

**A STUDY ON THE LEVEL
OF AWARENESS AND THE
RESTRICTING FACTORS IN
PLAY FOR THE GENERAL
POPULATION WITH
REGARD TO USING MOBILE
TECHNOLOGY FOR
ACCESSIBILITY
OF HEALTHCARE FACILITIES.**

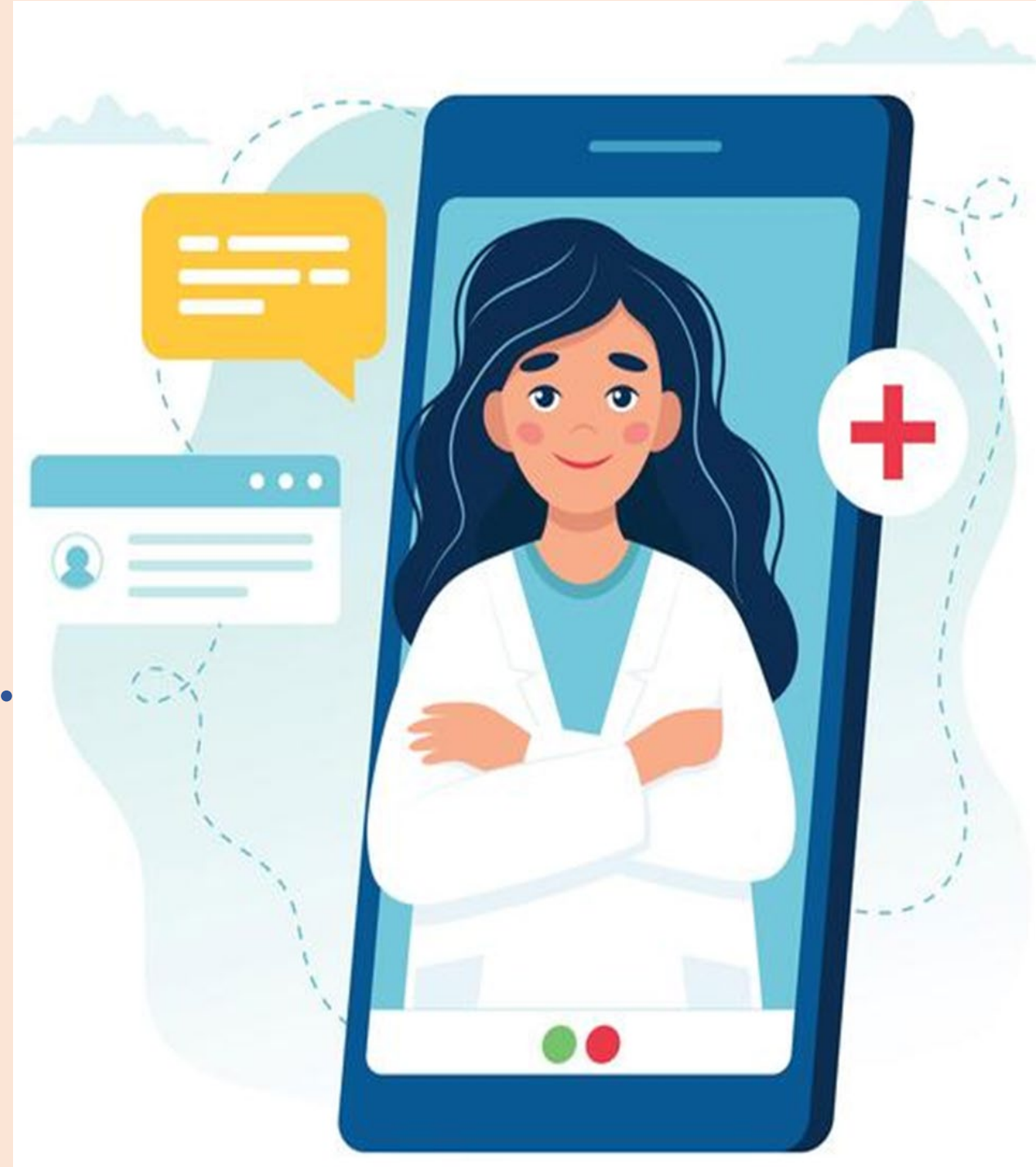
By- MARIYA ASIF

Roll No – 1131

MBA HM- 25

Mentor – Dr. VARSHA TANU

IIHMR University, Jaipur



INTRODUCTION



- Online doctor consultation is a coveted field in India and can offer services like telehealth, telemedicine, remote monitoring & digital health care services.
- E-healthcare has emerged as an effective preventive solution to mitigate the spread of COVID-19.
- The pandemic has encouraged people to use the platform and consult a doctor rather than resorting to self-medication. The telehealth market in India is forecasted to reach \$5.4 Billion by 2025 at a CAGR of 31%
- Despite the benefits of increased access to quality improvements and cost controls, virtual consultancy also comes with some challenges that patients and practitioners face and would like to overcome.
- The project focuses upon understanding the awareness of virtual healthcare among general masses and suggesting improvement measures for organizations giving such services based on feedback

RESEARCH QUESTION

- **WHAT IS THE LEVEL OF AWARENESS AND THE RESTRICTING FACTORS IN PLAY FOR THE GENERAL POPULATION WITH REGARD TO USING MOBILE TECHNOLOGY FOR ACCESSIBILITY OF HEALTHCARE FACILITIES?**



✓ RATIONALE OF STUDY-

Despite advancement in technology and impact of COVID, Indian population still has mixed response on accessing healthcare infrastructure through technology. This project will help us to identify and understand the reach, perception and parameters that influence general population to use technology to access healthcare. It will help us to work on the restricting factors, to improve and generalize the use of technology for accessibility of healthcare facilities.

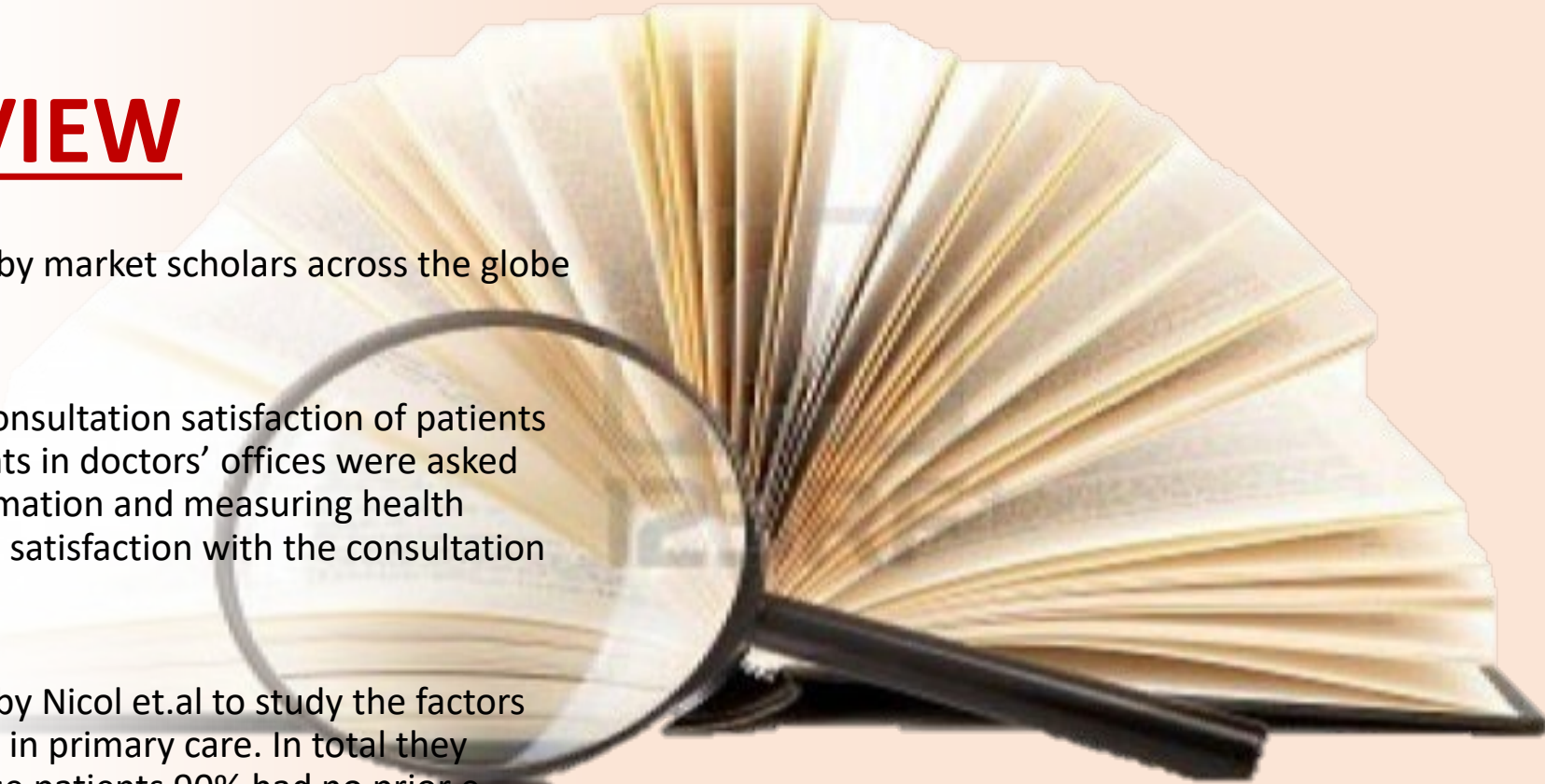
✓ OBJECTIVES OF STUDY-

- To evaluate the awareness of virtual healthcare among the general population
- To understand parameters influencing general population to use technology for accessing healthcare
- To understand the factors which resist general population from using Online healthcare
- To analyze the perspective of online doctor consultation
- To understand the improvements required in service.
- To suggest measures to improve the current service offered based on feedback.



LITERATURE REVIEW

- Over the decade many studies were done by market scholars across the globe to analyze the online doctor consultation
- A survey was done to understand online consultation satisfaction of patients by Martin et.al (2017) a total of 239 patients in doctors' offices were asked about their online seeking for health information and measuring health anxiety prior to the consultation, and their satisfaction with the consultation afterwards
- Similarly, an online survey was conducted by Nicol et.al to study the factors that can enhance the use of e-consultation in primary care. In total they conducted survey of 1706 patients, of these patients 90% had no prior e-consultation experience.
- An empirical study with multi period patient- doctor consultation data was conducted by Yefei et.al in 2019 by analyzing 77,248 patients' behaviors on an online healthcare platform covering the period 2017–2018, they found that the response time, the depth of interaction, and service content during the first consultation influence the patients' subsequent consultation behaviors significantly



METHODOLOGY USED



- The period of study was for 3 months from – 21st March 2022 to 30th June 2022.
- To understand the reach, perception and parameters that influence general population to use technology to access healthcare we conducted primary research through Google survey.
- Based on these interviews, the relevant information regarding the awareness of telemedicine, its preference, advantages, and disadvantages was collected from the target group.
- Tools used – Google Form
- Sampling Technique used – Simple Random Sampling
- Sample Size – 220
- Type of Research – Exploratory as well as conclusive Research.



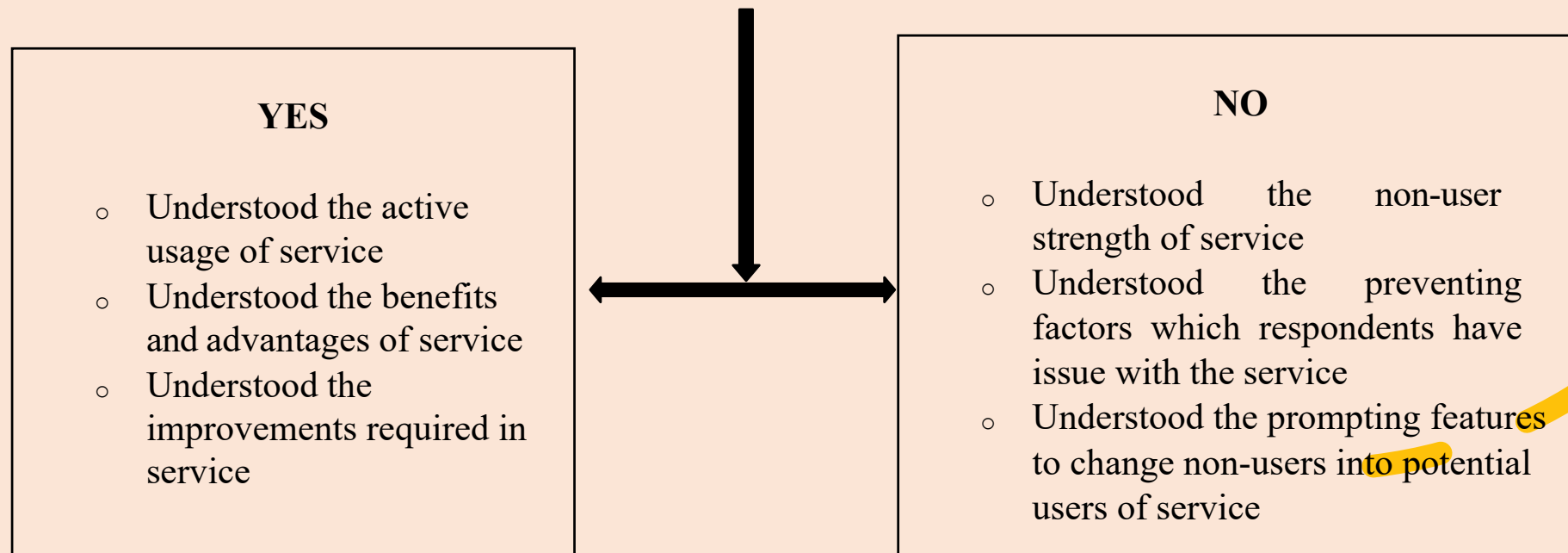
RESULTS

The survey was qualitative based research which was meant to understand the general awareness and application of online doctor consultation service

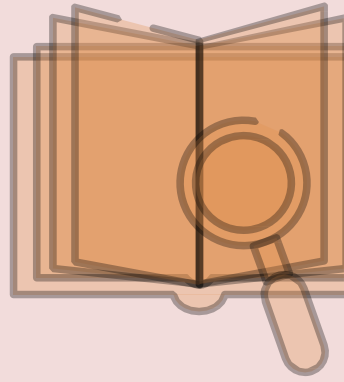
The survey focused primarily on getting answers in Yes and No response for the usage of Virtual healthcare service, further the data was analyzed accordingly

The cities were classified into 4 major groups wherein Group A consisted of Metropolitan cities, Group B consisted of Tier II cities, Group C consisted of Tier III cities and lastly the cities were classified as others

SIGNIFICANCE OF YES/NO SYSTEM



CLASSIFICATION OF CITIES



Class A
The category of mostly urbanized cities, this classification city had particularly a lot of users of Online doctor consultation and thus suggested diverse set of improvements in the service

Class B
The category of slightly fewer urban cities, this had comparatively less users of service and mentioned a lot of prompting features which might make them potential users of service in future

Class C
This was the category of non-urban cities, this had least no. of users of service and mentioned a lot of preventing factors which stops them from using the service.

Other cities
These were rest of the cities from the response survey and had mix set of responses.

DEMOGRAPHICS OF THE STUDY POPULATION

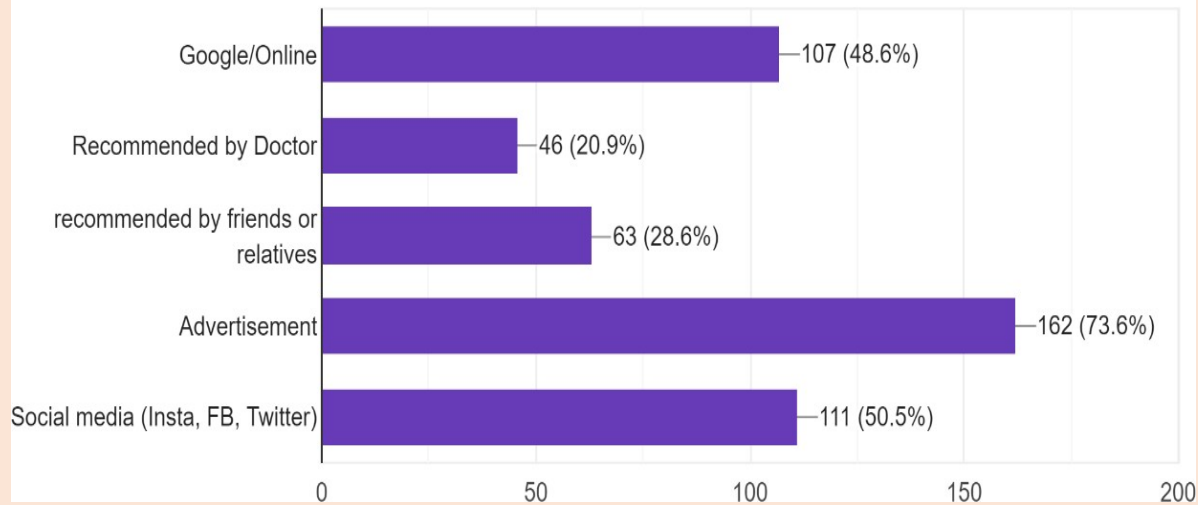
Sr. no	Class of city	Occupation status of respondents	Sample format (gender wise)		Respondents from each class of city
			Female	Male	
1.	A	Corporate	18	31	49
		Government service	7	12	19
		Homemaker	14	-	14
		Self-employed	5	17	22
					104
2.	B	Corporate	-	12	12
		Government service	14	16	30
		Homemaker	14	-	14
		Self-employed	-	8	8
					64
3.	C	Corporate	4	6	10
		Government service	6	2	8
		Homemaker	6	-	6
		Self-employed	2	4	6
					34
4.	Others	Corporate	1	4	5
		Government	4	2	6
		Homemaker	6	-	6
		Self-employed	2	3	5
					18
				Total Sample Size	220

	A		B		C		Others	
(% of total)	Max response	Minimum response	Max response	Minimum response	Max response	Min response	Max response	Min response
Age	40-50 (36.45%)	18-30 (15.89%)	40-50 (42.52%)	50 and above (12.12%)	40 to 50 (36.67%)	50 and above (10%)	40-50 (36.69%)	18- 30 (11.76%)
Occupation status	Corporate (46.2%)	Home maker (15.9%)	Government (43.08%)	Self Employed (12.31%)	Corporate + Government (50% and above)	Home maker (20%)	Home maker (41%)	Government (11%)
Income	15- 30 LPA (65%)	Less than 5 LPA (3.74%)	5- 15 LPA (60%)	Less than 5 LPA (9%)	5 TO 15 LPA (66.67%)	Less than 5 LPA (13.33%)	Less than 5 LPA (82.35%)	5 TO 15 LPA (17%)
Awareness	51.40% said yes	12.15% said no	82% are aware but never used	18.18% said no	43.33% said heard but never used	23% said no	47% said yes	17% said no

SOURCE OF INFORMATION FOR VIRTUAL HEALTHCARE

How did you come to know about Virtual healthcare?

220 responses

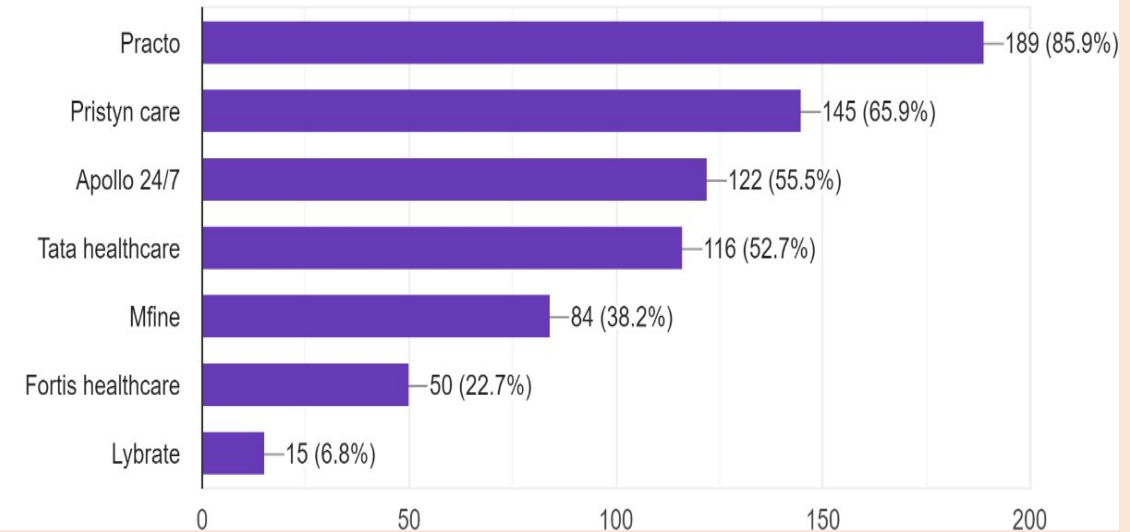


- It was seen that the source of first information for virtual healthcare for about 73.6% of respondents was advertisements, and only 20.9% of people came to know when they were recommended by the doctor.

AWARENESS ABOUT DIFFERENT HEALTHCARE PLATFORMS

Have you heard about following virtual healthcare platforms?

220 responses



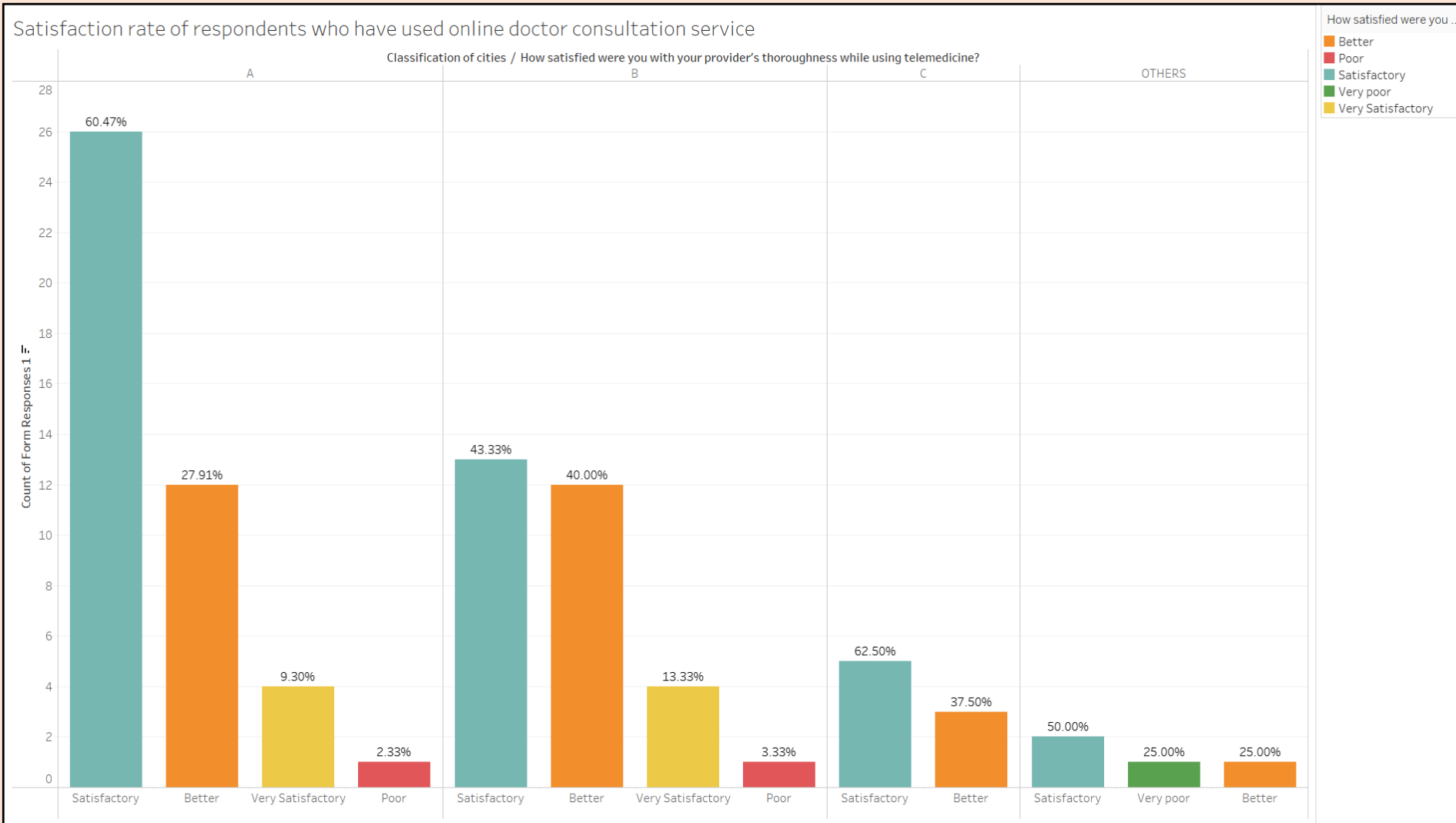
- When enquiring about platforms of virtual healthcare known by patients it was seen that the most popular amongst them was Practo that was known by majority of the respondents (85.9%)

ANALYSIS OF PREFERENCES OF RESPONDENTS IN USING ONLINE DOCTOR CONSULTATION SERVICE

Age	Class A city		Class B city		Class C city		Other cities	
	Yes response	No response	Yes response	No response	Yes response	No response	Yes response	No response
18-30	52.94%	47.06%	20.00%	80.00%	11.11%	88.89%	100%	0%
31-40	51.52%	48.48%	13.33%	86.67%	14.29%	85.71%	50%	50%
40-50	25.64%	74.36%	14.29%	85.71%	0%	100%	0%	100%
Above 50	22.22%	77.78%	12.50%	87.50%	0%	100%	0%	100%

It's seen that the cities of class "A" had maximum usage from age group of 18-30 as well as 31-40. In case of cities of class "B" the maximum rejection of service was observed particularly among the age group of 31-40 and 40-50 respectively. Similar, observations were found in cities of class "C".

SATISFACTION RATE OF USERS OF ONLINE DOCTOR CONSULTATION



- According to classification of cities the respondents of Class “A” city show that approx. 60% of the respondents are showing satisfactory response. Moving on if we try to understand the experience shared by class “B” city respondents then slight 50-50% satisfaction rate is shown in satisfactory and better responses. The scene in case of Class “C” and others show an avg response.

ANALYSIS OF IMPROVEMENTS NEEDED IN ONLINE CONSULTATION SUGGESTED BY THE RESPONDENTS

- The division is done based on the needs of different classes of cities. The class of city “A” respondents want improvements particularly in patient engagement, connection with specialist, detailed consulting etc.
- In case of respondents of class “B” the improvements are needed in making more people aware about the service, particularly special service for practical examination, also there’s a need to improve consultation for interacting with infants (pediatrician).
- The respondents of class “C” seek improvements in subscription plans of the service particularly in follow up visits.

Class of city	Needed Improvement	Share
Class A,	Frequent connection with specialist, more options such as online nurses and psychologist access, Patient engagement	75%
	Physical lab testing, detailed consulting, easy understandable language	20%
Class B	Frequent connection with specialist, making people aware about the service, Special service for practical examination, special service for infants (pediatrician)	70%
	Frequent updates, customer friendly behavior, Include doctor reviews	25%
Class C	Discount options on follow-up online visits, services for practical examination, physical lab testing	100%

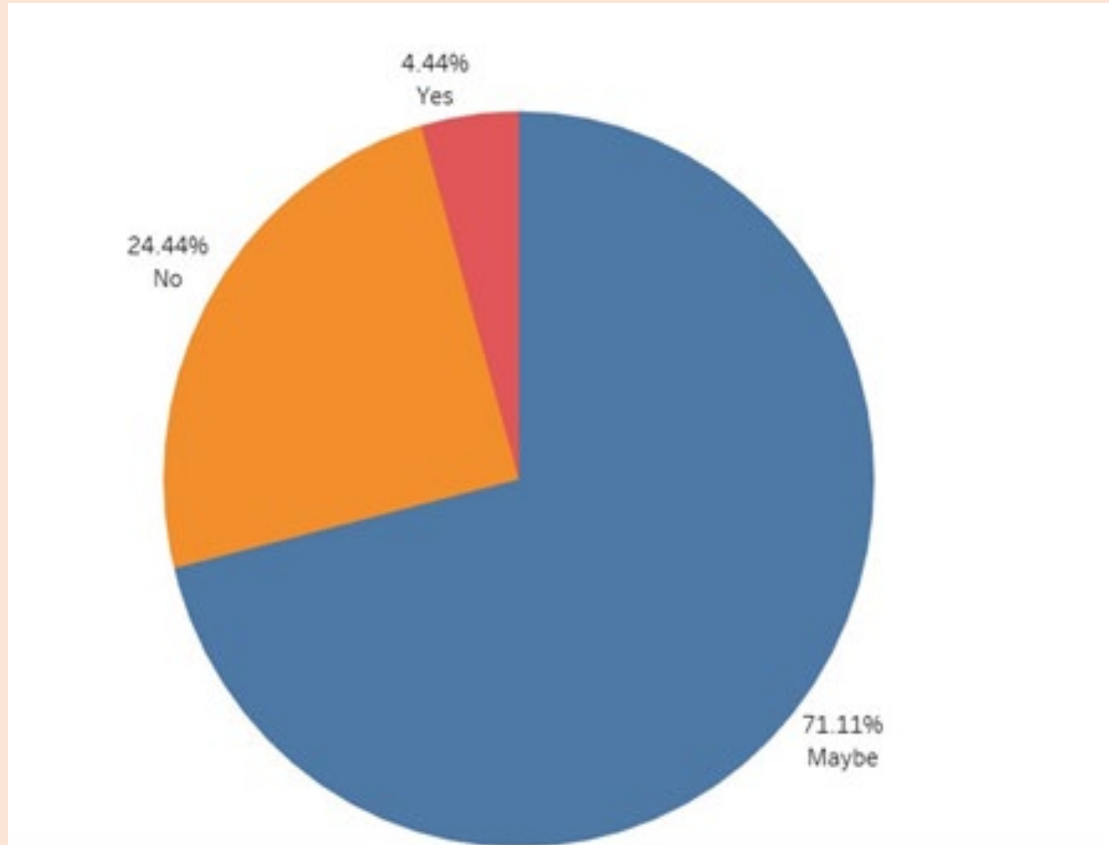
ANALYSIS OF PREVENTING FACTORS BY OUR RESPONDENTS TO USE ONLINE CONSULTATION

CLASS OF CITY	PREVENTING FACTORS	SHARE
Class A	Every service isn't available, no physical examination, lack of communication with doctor	63%
	Family doctor visiting home	15%
Class B	Lack of communication with doctor, no physical examination, Unable to connect with doctor virtually,	65%
	Reluctant to use video call, Communication barrier with doctor, Physical diagnosis more effective than virtual.	20%
Class C	Trust issue, Perception of untrustworthy service, lack of communication with doctor	68%
	Unable to trust online, physical visits are more appealing than virtual, unable to understand benefits	15%

ANALYSIS OF FEATURES WHICH PROMPT RESPONDENTS TO USE ONLINE CONSULTATION

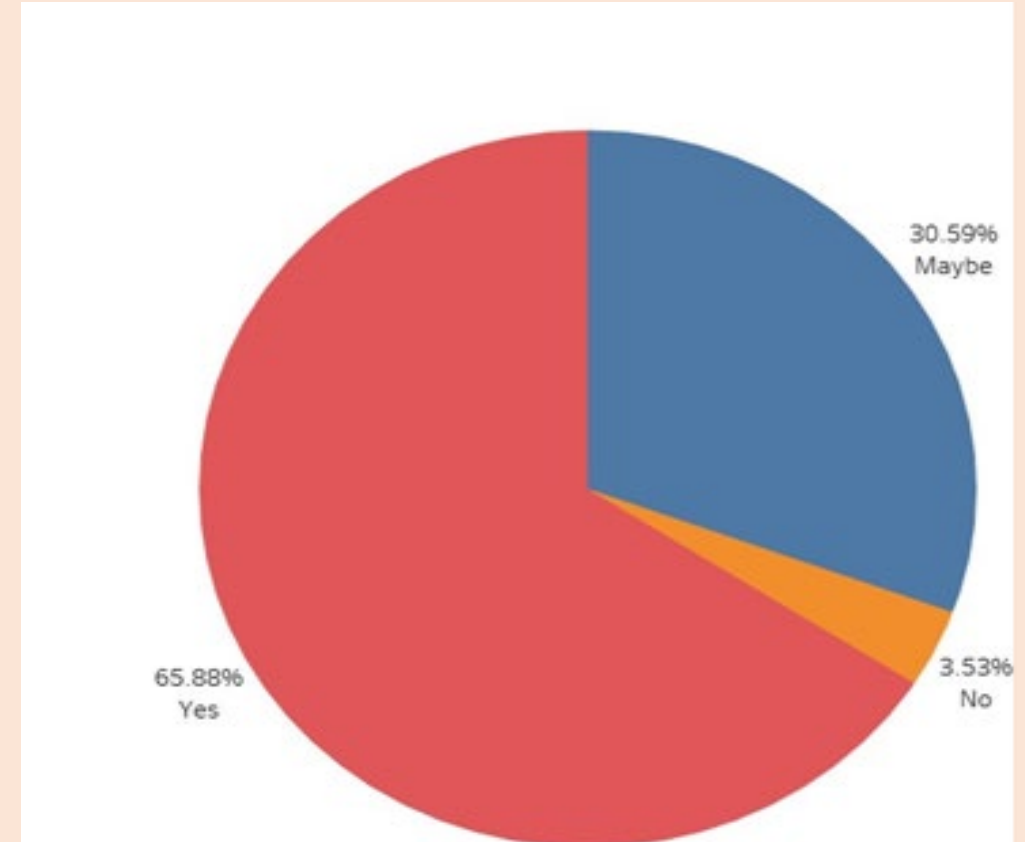
Classification of cities	Prompting features	Share
Class A	Assuring confidentiality, recent customer reviews, educating more about service, IoT support, voice assistants	45%
	Emergency care, up-to-date health report, more specialist doctor interaction, more services apart from virtual doctor consultation, mention stats about previous virtual customer visits	35%
	Virtual connectivity, Understandable features, transparency about service, convenient subscription plans, special offers for new patient visits	20%
Class B	Appealing online presence, Easy access to service, Convenient subscription plans, Improved doctor connection	60%
	Protecting user data, Home services for patient unable to access online service, Easy website navigation, discounts	40%
Class C	Distant health services apart from online service, Emergency care, discounts	65%
	Educating more about the service, better trustworthy service, special offers for new patient	35%

NON-USERS OF ONLINE MEDICAL CONSULTATION SERVICE LOOKING FORWARD IN FUTURE TO BE POTENTIAL USERS



We can see that the majority of non-user of the service i.e. 71.11% said they may opt for online medical service in future, while a very small percentage i.e. 4.44% are sure of it.

RECOMMENDATION OF SERVICE BY THE USERS



In terms of recommendation by the users, there is high level of satisfaction and hence about 65.88% of the users said they will recommend it to others, uncertainty is seen in 30.59% of users.

CONCLUSION

A total of 220 responses were collected from across India from diverse group of age that is ranging from 18 years to 50 years and above

Classifying the cities based on A-B-C Classification, gives a clear understanding of the sectors of cities and how well they are accustomed to online consultation and what is the room of growth of awareness in the same.



	CLASS A	CLASS B	CLASS C
ACCEPTANCE/ REJECTION	Acceptance majorly for the age group 18-30 (52.94%)	Maximum rejection of service was observed particularly among the age group of 31-40 (86.67%).	age group of 40-50 and 50 above both showed 100% rejection for online consultation
IMPROVEMENTS SUGGESTED	75% of them wanted frequent connection with specialist, more options such as online nurses and psychologist access, patient engagement	70% of them wanted awareness about the service, particularly special service for nurses, psychologist, also there's a need to improve consultation for interacting with infants (pediatrician).	All the respondents (100%) of class "C" seek improvements in discount options on follow up visits, services for practical exam and lab testing.
PREVENTING FACTOR	lack of rapport formation, no physical examination and unavailability of certain services by about 63% of the respondents.	lack of rapport formation, no physical examination and problems with connecting with doctor virtually by about 65% of the respondents.	68% of the respondents find the service to be untrustworthy and say it's difficult to trust someone online, they also show inclination towards physical consultation, also they are unable to understand the benefits of the service.
PROMPTING FEATURES	Assuring the confidentiality of a patients' data while using the virtual consultation service, also more education about the service must be provided before becoming a user (45%),	There should be enough appealing online presence of the service, easily accessible, convenient subscription plans, special offers for new patients, and even improved doctor connections, this was opted by about 60% of the respondents	There should be services apart from online consultation particularly for those who are not able to access internet connectivity in these locations by 65%. There is also a demand for discounts and special offers for new patients, finally it is mentioned that the service should be made trustworthy to be accepted among the society by 35% of the respondents.

SOLUTIONS

CLASS "A" CITY

- This category of city had highest no. of frequent users of the service so accordingly the responses mentioned few of the improvements needed to be considered for better service options.
- For Class A cities, Tele Consultation will be useful in saving time of the patients, we can promote Tele consultation in cases of Primary Care and also in some cases of Secondary Care. In such cities, time consumption will be a very big concern for the patients, we can save time in Transportation and also waiting time in the hospital.

CLASS "B" CITY

- The responses received from this category of city had comparatively less no. of users of online doctor consultation service, but the responses received mentioned various prompting features which might make them future user of the service.
- To be noted Class "B" respondents shown the highest share of being the future user of service when asked about if they would like to use this service in future.
- Healthcare organization should try implementing these prompting features in their service to turn the non-users of this service into

CLASS "C" CITY

- This category of city had responses non-urban cities under study, the data had responses which showed a smaller number of users for online doctor consultation. The survey also showed data about various preventing factors which the respondents experience.
- Healthcare organizations should investigate these preventing factors or rather problems and turn them into solutions so as to attract more users of online doctor consultation service from this segment.
- A 100% rejection was seen in age group of 40 and above. To bring a change in this we need to target the 50% who show acceptance in age group of 31-40 years, they can become a source of awareness for the older generation.

LIMITATIONS/ AREAS OF CONCERN

- A failed telehealth experience may be a reason for absolute dissatisfaction for patients.
- Some specialties essentially are not helpful to virtual care, such as physical therapy and examination or ophthalmology/orthopedic follow-ups.
- This model of care also raises the question of whether more medical test and investigations will be ordered in the absence of being able to physically conduct a physical examination of the patient.
- It also puts a doctor in the difficult situation of making a diagnosis without a proper understanding of the patient's medical history and social context, in addition to removing the opportunity to conduct a physical examination.



SUGGESTIONS



A personal touch and rapport building during an online conversation between doctor patient is the need of the hour



Instead of stating a diagnosis online, a list of differential diagnosis can be suggested to the patient. Prevention should be the main theme of discussions online, instead of treatment



In case of non-availability of doctors or busy schedule, appropriate waiting time must be mentioned to the patients



A user-friendly interface so that the patient can attach all reports of the tests as well as previous treatment records including prescriptions since it will help the doctor to give you more appropriate advice

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Thank you!