated the telemedicine service fair and 3 (2%) respondent have rated the telemedicine service poor.

14) Would you like to continue to use the telemedicine service in Future



Graph 16- Continue to use Telemedicine Service In Future

- 81(60%) respondent will continue using telemedicine but with improvement.
- 48 (36%) respondent will continue to use telemedicine but only when it is in the same way as the service has been developed
- 6 (4%) will not use telemedicine service in future.

Chi-Square Test

Expected	Male	Aware	Not Aware	Row Total
		55.76	12.24	68
	(O-E)	-3.76	3.76	
	(O-E) ²	14.1376	14.1376	
	(O-E) ² /E	7.07	7.07	14.14
	Female	Aware	Not Aware	Row Total
		67.24	14.76	82
	(O-E)	3.76	-3.76	
	(O-E) ²	14.1376	14.1376	
	(O-E) ² /E	7.07	7.07	14.14
			CHI VALUE	28.28
			DF	1
			CRIT	8.01

H_0 = Gender Awareness of Telemedicine Same
 H_1 = Gender Awareness Of telemedicine not Same

We now have our chi square statistics is 8.01, our predetermined alpha level of significance i.e. 0.05 and a degree of freedom (DF=1). So, when computed chi square statistics exceeds the critical value in the table of 0.05 probability level then we will reject the null hypothesis of equal distributions

Discussions

- Based on the questionnaire following inferences were made –
- 1) No of female respondent more contributing 55% of study
- 2) 54% OF respondent between age group 25-35.
- 3) 82% of respondent were aware about telemedicine service only 18% doesn't have awareness.
- 4) 65% of respondents' hospitals are providing telemedicine service. This shows increase in service at a good rate.
- 5) 69% of respondent hospitals' /consultant's have encourages them to opt telemedicine service. This is a good sign to understand that hospitals are adopting telemedicine model.
- 6) 68% of respondent have used telemedicine service in lockdown. This shows that a good number of people have opted for telemedicine service

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- 7) Between the age group of 25-35 are maximum telemedicine users also the awareness rate among them is more.
 - 8) Mostly responded prefer online consultation. Other services are preferred less.
 - 9) 90 % of the respondent are comfortable in using the telemedicine consultation.
 - 10) According to the survey most of the respondent (86%) have used the telemedicine service during lockdown. This shows a huge growth of telemedicine service
 - 11) Half of the telemedicine user believe that both type the services are same. This is a good indication that majority of the respondent are comfortable with the telemedicine consultation.
 - 13) respondent have rated the telemedicine quality of service good and excellent
 - 14). 37% respondent believe that they will use telemedicine service if it is in same way it has been developed now. 69% answered that they think that there should be improvement in the quality of service. This states that there is a requirement of improvement in the quality of service being provided.

Conclusion

- Conclusion pertaining to telemedicine service were drawn from the result of the analysis-
- According to the Survey, the demand of the telemedicine services has increased rapidly because of the covid19 pandemic.
- Hospital/Consultant should bring their services virtually so that patient does not face any difficulty at the time of lockdown to get healthcare services.
- 20% of the emergency room visit could potentially be avoided via virtual care offering, 24% of healthcare office visit and OPD volume can be delivered near virtually. 35% of regular home health attendant service could be virtualised.
- The gap between the consumer interest and awareness about telemedicine should be reduced as a greater number of hospitals/consultants should encourage patient to use telemedicine service. Doctors and hospitals play important role in educating and encouraging patient regarding telemedicine.
- The awareness and use of telemedicine service should be increased among the geriatric population more.

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- Important to understand risk of infection high in traditional care because of covid19
 - Web and mobile based platform can be utilised for the use of telemedicine service.
 - Ensure Patient Satisfaction
 - Telemedicine can increase access to necessary care in areas with shortage such as behavioural health, improve patient experience and patient outcome
 - Quality of Service should be same

Recommendation

- Increasing Telemedicine service is the need of hour.
- Prompt Access
- Better Technological Changes
- Awareness should increase
- Comfortability should increase
- Geriatric population should be made more aware
- Doctor should provide treatment according to criticality
- Easy to use
- Regular emails/ text message phone calls should be done to make the patients aware about the telemedicine services provided by the hospitals/ Consultants.

Thankyou