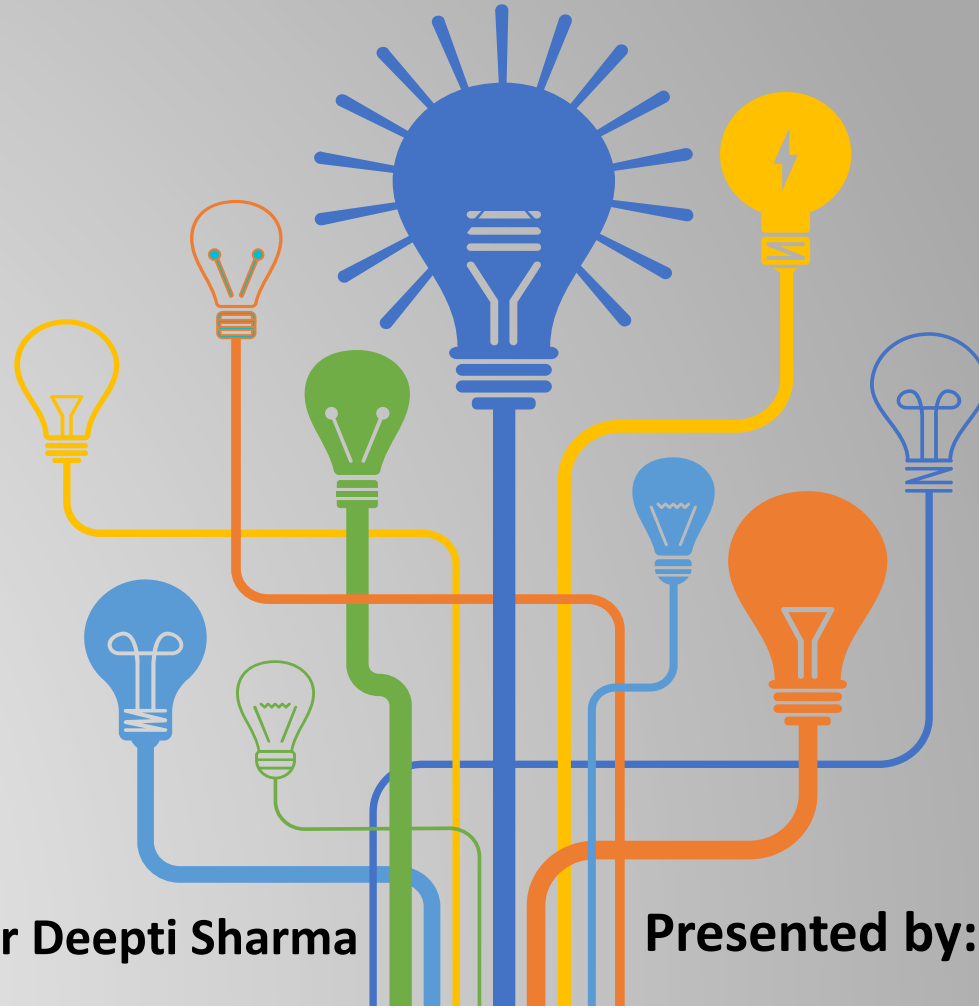


**IMPACT OF COVID-19 PANDEMIC
ON
PEOPLE'S AWARENESS AND PERCEPTION
TOWARDS HOME HEALTHCARE SERVICES: A STUDY**



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INTRODUCTION

- In December 2019, Wuhan Municipal Health Commission (WMHC) reported 27 cases of viral pneumonia with recent exposure to wildlife animals at Huanan Sea-food wholesale market in Wuhan, China. WHO declared coronavirus outbreak a Public Health Emergency of International Concern on January 31, 2020, and a pandemic on March 11.
- COVID-19 pandemic has acted as an innovation catalyst in healthcare. Due to its contagious nature and stay at home protocols all businesses and sectors have shifted to provide services at the doorstep. This also applies to healthcare sector where virtual health, telemedicine, home care services seeped into India which was not much accepted earlier.



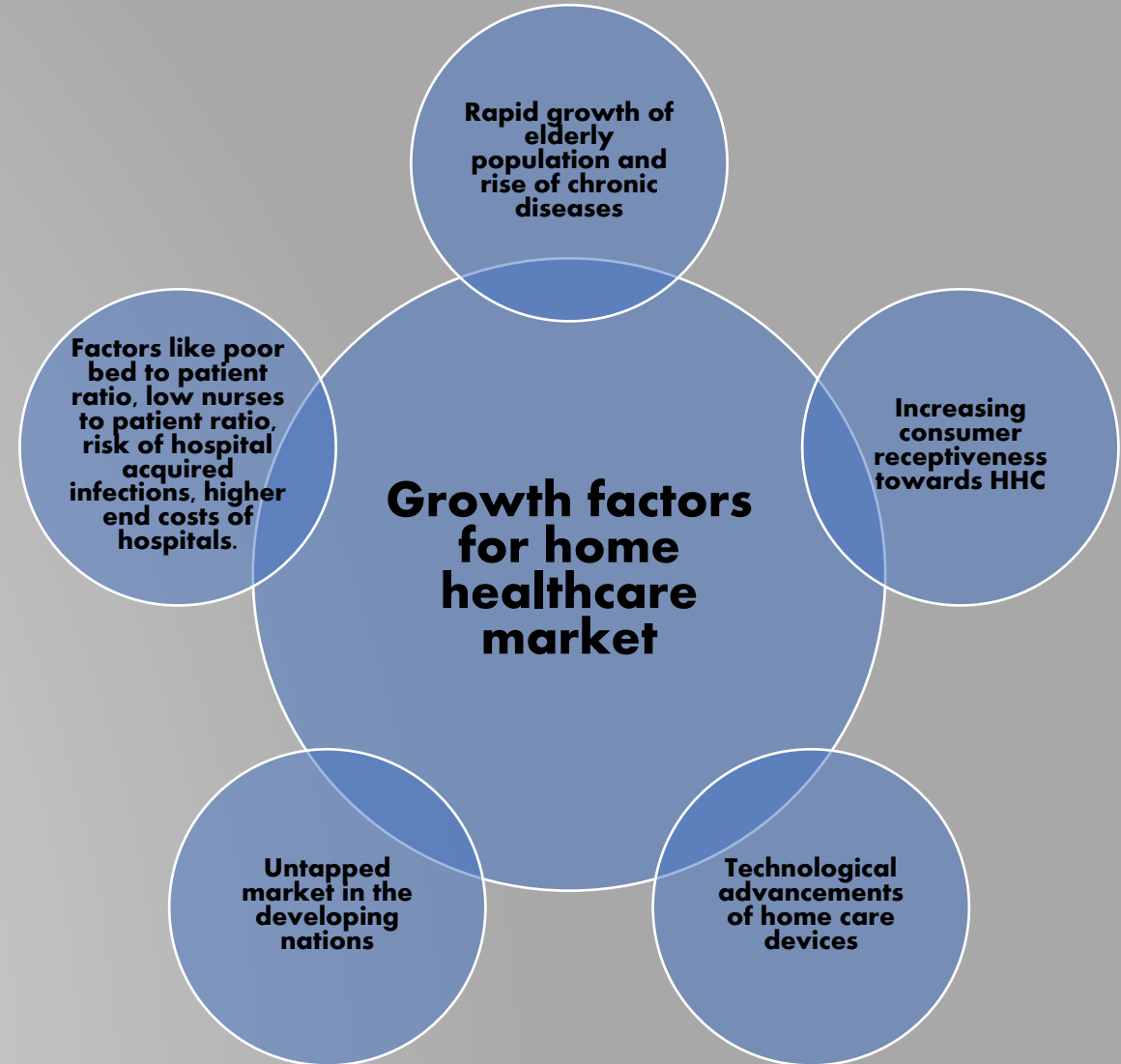
HOME HEALTHCARE MARKET

GLOBAL LEVEL

The global home healthcare market size is forecasted to be USD 274.7 billion by the year 2025. Currently as of 2020, the market size stands at USD 181.9 billion with a compound annual growth rate of 8.6 percent during the projected period.

COUNTRY LEVEL

The Indian home healthcare market sized USD 5.2 billion in 2019 and is forecasted to grow four times to USD 20 billion by 2027; with a CAGR of 19.2 percent.



WHAT IS HOME HEALTHCARE?

Home healthcare refers to a range of healthcare services a patient can render at home

Home healthcare market

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graph LR; A[Home healthcare market] --> B[By services]; A --> C[By product]; B --> D["Skilled nursing, physician visits, rehabilitation therapy, hospice and palliative care, physiotherapy, respiratory therapy, infusion therapy, pregnancy care, cancer care, basic support care, chronic disease management care"]; C --> E["Therapeutic segment: C-PAP, Bi-PAP, ventilators, nebulizers, oxygen delivery systems, IV equipment, dialysis equipment, inhalers"]; C --> F["Diagnostics and monitoring products: Blood glucose monitors, blood pressure monitors, pulse oximeters, heart rate monitors, HIV test kits, home sleep testing devices, coagulation monitoring products, ovulation and pregnancy test kits"]; C --> G["Mobility care products: Wheelchairs, walkers, canes, crutches and mobility scooters."];
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By services

Skilled nursing, physician visits, rehabilitation therapy, hospice and palliative care, physiotherapy, respiratory therapy, infusion therapy, pregnancy care, cancer care, basic support care, chronic disease management care

By product

Therapeutic segment: C-PAP, Bi-PAP, ventilators, nebulizers, oxygen delivery systems, IV equipment, dialysis equipment, inhalers

Diagnostics and monitoring products: Blood glucose monitors, blood pressure monitors, pulse oximeters, heart rate monitors, HIV test kits, home sleep testing devices, coagulation monitoring products, ovulation and pregnancy test kits

Mobility care products: Wheelchairs, walkers, canes, crutches and mobility scooters.

OBJECTIVE OF THE STUDY



To investigate the knowledge and perception of the general population towards home healthcare services in India.



To understand the impact of COVID-19 pandemic in changing the population's perception towards availing healthcare services at home.

METHODOLOGY

- **Study Design:** Cross-sectional descriptive study design
- **Study setting:** India
- **Sampling technique:** Non-probability, convenience sampling
- **Data type:** Primary data
- **Inclusion and Exclusion Criteria:** The target population was set to be people above 18 years of age who are residents of India and own a smartphone. Population below 18 years of age were excluded from the study.
- **Sample size:** 319 individuals (324 filled surveys out of which five participants disagreed to participate).
- **Data analysis:** Using IBM SPSS version 26.0 and Microsoft Excel as needed.

RESULTS AND DISCUSSION (n=319)

Demographic characteristics

Gender: 55% males and 44 % females

Age: Mean age of sample 29.08 with SD of 8.472, indicative of participants being of the age group of 21 to 37 years of age.

Area of residence: 75 % from urban areas, 18 % from semi-urban and 7 %n from rural areas. Highest proportion from Maharashtra (54 %), followed by Tamil Nadu (7.5 %) and Delhi (6.3 %)

Education level: 55 % post-graduates, 42 % graduates, 3 % have done secondary schooling and 0.6 % have done their primary schooling

Employment status: 174 respondents are employed, 101 respondents are students, 10 respondents have their own business, 33 respondents are not employed, and 1 respondent has retired from work.

Awareness of the respondents:

Heard of HHC prior to COVID-19 pandemic

- 70 % of the respondents claimed being aware of home healthcare services prior to the pandemic.

Who are eligible to receive care at home

- 18 % respondents feel the care is limited for elderly people, whereas 75 % respondents feel the care can be availed by all (children, adults, and old people). Despite of being aware of this majority of the cohort perceive that home healthcare services are to be preferred only for terminally ill or old people. This denotes a gap in their awareness and perception of use of the services.

HHC helps reduce caregiver/patient stress

- 250 respondents are opiated that HHC services can help reduce the caregivers'/patients' stress, 61 respondents are unsure if it will help reduce stress and 7 respondents disagree that HHC can relieve any such stress.

Ever received HHC services

- 26 % (82 respondents) of them have availed services in the past and 73 % (231 respondents) have not availed any such services.

If yes, which services were availed from the given list

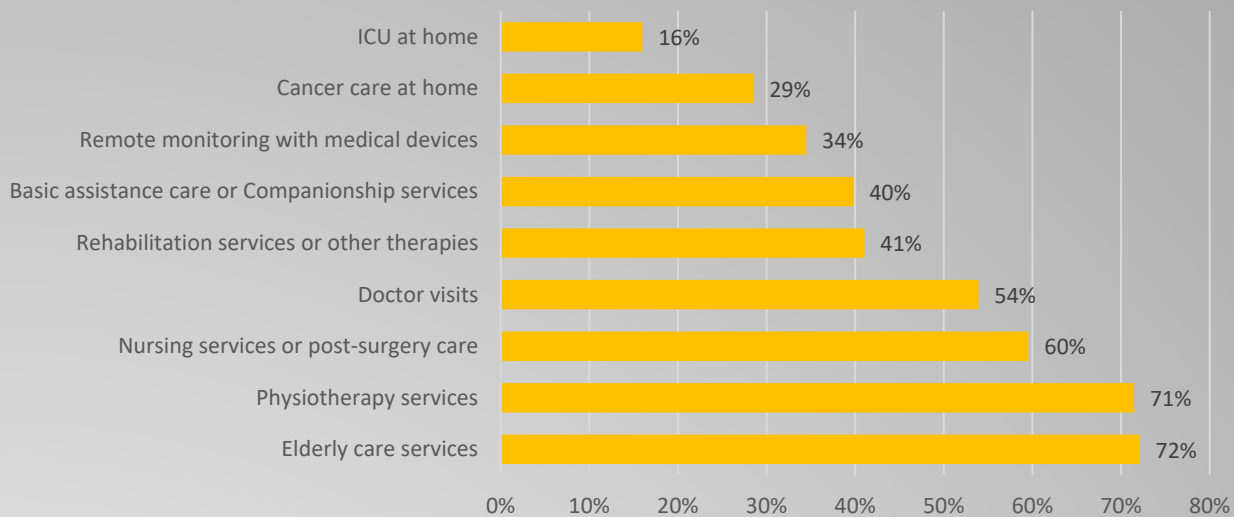
- 110 respondents have later chosen the services they have availed; this hints that maybe they were not aware that the services they choose fall under the category of home healthcare services. Almost half of them have availed doorstep delivery of medicines, diagnostic services at home and quarter of them have availed COVID-19 isolation services.

Perception of respondents (using Likert scale):

Questions	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Opinion towards home healthcare services					
Provides one on one personalized care	99 (31.0)	159 (49.8)	55 (17.2)	4 (1.3)	2 (0.6)
Comfortable with clinical staff being around at home	67 (21.0)	166 (52)	72 (22.6)	11 (3.4)	3 (0.9)
Known environment/comfort at home helps with patient's prognosis	176 (55.2)	115 (36.1)	22 (6.9)	4 (1.3)	2 (0.6)
Lesser chances of Hospital acquired infections (HAI)	139 (43.6)	142 (44.5)	27 (8.5)	9 (2.8)	2 (0.6)
Will trust external support/treatment at home	78 (24.5)	149 (46.7)	72 (22.6)	16 (5.0)	4 (1.3)
Patient conditions'/needs cannot be met at home due to limitations	61 (19.1)	149 (46.7)	83 (26)	21 (6.6)	5 (1.6)
HHC is expensive compared to hospital costs	70 (21.9)	111 (34.8)	85 (26.6)	34 (10.7)	19 (6.0)
Preferred only for terminally ill or old people	73 (22.9)	136 (42.6)	71 (22.3)	29 (9.1)	10 (3.1)
Invades privacy or independence at home	44 (13.8)	127 (39.8)	93 (29.2)	41 (12.9)	14 (4.4)
Provides protection of patient's identity better than hospital environment	76 (23.8)	129 (40.4)	92 (28.8)	16 (5.0)	6 (1.9)

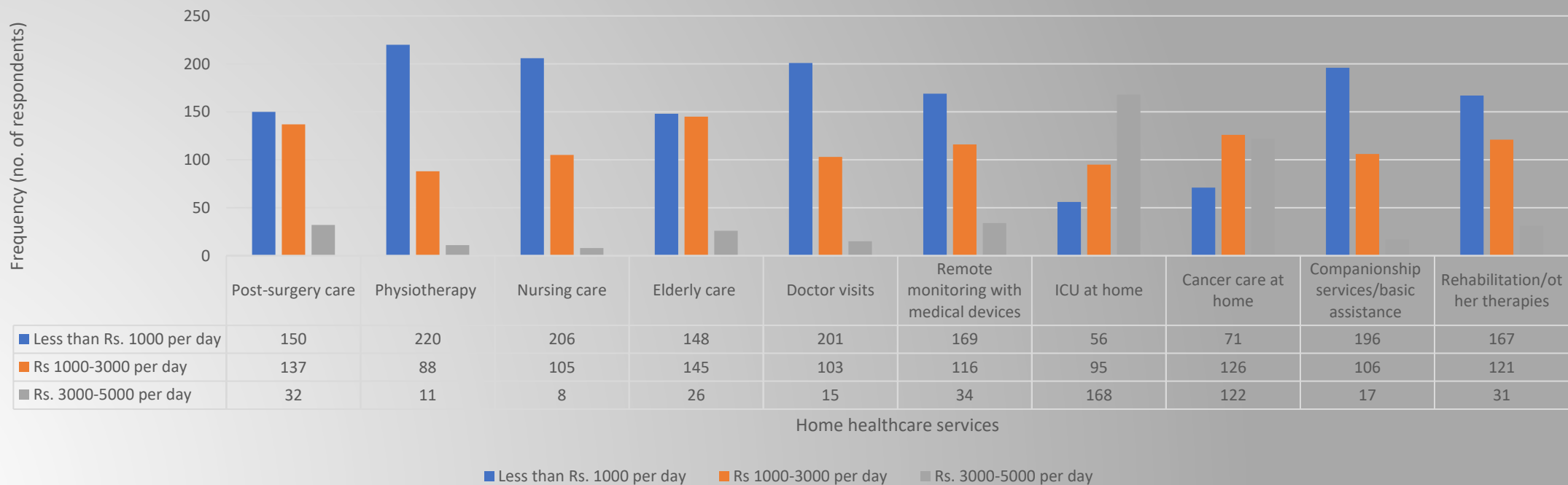
The participants overall perceived home care services positively as majority of them agreed that home care provides one on one care, helps with better prognosis due to known environment, and leads to lesser hospital acquired infections. They also have an understanding that not all the patients' medical needs can be met in a home setting. Also, majority of them perceive that home care can lead to invasion of privacy or independence.

Inclination towards availing HHC services

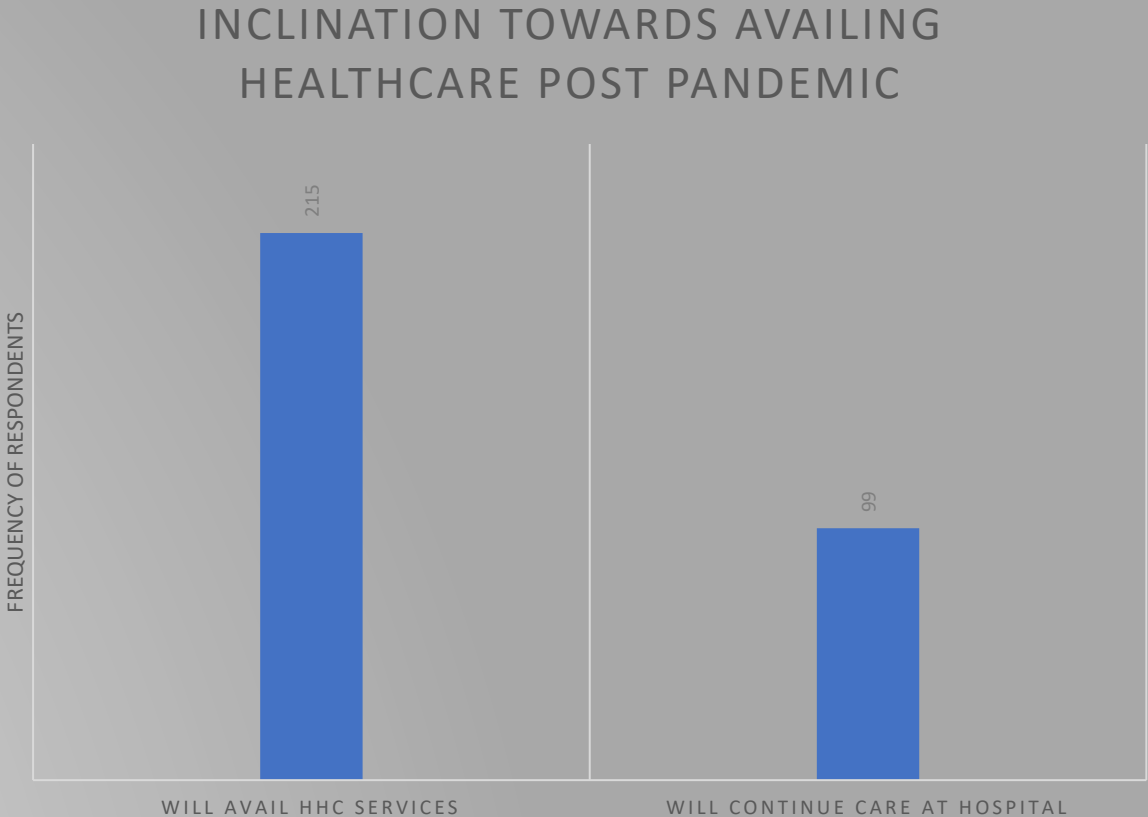
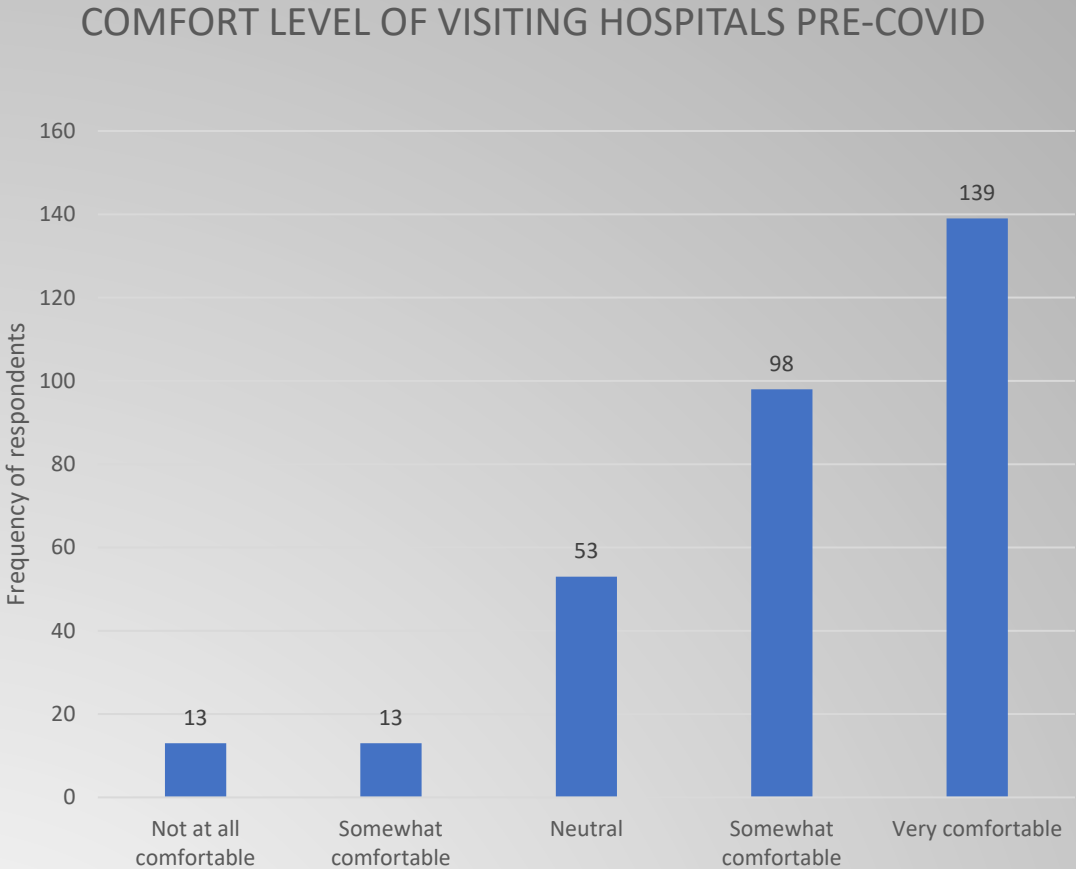


Regarding inclination towards availing home care the participants majorly would avail elderly care services at home, physiotherapy services, nursing services or post-operative care and doctor visits at home. From perceived price point majority of respondents would shell out less than Rs. 1000 for physio, nursing, doctor visits, remote monitoring using medical devices, companion and rehabilitation services. For post surgery, elderly care the respondents would shell Rs. 1000 to 3000 and for ICU at home and cancer care at home they would likely shell up to Rs. 5000.

Perceived price point for home healthcare services



Inclination towards Home Healthcare services: Change of perception



The respondents were fairly comfortable in visiting hospital to avail healthcare prior to pandemic. Furthermore, when understanding if the peoples’ perception has changed post pandemic about 215 respondents said that they would like to avail home healthcare services going forward and about 99 respondents would still continue availing care at hospitals.

QUESTION

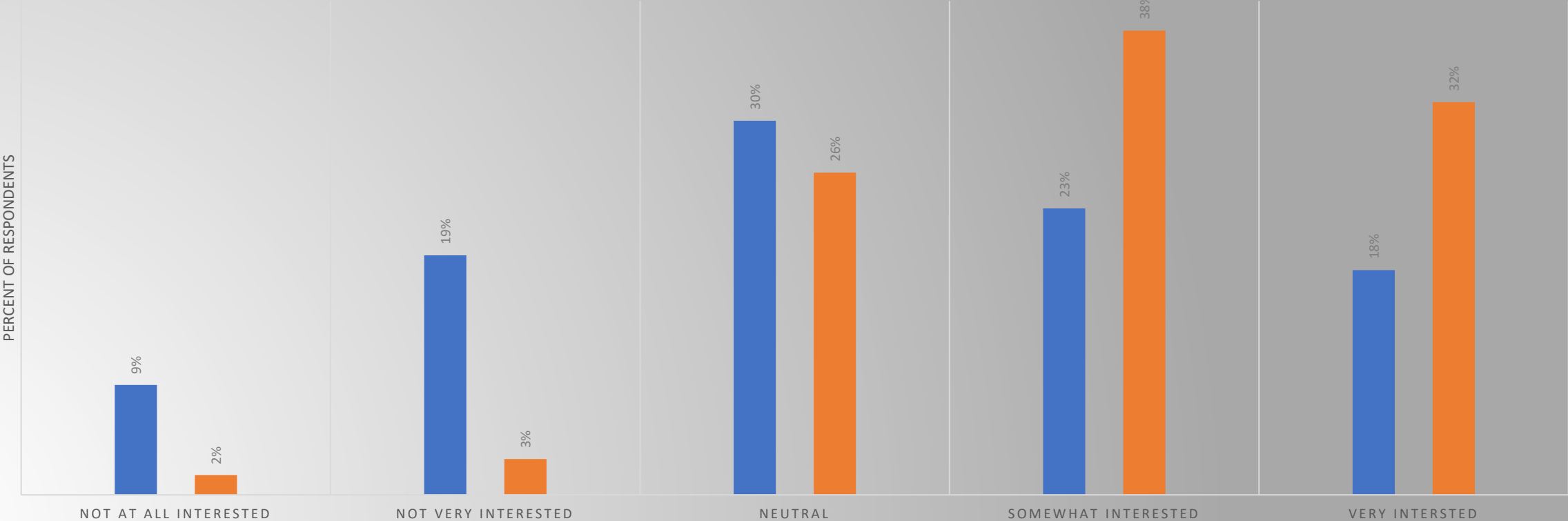
FREQU
ENCY PERCENT

Covid-19 pandemic has created awareness about HHC			
	Agree	299	93.7
	Disagree	16	5.0

94 percent of the participants feel that COVID-19 has certainly fuelled the awareness of home healthcare services. This can be due to the stay at home been imposed due to the pandemic, which pushed everyone to provide or receive services at the doorstep. Also a shift of inclination to avail home care post pandemic as compared to pre pandemic norms.

CHANGE OF PERCEPTION TOWARDS AVAILING HHC PRE AND POST PANDEMIC

Pre-covid Post covid



CONCLUSION

An attempt is made to understand the people's awareness and perception regarding home healthcare services. With the home care market being new in India and COVID-19 pandemic acting as an innovation catalyst there has been a definite growth for this domain. However, the awareness of the market is not disseminated equally amongst the population. The perception of population towards the services might be positive however, when related with the fee for service it sees a downward trend. Thereby more awareness or rather marketing of the healthcare services and products must be done to positively push the customer education norms for home healthcare care services in India.