“TO STUDY THE USE OF DIGITAL TECHNOLOGY FOR GERIATRIC HEALTH CARE DURING COVID-19 PANDEMIC IN INDIA”

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Submitted by

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INTRODUCTION

- Geriatric care is a speciality that is based on improving the health care for elderly people.
- Nearly 120 million old people in India suffer from a variety of physical, psychological, economic, and spiritual issues.
- Digital health means the use of information and communications technology in support of health and health-related fields.
- The potential for using technology to assist healthcare delivery has been bought to attention by the COVID-19 pandemic.
- Using digital healthcare technologies for the elderly can prove to be beneficial because they are the ones who are the most vulnerable during this pandemic.

RESEARCH OBJECTIVES

- To study the use of digital technology in geriatric health care during COVID-19 pandemic in India
- To study the strengths and weaknesses of using digital technology for geriatric health care during COVID-19 pandemic in India

METHODOLOGY

Secondary research was done with the help of two electronic databases, i.e., PubMed, and Google Scholar, for searching research articles related to the chosen topic using a set of keywords.

TABLE 2.1: Search query

Query	Keywords (that searched all Fields i.e. within titles, abstracts, subject headings like MeSH)
1	“Novel Coronavirus” OR “Coronavirus” OR “COVID-19” OR “nCOV”
2	“Geriatric Healthcare” OR “Elderly Healthcare” OR “Older Healthcare”
3	"Digital Technology" OR “digitization” OR “digital transformation”
Final Search Query	1 AND 2 AND 3

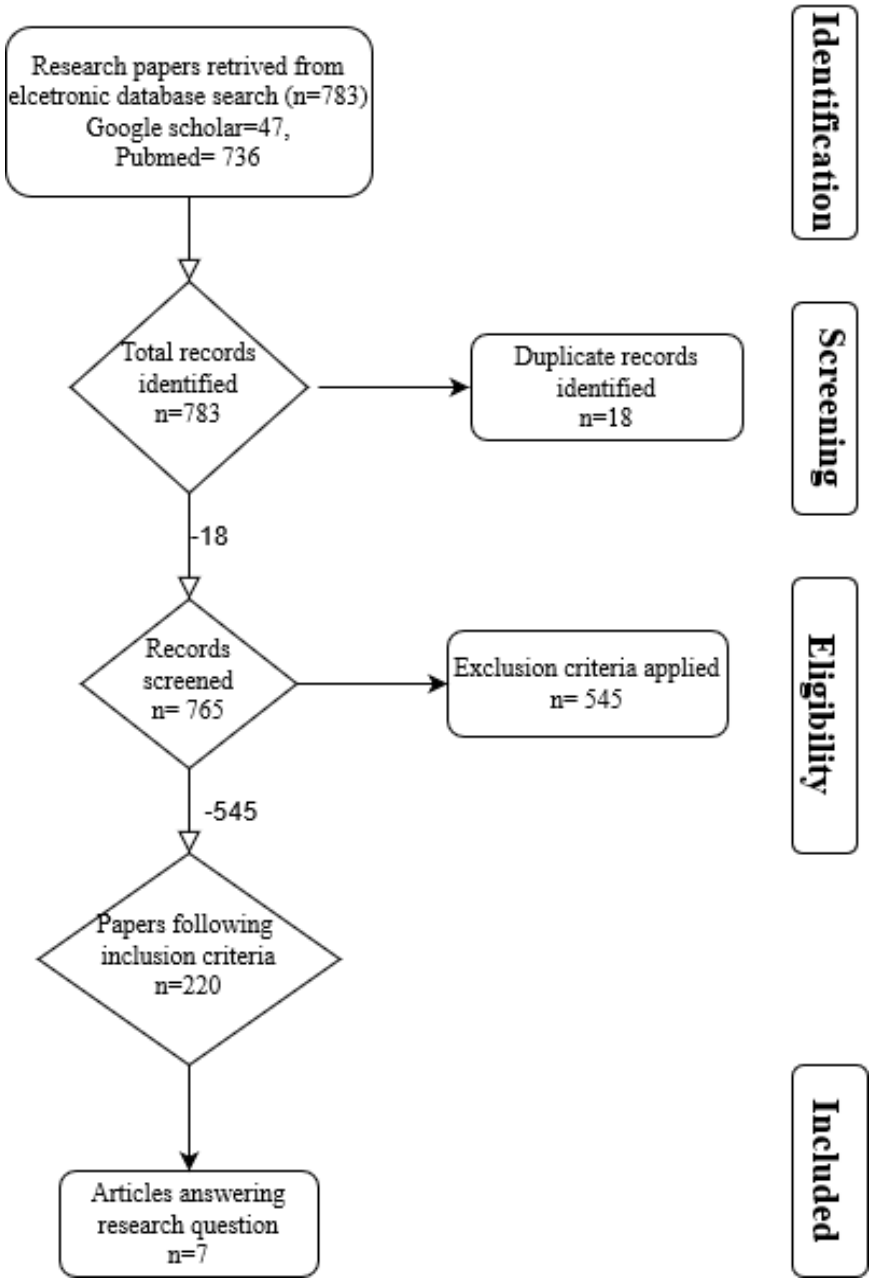
Inclusion Criteria:

- All the articles written in English were included in the study.
- Only the articles from the time-period of 2020 to 2021 were considered.
- The articles that have been published were included.

Exclusion Criteria:

- Articles that did not fulfil the inclusion criteria that is specified above were excluded from the study.

Flow Chart Showing Methodology (made using draw.io)



REVIEW OF LITERATURE

Study Title	Year	Objective	Methodology	Key findings
"Digital Health Interventions among People Living with Frailty: A Scoping Review"[6]	2021	The purpose of this study is to give an overview of Digital health interventions (DHI) used in frail elderly people.	Based on Population, Concept, and Context, a scoping review was conducted using PRISMA standards. 105 studies were included that fulfilled the eligibility criteria.	DHI was mainly used for monitoring in the frail older population, which contained either a sensor-based technology distribution mechanism or a feedback content for consumers or feasibility assessment.
"Internet use and need for digital health technology among the elderly: a cross-sectional survey in China"[11]	2020	The research was conducted to identify the use of internet and digital health technology in the elderly in China and the factors influencing this use.	A cross- sectional study was conducted for people above the age of 60 years, who were randomly chosen from 13 cities in Heilongjiang province. A survey was conducted for a total of total of 669 subjects using questionnaires from May 1 to July 31, 2018.	The study subjects were more inclined towards smart bracelets, emergency callers, telemedicine, and online health consultation and very few of them used internet for medical bill payment and appointment registration are done through online mode. Age, marital status, sex, monthly income, level of education, number of friends, and social participation were the main factors influencing the use of digital technology.

"Older adults' perspective on using digital technology to maintain good mental health: Interactive group study"[3]	**2020**	**This study was conducted to explore the factors which motivate or hinder the use of digital technology (apps and websites) to support a good mental health by the older adults.**	**A qualitative study was conducted among a total of 15 older adults aged 50 years or older. Interactive techniques were used to understand the experience of the study subjects with the application of digital technology in order to promote mental wellness.**	**Self-reliance, averting loneliness, normalization, facilitated expression were found to be some of the motivators and fear of consequences, the impact of low mood on readiness to engage with technology, and a lack of prior knowledge of digital technologies were some of the barriers for digital technology use to improve mental health among older adults.**
"Usability of a self-administered geriatric assessment mHealth: Cross-sectional study in a geriatric clinic"[9]	2020	The study's goal was to evaluate the applicability of a geriatric assessment smartphone application that is self-administered.	A cross-sectional study was conducted, which included 72 study subjects from a geriatric practice from Ain Shams University Hospital, Cairo, Egypt.	The mHealth geriatric assessment is very beneficial in times when physical distancing has to be maintained and it can also provide pre-comprehensive geriatric assessment. Though it cannot replace clinical examination and multidisciplinary standard CGA.

"Impact of IoT on geriatric telehealth"[5]	**2020**	**The goal of this study is to understand the advantages of using Internet of Things technology for geriatric telehealth.**	**An exploratory case study was conducted, and data was compared between rates of re-hospitalization of those who used telehealth services in comparison to individuals who did not use telehealth services.**	**Rate of re-hospitalization decreased in the patients using telehealth services in comparison to those patients who did not use telehealth services. People using tele-health were also shown to be taking better care of their health.**
"Mobile applications for elderly healthcare: A systematic mapping"[8]	2020	The purpose of this research was to understand the use of mobile applications for elderly healthcare.	A SLM was done of 149 papers that met the eligibility criteria.	It was found that the majority of mobile apps related to the elderly health were concentrated on Personal Health Tracking category, which shows that there is a great deal of interest in mobile application-based health monitoring services.
"VA Video Connect for Clinical Care in Older Adults in a Rural State During the COVID-19 Pandemic: Cross-Sectional Study"[7]	2020	The aim The goal was to see if elder veterans were capable and willing to engage in a VVC visit during the COVID-19 pandemic.	A cross-sectional study was carried out. Telephonic interviews were taken of 118 older veterans at Central Arkansas Veterans Healthcare System.	There were many factors affecting the use of VVC visit. Some that were identified in this study were access to the proper equipment, internet access, and the education status of the patients.

RESULTS

FIGURE 4.1: Telemedicine market size in India during 2019, 2020 and 2021

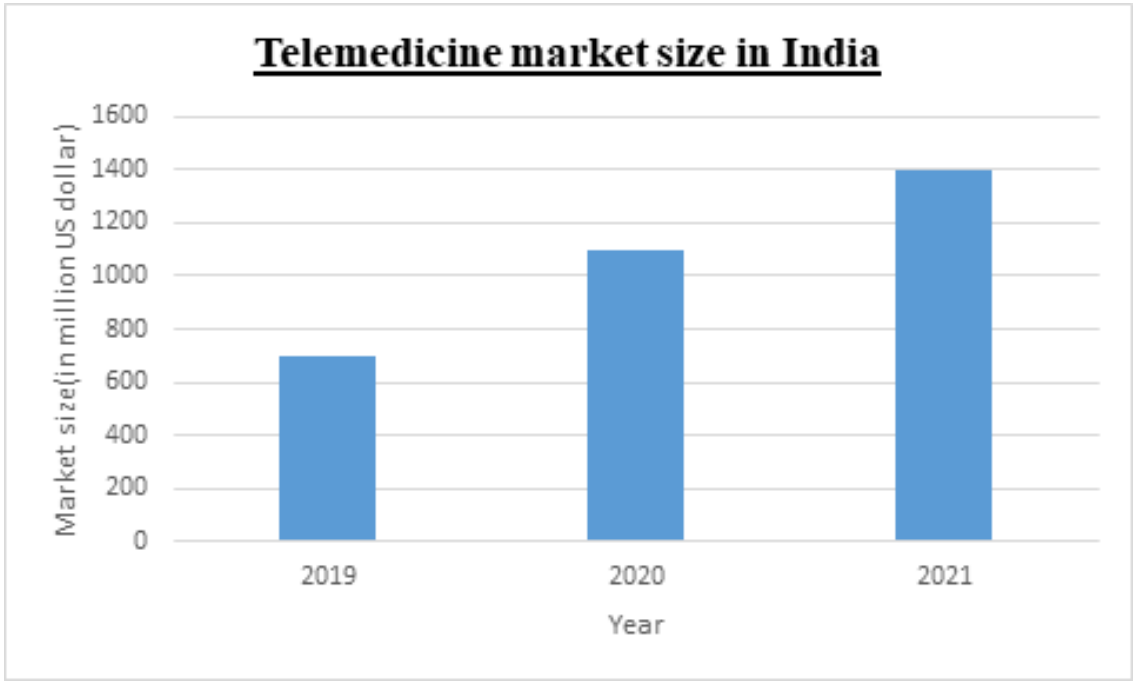
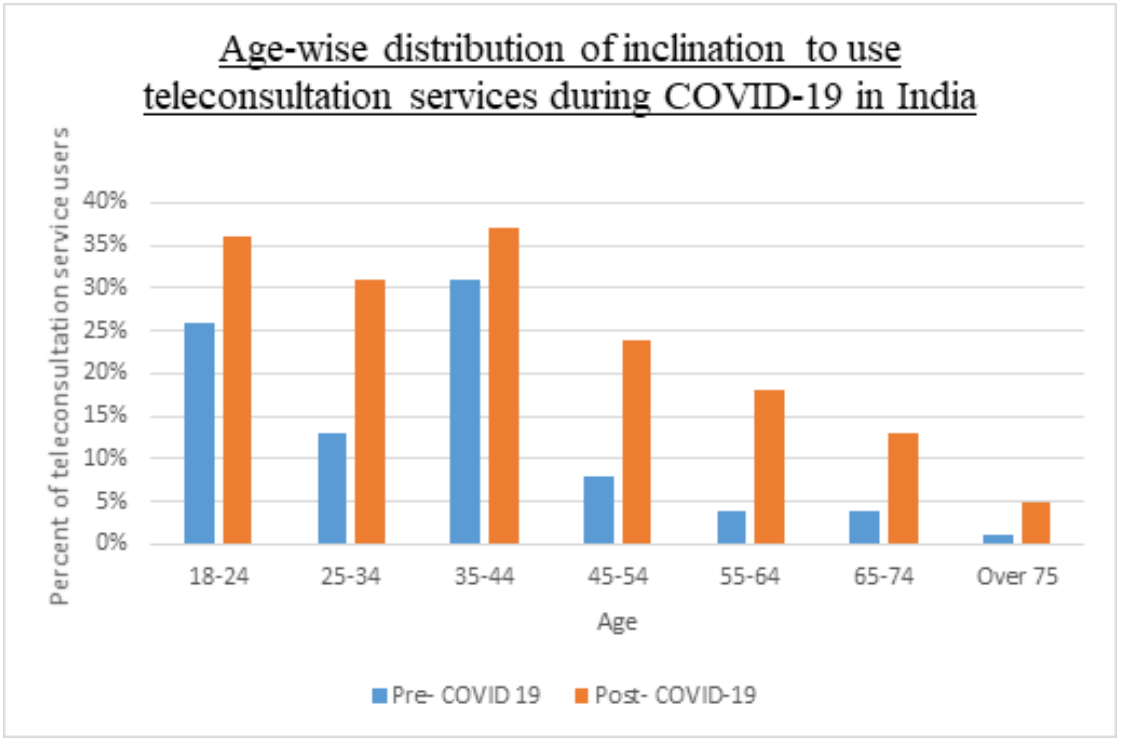


FIGURE 4.2: Age-wise distribution of inclination to use teleconsultation services in India before and after COVID-19



SWOT ANALYSIS

STRENGTH	WEAKNESS
It can help in providing social connection, thereby reducing loneliness and will help in improving the mental health of the elderly. It can provide healthcare at home, which will help the problem of accessibility and in cases when physical distancing (like during COVID-19) must be maintained. Mobile apps and wearables can help not only help the elderly but also their caregivers in maintaining and keeping track of the health and medicines of the elderly. Less chances of acquiring infections.	Low acceptance of digital technologies due to lack of knowledge and fear of loss of privacy. Everything cannot be done through digital technology. It cannot replace clinical care or taking laboratory tests. All the insurance do not cover for telemedicine.
OPPORTUNITIES	THREATS
Research and development in this area will also be helpful during the post-COVID period.	Lack of knowledge about using digital technology. Lack of proper equipment or internet connection.

CONCLUSION:

There is a huge scope of use of digital health technology for the elderly in India, especially during the COVID-19 times. Though government initiatives like providing telehealth insurance, providing internet connectivity in all areas of the country, and providing education to people about using the gadgets so that they have access to digital health, will go a long way in improving the situation.

THANK YOU