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Market Analysis of Telemedicine in Vadodara District

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ABSTRACT

Starting with a valuation of $1.10 Bn in 2022, the India Telemedicine industry is expected to rise at a CAGR (compound annual growth rate) of 21.2% to $5.15 Bn by 2030. With extensive state engagement in key sectors, India's economy has transitioned from a mixed planned economy to a mixed middle-income developing social market economy. If measured by PPP instead of nominal GDP, it would be the world's third biggest economy. According to the newly released research GDP Growth by Country 2022, India has the world's fifth-largest GDP at $3.47 Tn. Yet, India remains successful, outpacing even the United States, China, Japan, and Germany.

There is a correlation between the growth of India's telemedicine sector and the improvement of the country's healthcare information technology infrastructure. Market research on the vadodara area of India reveals that the abrupt COVID-19 breakout and state-by-state lockdown established to battle the virus have created new openings for the expansion of India's telemedicine industry. Patients and their loved ones worried about catching an illness while in a clinic or hospital which favoured telemedicine service for remote consultations instead. So that hospitals and medical personnel could concentrate on COVID-19 patients, outpatient services were halted.

Keywords: Telemedicine, Market Analysis, Vadodara, Telehealth

1. INTRODUCTION

Telemedicine is the "natural evolution of healthcare in the digital environment," according to the American Telemedicine Association (ATA). Telemedicine is described by the World Health Organization (WHO) as "the delivery of healthcare services, where distance is a critical factor, by all healthcare professionals using information and communication technologies for the exchange of valid information for diagnosis, treatment and prevention of disease and injuries, research and evaluation, and for the continuing education of healthcare providers, all in the interests of advancing the health of individuals and their growing presence."

In 2001, the Indian Space Research Organization (ISRO) launched a Telemedicine Pilot Project that connected the Apollo Hospital in Chennai with the Apollo Rural Hospital in the Andhra Pradesh village of Aragonda. The development of telemedicine services in India was greatly aided by initiatives taken by ISRO, the Department of Information Technology (DIT), the Ministry of Foreign Affairs, the Ministry of Health and Family Welfare, and the state governments.

2. LITERATURE REVIEW

An Examination of the Market for Telemedicine

Telemedicine is the practise of providing medical care and exchanging medical information over long distances. The word "tele" is a prefix that means "at a distance" in Greek. It includes the full spectrum of medical activities, such as disease diagnosis, treatment, and prevention, ongoing training for healthcare professionals and patients, and research and assessment. It is presented in as an all-encompassing word for all distance-based health-related activities (Richard Wootton, 2017).

(What is telemedicine? 2007) explains that telemedicine is a type of electronic health built on computers, smartphones, and wireless sensors and provides healthcare services to faraway patients. It also claims that telemedicine was overlooked because it was a cumbersome, dubious, and prohibitively expensive innovation.

(Telemedicine on the move: health care heads down the information superhighway, 1994) states that telemedicine has attracted more attention as one of the emerging modern benefit delivery methods that will use the information superhighway. For patients who reside far away, telemedicine reduces travel time and expenses (Telemedicine is a useful tool to deliver care to patients with Amyotrophic Lateral Sclerosis during COVID-19 pandemic: results from

Southern Italy, 2020). That enables us to get affordable, high-quality healthcare services (Patients' perceptions of teleconsultation during COVID-19: Across-national survey., 2021).

The use of telemedicine has advanced beyond the provision of medical services in clinics, outpatient centres, and specialist offices, as well as among medical professionals, to provide care in patients' homes.

According to (Barriers to Telemedicine: Survey of Current Users in Acute Care Units, 2012)., achieving immediate patient access, closing service gaps, and raising quality are key drivers for doctors to adopt telemedicine in acute care facilities. Also, because online appointments can be readily scheduled around hectic schedules, working parents with child care duties may find telemedicine more convenient than in-person consultations. Similar to this, telemedicine boosts the productivity of medical specialists like doctors, consultants, and nurses by enabling them to treat more distant patients within a constrained budget and time (Factors influencing decision making for implementing e-health in light of the COVID-19 outbreak in Gulf Cooperation Council countries, 2021).

Telemedicine has been regarded as a helpful technique to reduce pressure on burdened healthcare systems during the COVID-19 epidemic. A well-known element influencing the acceptance of telemedicine is doctors' readiness or reluctance to use it explains (Predictive factors of telemedicine service acceptance and behavioural intention of physicians, 2014).

3. BACKGROUND OF THE STUDY

Up or down, market trends are the long-term movements of prices in a certain market. When launching anything novel, it's more challenging to predict how large the market will be.

The Ministry of Health and Family Welfare and the Department of Information Technology jointly oversee telemedicine services in the nation. The National Rural Telemedicine Network and the National Medical College Network (NMCN) have been established by the Telemedicine Division of the Ministry of Health and Family Welfare (MoHFW), Government of India, respectively, for the purposes of e-Healthcare delivery and e-Education.

This study seeks to investigate and study about the presence of Telemedicine in Vadodara district. It also aims to provide insight on the awareness and usage capability around the people of Vadodara.

Another element affecting the future course of medical research is the fast expanding capacity of the health ecosystem for data collecting and processing. Businesses are incorporating insights from interoperable data and platforms enabled by deep learning capabilities, always-on io sensors, and behavioural research to influence consumer perceptions and behaviour.

Transformational Innovation's:

- Digital Medicine

- Digital Therapeutics

- Nano Medicine

- Bigdata and Artificial Intelligence

4. OBJECTIVES OF THE STUDY:

- To study the market of Vadodara district for telemedicine.

- To understand patient's perception.

- To understand the growth potential of Indian healthcare market.

- To Identity the Opportunities and Challenges of Telemedicine systemin Healthcare Sector.

- To find out the perception of Health Professionals and patients towards telemedicine system.

4. RESEARCH METHODOLOGY:

Research Design:

The research design of the proposed work, considering its objectives, scope and coverage will be exploratory and descriptive in nature.

The research methodology mainly includes the following points:

Source of Information:

The research would make the use of both Primary Data as well as Secondary Data sources of information as the case may be.

Primary Data:

The primary data will be collected through questionnaire. Hence the questionnaire is the main source of primary data.

Secondary Data:

The secondary data was collected from publishing by search engines, newspapers, books, magazines, journals, websites, and other relevant information

Research Instrument:

The researcher will put to use the structure, non-disguised and close-ended questionnaire to get the responses from the particular target audience.

Population/Universe:

The data will be collected from the people of Vadodara district.

Sample Frame:

The sample unit's inappropriate and justified size would be conveniently drawn from different people living in different areas of Vadodara district.

Sample Size:

The sample size is around 200.

Sample Design & Methods:

A representative sample will be drawn from the population based on non- probability convenience sampling methods in this type of sampling items for the sample are selected deliberately by the researcher.

Sample Media:

Sample media would be circulating forms for filling up structured, non-disguised and close-ended Questionnaires.

Plan of analysis

Diagrammatic representation through graphs and charts

Big data able inferences will be made after applying necessary statistical tools.

Findings & suggestions will be given to make the study more useful.

5. DATA ANALYSIS:

1) **Telemedicine usage as per gender and profession wise:**

Column Labels			
Row Labels			
	Female	**Male**	**Grand Total**
Business			
No	1	12	13
Yes	0	1	1
Medical Professional			
No	7	0	7
Yes	3	2	5
Student			
No	37	20	57
Yes	7	24	31
Unemployed (Homemaker)			
No	25	1	26
Yes	6	0	6
Working			
No	5	43	48
Yes	0	6	6
Grand Total	91	109	**200**
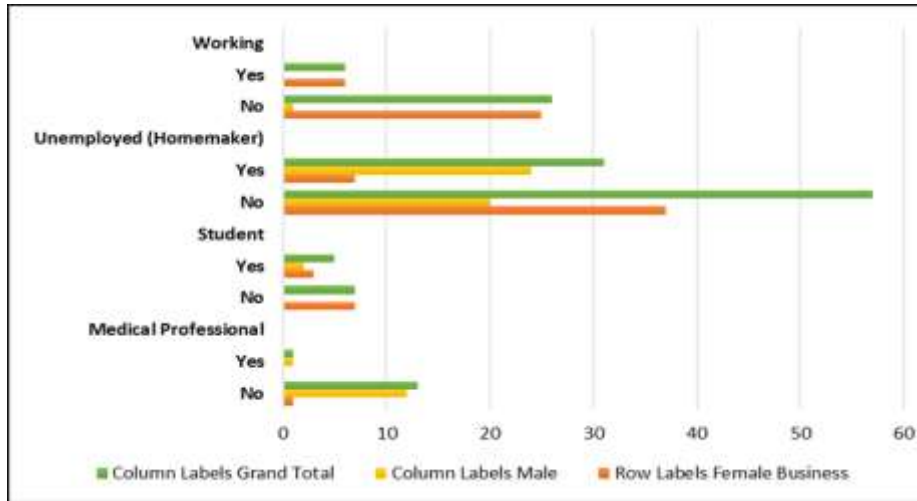
2)   Are you aware about any Telemedicine services?

YES	105
NO	95
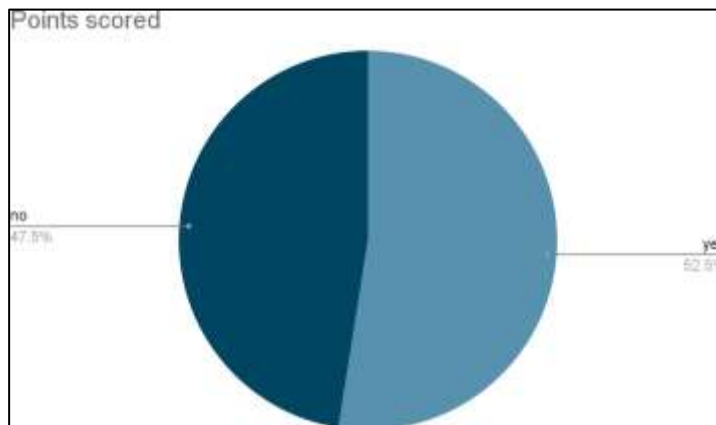
3)   How much interested would you be in using telemedicine services in the future? (Rating from one to five, five is the highest)

One	18
Two	31
Three	73
Four	47
Five	31
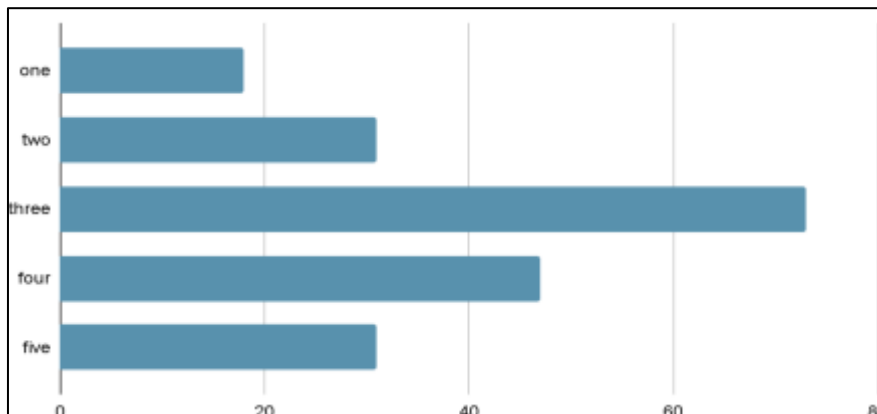
Interpretation:

- The above chart displays gender wise and profession wise people who has used telemedicine earlier. The histogram briefs which profession as well as gender has more usage capability.

- From the above chart, it shows that are they interested in using it in future, it revealed that 78 of respondents will surely use this service in future, and about 73 respondents are still not sure of using it in future but around 49 respondents are not at all interested in using telemedicine services in future.

- From the above chart, it shows the awareness of telemedicine among the respondents in Vadodara, it revealed that about 52.5% of respondents are aware of telemedicine and almost near to 50% respondents are not aware about telemedicine.

6. CONCLUSION:

Telemedicine cannot be the answer to all problems, but it can be very important in addressing a vast range of problems. But in order to deliver high-quality treatment at a lower cost to patients, telemedicine is increasingly being used.

By the use of electronic devices like PCs, Macs, tablets, and smartphones, telemedicine enables doctors to make virtual home visits to patients. Promoting telehealth services to patients who want and need them is crucial for healthcare facilities that provide this option. By eliminating the need for physicians to visit their patients' homes, telemedicine helps to save both time and money. Furthermore, telemedicine allows for patients and their loved ones to have in-person consultations with their doctors, which may lessen waiting times and enhance treatment.

Lack of awareness and acceptance of new technology by the public and professionals are holding it back. Governments are now starting to take a keen interest in developing telemedicine practices, resulting in a slow but steady rise in its utilization in public health.

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