European Journal of Molecular & Clinical Medicine
ISSN 2515-8260 Volume 09, Issue 08, 2022

IMPACT OF COVID-19 PANDEMIC ON OLD PEOPLE IN INDIA: AN EMPIRICAL RESEARCH

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Abstract

Background – There has been a significant impact of COVID-19 on the global economy and public health. Various countries have made unmatched efforts and awareness to ensure containment of this deadly virus. In order to make it possible, several routine activities have been affected which changed behavioural patterns of the common public. A lot of countries have imposed lockdown, social distancing, use of masks and sanitizers, frequent hand washing, vaccination, and other preventive measures. Elderly citizens have been the most vulnerable group which has been affected by the pandemic.

Objective – Considering the above arguments, this study is aimed to study the impact of COVID-19 pandemic on elderly people in India, especially their daily life, physical and mental health, social life, and preventive measures taken by them.

Methodology – An empirical survey was conducted as part of descriptive research. A self-structured questionnaire was sent through Google Form to collect survey data online. Total 126 responses were collected to analyse the impact of COVID-19 on elderly. All the survey participants are elderly to meet the inclusion criteria. SPSS version 22 was used to analyse the survey data.

Result – The finding of the study suggests that there was a significant impact of COVID-19 on daily life and overall health of elderly in India ($p<0.05$). However, the best part is that all of the survey respondents have followed all security measures suggested by the government, such as double dose of vaccination, social distancing, masks and sanitizers, and avoiding social gatherings.

Keywords: *COVID-19, social distancing, elderly population, pandemic, lockdown, vaccination*

1. Introduction

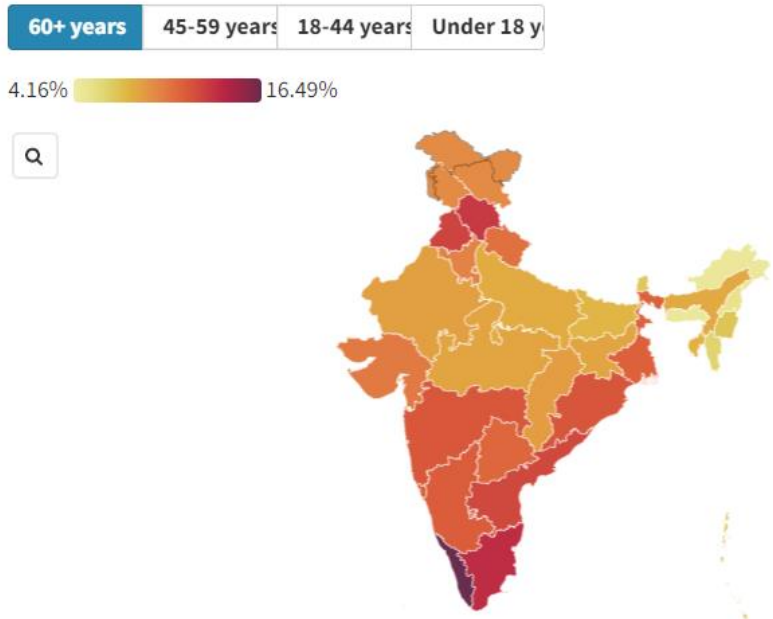
Higher mortality risk was found during the first wave of COVID-19 pandemic among the older population aged above 60 years, especially suffering from pre-existing chronic illnesses (Santesmasses et al., 2020). Across the world, studies have reiterated the higher risk of fatality and hospitality in national-level information in most of the countries. Around 86% of deaths reported among the elderly in countries like Chile and Colombia. Around 70% of deaths are reported amongst the population above 60 years old (Global Platform, 2022).

1.1 Background

There are only a few states which reported age-specific data but India has still followed the trend and found case-rate in elderly adults. In West Bengal, 7.45% of case-fatality rate was found among population aged above 75 years and 3.41 among people aged from 60 to 75 years, while 0.32% in adults aged 31 to 45 years and 1.21% in adults aged 46 to 60 years, as of November 26, 2021 (WB Health Report, 2021). Kerala is the state where 54% of deaths are reported among senior citizens above 60 years old (GoK Stats, 2021). Around 70% of all deaths are concentrated in the bracket of 46+ years in Nagaland (Govt of Nagaland, 2021). Diabetes and hypertension are the most significant comorbidities that have been causing death.

As per the report of "National Commission on Population", the population of elderly adults in India is above 60 years, including 67 million men and 71 million women. This age group in the past 60 years has doubled its population in 2021 and will rise up significantly. Kerala ranks top for having the highest rise in population of elderly in India, i.e., 16.49%, followed by Tamil Nadu (13.64%) and Himachal Pradesh (13.04%) (Figure 1).

Figure 1 – Demographics of Elderly Population in Indian states (2021)



Source – "Observer Research Foundation, 2021"

Though elderly population in India is significantly lower than other developed countries, they are still vulnerable due to poor social protection and structural flaws. Financial aid is relatively lesser which is allotted for their care, along with lack of outreach and geriatric healthcare infrastructure. Around 70% of elderly people rely on others for daily needs. They are deprived of the attention they need and social connections at the time of COVID-19 crisis. They are also not very tech-savvy, which further amplified their stresses.

2. Literature Reviews

COVID-19 is a serious health concern for being a highly contagious infection. Any contagious disease can easily and quickly spread in densely populated and metropolitan areas and people living there are more likely to come into contact with infection. However, some researchers have observed that COVID-19 doesn't rely entirely on population density for spreading. **Bhadra et al (2021)** investigated the influence of density of population on the spread of COVID-19 and mortality in India. They conducted an in-depth regression and correlation analysis of mortality rates and infection at district level because of COVID-19 and found moderate relation between population density and spread of infection.

On March 30, 2020, there were a total of 1251 cases and 32 deaths reported due to COVID-19 in India. **Chatterjee et al. (2020)** analysed the impact of pandemic on the healthcare system in India with a "stochastic mathematical model". It was predicted that it would have caused over 1.56 million deaths and 364 million cases by mid of July 2020 if it was not controlled. The healthcare resources were overwhelmed by May 2020 considering the growth rate. They observed that quick institutionalisation of NPIs could reduce the hospitalizations, total cases, death toll and ICU demands by around 90%.

There has been an association between COVID-19 and mortality in the global population. **Jain et al. (2020)** elucidated several causes behind lower mortality in India because of COVID-19. The mortality due to COVID-19 was lower in India and other south Asian countries than in western countries. They discussed various reasons behind this change in mortality because of COVID-19. However, this mortality has also affected populous countries like India because of lack of resources and care.

When there were limited resources available to contain the pandemic, mental health care and concerns took the backseat. Mental health problems have been significantly reported during this global crisis of COVID-19. **Roy et al. (2021**) reviews the existing mental health problems with global experiences during the pandemic and established reactive strategies in mental health in India. They performed a rapid synthesis of studies available to propose a conceptual model for dealing with mental health concerns during the epidemic. Some of the significant mental health issues were depression, anxiety, stress, denial, insomnia, fear and anger. People suffering from mental health conditions, frontline workers, elderly people and children were highly vulnerable. Suicides were also prevalent during COVID-19. Several measures are taken across the world to address mental health concerns across the world with intervention strategies and guidelines. Social media has also played a great role in this matter.

Various countries have taken measures like social distancing, lockdown, and shutdown of markets, educational institutions, and religious gathering to control the effect. Many people were deprived of income due to lockdown. Lockdown had severely affected middle-income and poor people. **Kundu & Bhowmik (2020)** have discussed the social effects of COVID-19 in India. The impact of domestic violence, health, essentials, psychology and politics have been discussed.

2.1 Research Gap

There are so many studies done on the overall impact of COVID-19 in India and its healthcare system. There are also various studies on the impact of pandemics on elderly people across the world. But there is a lack of such a kind of study in the Indian context. Hence, this study is aimed to fill this gap.

2.2 Research Question

- How was the impact of COVID-19 on daily life, physical and mental health, family and social life of elderly people in India?

2.3 Research Objectives

- To understand the impact of COVID-19 on daily life of elderly people in India
- To understand the impact of COVID-19 on physical and mental health of elderly people in India
- To understand the impact of COVID-19 on family relations and social life of elderly people
- To know the preventive measures elderly people have taken to survive the pandemic

2.4. Hypothesis

H1 – There is a significant impact of COVID-19 on overall health and life of elderly people in India

H0 - There is no significant impact of COVID-19 on overall health and life of elderly people in India

3. Research Methodology

It is observed that COVID-19 has made a significant and varied impact on various people. This way, senior citizens were highly vulnerable. So, it is important to understand the impact on them in India. Since higher age is another risk factor of infection, it has been paramount to understand the vulnerability status of senior citizens. High levels of poverty, vulnerability, weak health system and social protection are some of the factors that led to the economic and health crisis. Hence, this study is based on the impact of the pandemic on daily life, physical and mental health, family and social relations, and preventive measures they have taken.

3.1 Research Method & Design

An empirical study was conducted to fulfil the above objectives. This study undertakes descriptive research design in which data was gathered through Google Form.

3.2 Research Approach

A self-structured questionnaire was prepared with a 5-Point Likert scale to collect the responses. A total of 126 responses were collected in this study. Primary data was analysed using SPSS version 22 and interpreted through tables and charts for clear illustration. In order to find out the impact of COVID-19 on overall health and life of elderly people in India, one-sample t-test was conducted.

4. Analysis of Study

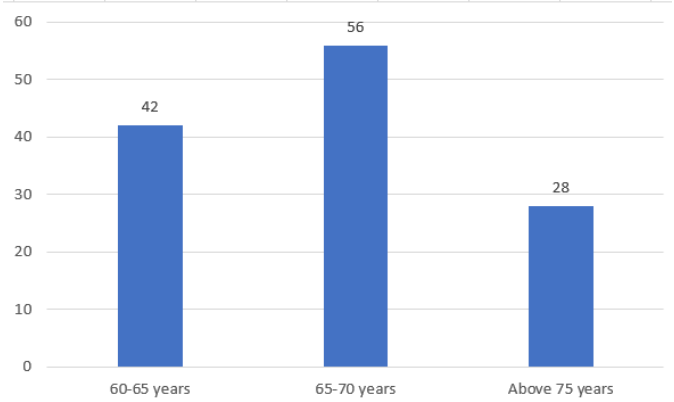
4.1. Sociodemographic Profile

In this study, the majority (44.4%) participants are aged 65 to 70 years old, while 33.3% participants are 60 to 65 years old and 22.2% participants are above 75 years old (Table 1) (Figure 2).

Table 1 - Age group

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	60-65 years	42	33.3	33.3	33.3
	65-70 years	56	44.4	44.4	77.8
	Above 75 years	28	22.2	22.2	100.0
	Total	126	100.0	100.0	

Figure 2 – Age group of participants

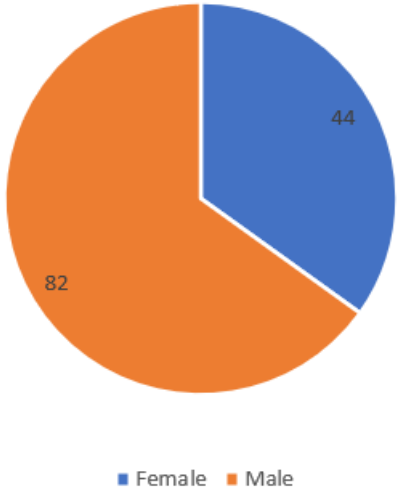


In this study, the majority (65.1%) participants are male and 34.9% participants are female (Table 2) (Figure 3).

Table 2 - Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	44	34.9	34.9	34.9
	Male	82	65.1	65.1	100.0
	Total	126	100.0	100.0	

Figure 3 – Gender of participants

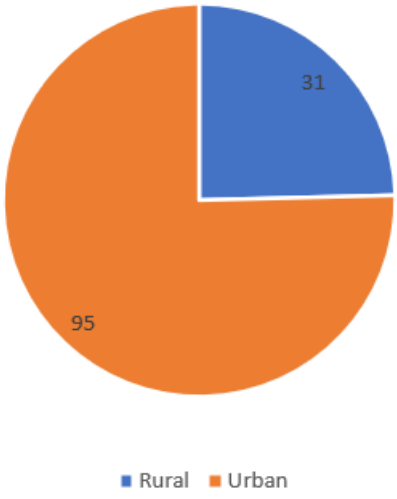


Majority (75.4%) participants belong to urban areas and 24.6% participants belong to rural areas (Table 3) (Figure 4).

Table 3 - Residence

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Rural	31	24.6	24.6	24.6
	Urban	95	75.4	75.4	100.0
	Total	126	100.0	100.0	

Figure 4 – Residences of Participants



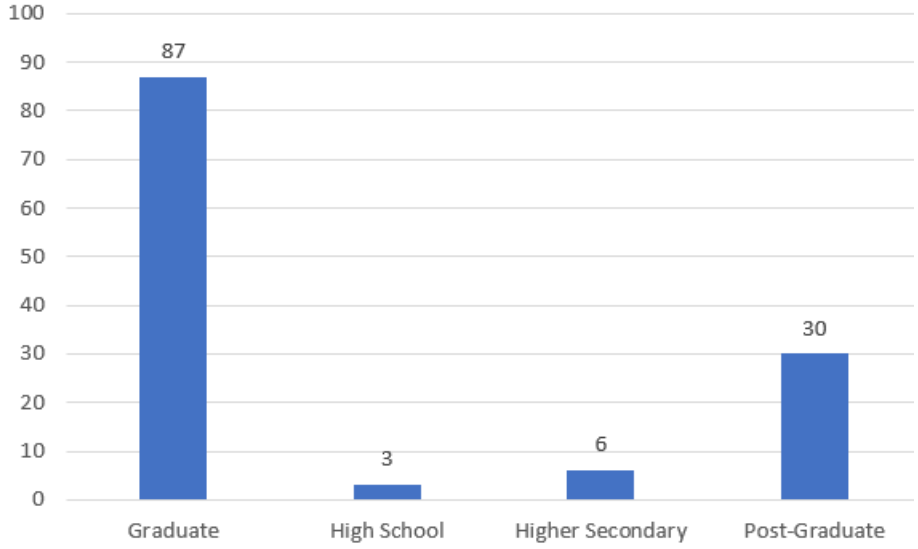
When it comes to education status, the majority (69%) participants have done graduation, while 23.8% participants have completed post-graduation, only 4.8% participants have attended

higher secondary and only 2.4% participants have completed high school education (Table 4) (Figure 5).

Table 4 - Level of Education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Graduate	87	69.0	69.0	69.0
	High School	3	2.4	2.4	71.4
	Higher Secondary	6	4.8	4.8	76.2
	Post-Graduate	30	23.8	23.8	100.0
	Total	126	100.0	100.0	

Figure 5 – Education of Participants

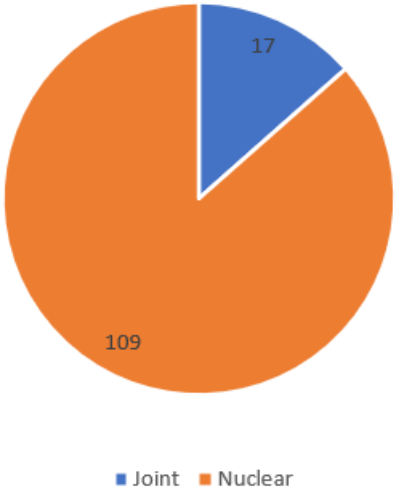


In this study, the majority (86.5%) of the aged population live in a nuclear family while only 13.5% participants live in a joint family system (Table 5) (Figure 6).

Table 5 - Family Structure

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Joint	17	13.5	13.5	13.5
	Nuclear	109	86.5	86.5	100.0
	Total	126	100.0	100.0	

Figure 6 – Family Structure



In this study, all of the participants were aware of COVID-19 and its implications (Table 6).

Table 6 - Were you aware of COVID-19?

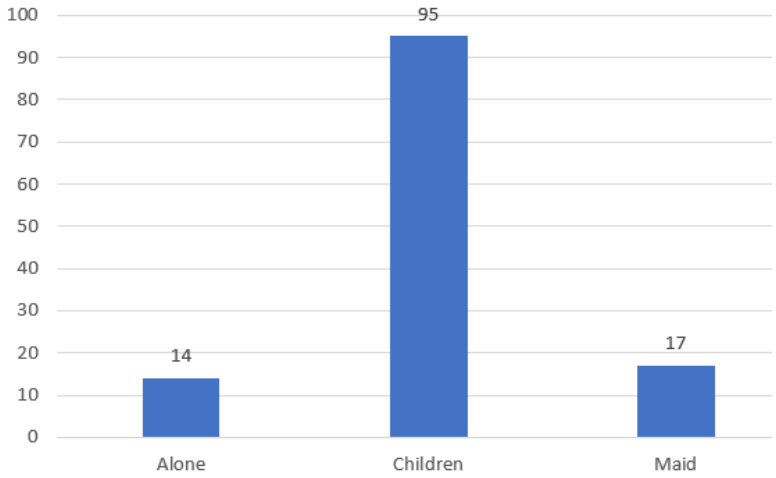
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	126	100.0	100.0	100.0

In this study, the majority (75.4%) participants said that their own children are their caregivers, while 13.5% participants had maids to take care of their daily needs and 11.1% participants were on their own (Table 7) (Figure 7).

Table 7 - Caregivers

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Alone	14	11.1	11.1	11.1
	Children	95	75.4	75.4	86.5
	Maid	17	13.5	13.5	100.0
	Total	126	100.0	100.0	

Figure 7 – Caregivers of participants



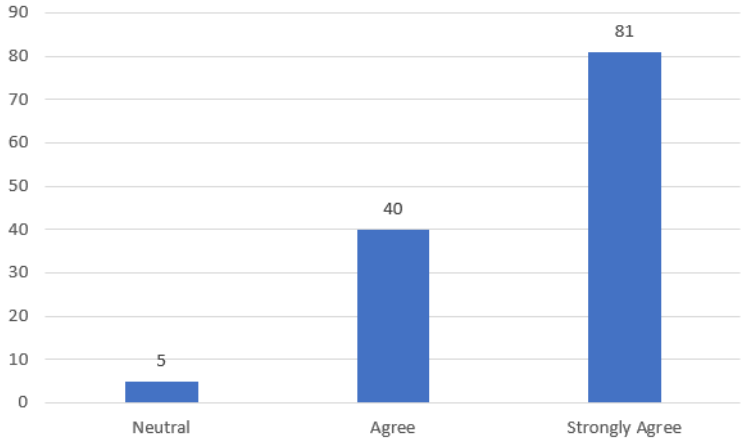
4.2. Impact on Daily Life

In this study, it is found that COVID-19 pandemic has significantly affected the daily routine of the majority (96%) of participants (Table 8) (Figure 8).

Table 8 – Impact on daily routine

COVID-19 pandemic has had a serious impact on your daily routine		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	5	4.0	4.0	4.0
	Agree	40	31.7	31.7	35.7
	Strongly Agree	81	64.3	64.3	100.0
	Total	126	100.0	100.0	

Figure 8 – Impact on daily routine

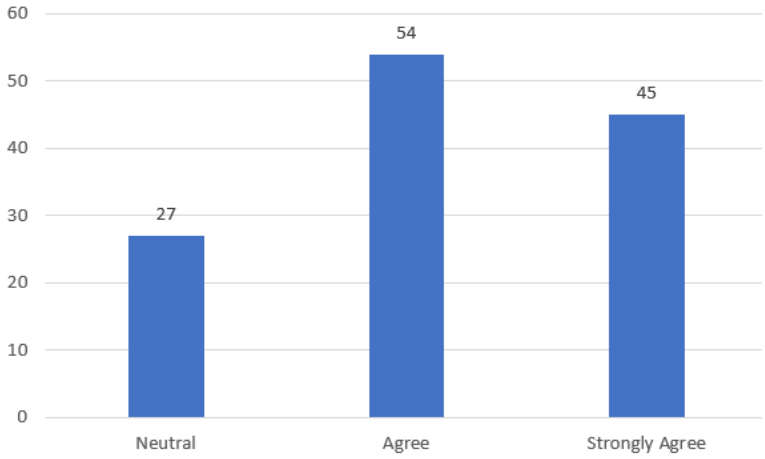


In this study, 42.9% agree and 35.7% participants strongly agree that they were restrained by lockdown from meeting loved ones, children and friends (Table 9) (Figure 9).

Table 9 – Isolation from family due to Lockdown

You were restrained by lockdown from meeting loved ones, children and friends		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	27	21.4	21.4	21.4
	Agree	54	42.9	42.9	64.3
	Strongly Agree	45	35.7	35.7	100.0
	Total	126	100.0	100.0	

Figure 9 - Isolation from family due to Lockdown

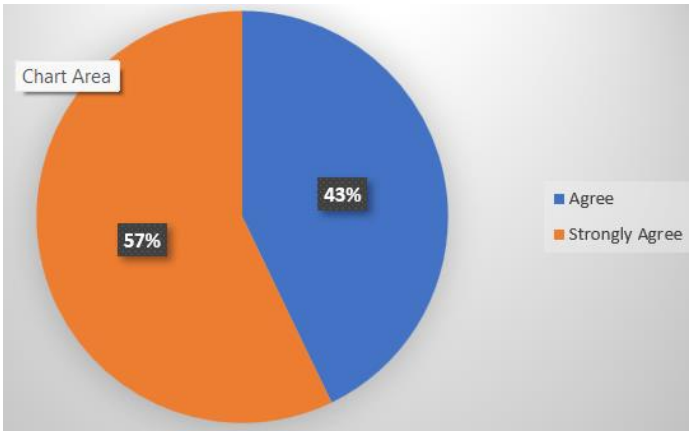


All the participants in this study agree and strongly agree that their daily income was affected by COVID-19 lockdown (Table 10) (Figure 10).

Table 10 – Impact of lockdown on income

Your daily income was affected by COVID-19 lockdown		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	54	42.9	42.9	42.9
	Strongly Agree	72	57.1	57.1	100.0
	Total	126	100.0	100.0	

Figure 10 – Impact of lockdown on income



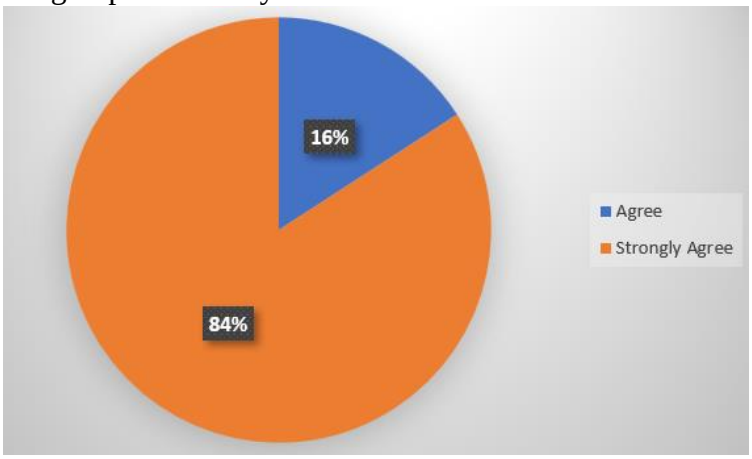
4.3. Impact on Mental Health

Lockdown was imposed to prevent the spread of COVID-19. During the period when people were at home, they were exposed to daily news and updates related to increasing cases of COVID-19 in India and in their places and declining healthcare facilities for those who were infected. Such types of news and updates really had a serious impact on mental health of participants (Table 11) (Figure 11).

Table 11 – Devastating Impact of Daily News on mental health

Daily news and updates related to COVID-19 cases were highly disturbing to your mental health		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	20	15.9	15.9	15.9
	Strongly Agree	106	84.1	84.1	100.0
	Total	126	100.0	100.0	

Figure 11 – Devastating impact of Daily News on mental health

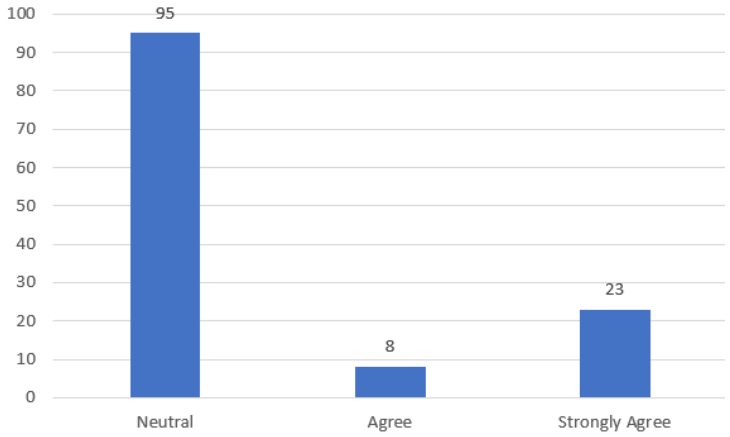


In this study, the majority (75.4%) participants were neutral with the opinion that they felt isolated from their loved ones due to COVID-19 restrictions (Table 12) (Figure 12). It is probably because they had various other means to contact loved ones during lockdown, which will be discussed later.

Table 12 – Isolation due to COVID-19 restrictions

You felt isolated from your loved ones due to COVID-19 restrictions		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	95	75.4	75.4	75.4
	Agree	8	6.3	6.3	81.7
	Strongly Agree	23	18.3	18.3	100.0
	Total	126	100.0	100.0	

Figure 12 - Isolation due to COVID-19 restrictions

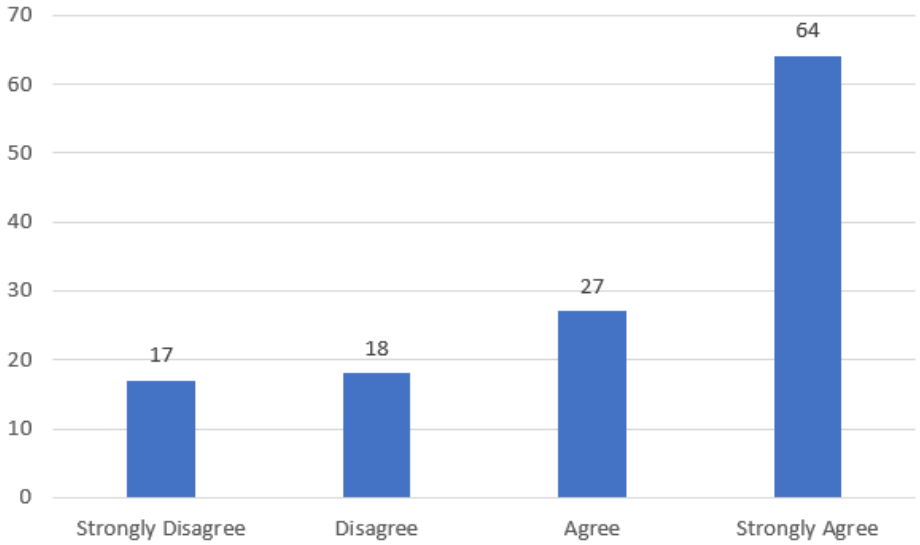


Along with daily news and updates on news channels, social media was also responsible for spreading fake news related to COVID-19, which posed significant fear and anxiety among the residents. In this study, majority (50.8%) participants strongly agree and 21.4% participants agree with that (Table 13) (Figure 13).

Table 13 – Anxiety and fear due to COVID-19

You faced significant anxiety and fear due to COVID-19		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	17	13.5	13.5	13.5
	Disagree	18	14.3	14.3	27.8
	Agree	27	21.4	21.4	49.2
	Strongly Agree	64	50.8	50.8	100.0
	Total	126	100.0	100.0	

Figure 13 - Anxiety and fear due to COVID-19



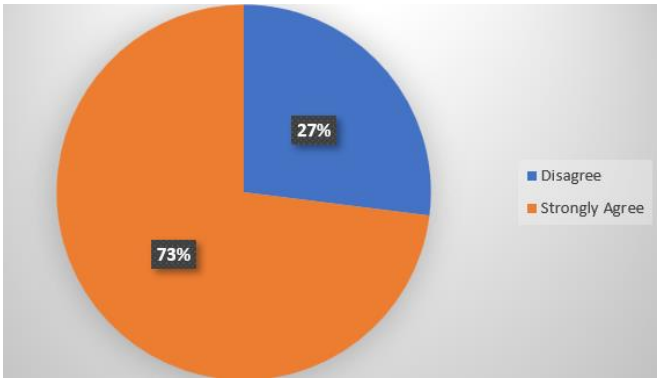
4.4. Impact on Physical Health

In this study, majority (73%) participants strongly agree that they were unable to see the doctor for regular checkups due to lockdown and 27% disagree, probably because they had used other mediums like Telemedicine apps, social media, video calls, etc. to get regular check-ups done at home (Table 14) (Figure 14). However, most participants may not be very tech-savvy to use digital mediums.

Table 14 - Inability to see doctor due to lockdown

You were unable to see the doctor for regular checkups due to lockdown		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	34	27.0	27.0	27.0
	Strongly Agree	92	73.0	73.0	100.0
	Total	126	100.0	100.0	

Figure 14 – Inability to see doctor due to lockdown

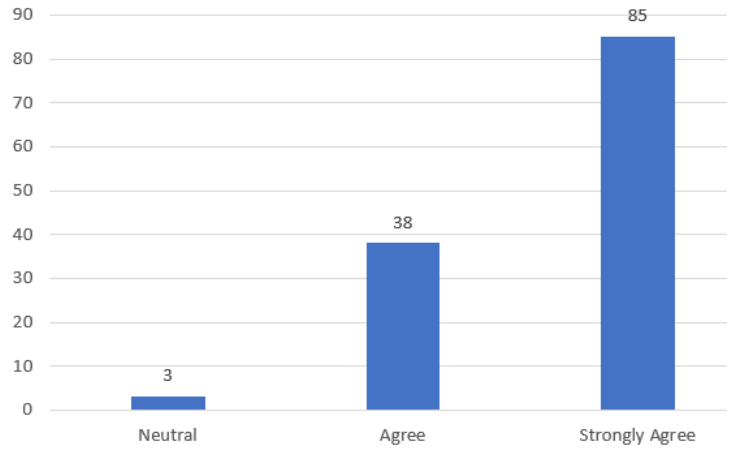


There are 67.5% participants who strongly agree and 30.2% participants who agree that their health used to get worse during COVID-19 (Table 15) (Figure 15).

Table 15 – Declining health during COVID-19

Your health used to get worse during COVID-19		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	3	2.4	2.4	2.4
	Agree	38	30.2	30.2	32.5
	Strongly Agree	85	67.5	67.5	100.0
	Total	126	100.0	100.0	

Figure 15 - Declining health during COVID-19



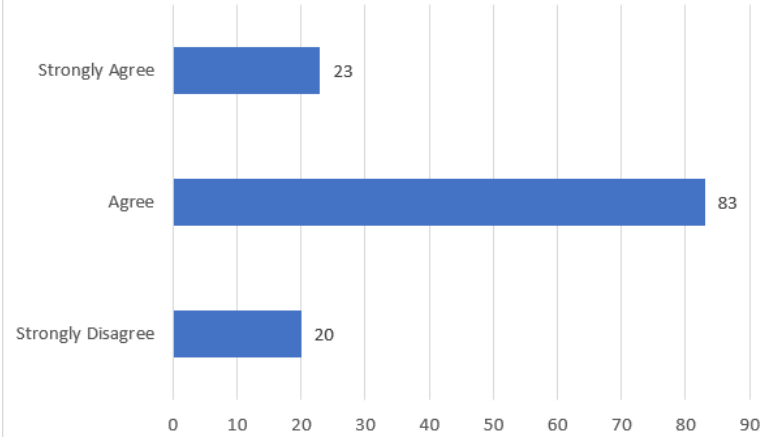
4.5. Impact on Family Relations

Majority (65.9%) participants agree and 18.3% participants strongly agree that they have been restricted by COVID-19 from meeting their relatives and family (Table 16) (Figure 16).

Table 16 – Participants unable to meet family due to COVID-19

COVID-19 had restricted you from meeting your family and relatives		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	20	15.9	15.9	15.9
	Agree	83	65.9	65.9	81.7
	Strongly Agree	23	18.3	18.3	100.0
	Total	126	100.0	100.0	

Figure 16 - Participants unable to meet family due to COVID-19



In this study, all the participants socialised with relatives and friends using video and voice calls (Table 17).

Table 17 – Usage of video and voice calls to socialise

You have socialised with relatives and friends through video and voice calls	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Agree	126	100.0	100.0	100.0

All the participants in this study strongly agree that their family gatherings and events had been affected by COVID-19 (Table 18).

Table 18 – Effect on family gatherings and events

COVID-19 has affected your family gatherings and events	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Agree	126	100.0	100.0	100.0

4.6. Preventive Measures Taken by Participants

In this study, all the participants have taken preventive measures against COVID-19. All of them used masks and sanitizers when going out, maintained social distancing in public areas, avoided social gatherings, took both doses of COVID-19 vaccine and followed all natural care recipes, yoga and other healthy techniques to boost immunity.

4.7. Impact of COVID-19 on overall health and life of Elderly People in India

In order to find out if there was a significant impact of COVID-19 on overall health and life of elderly people in India, One-Sample T Test was performed. The value of significance was below 0.05 at 95% confidence interval on all responses. It means H1 is approved, i.eThere is a significant impact of COVID-19 on overall health and life of elderly people in India (Table 19).

Table 19 - One-Sample Test

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
COVID-19 pandemic has had a serious impact on your daily routine	91.161	125	.000	4.603	4.50	4.70
You were restrained by lockdown from meeting loved ones, children and friends	62.398	125	.000	4.143	4.01	4.27
Your daily income was affected by COVID-19 lockdown	103.280	125	.000	4.571	4.48	4.66
Daily news and updates related to COVID-19 cases were highly disturbing to your mental health	148.121	125	.000	4.841	4.78	4.91
You felt isolated from your loved ones due to COVID-19 restrictions	49.081	125	.000	3.429	3.29	3.57
You faced significant anxiety and fear due to COVID-19	28.389	125	.000	3.817	3.55	4.08
You were unable to see the doctor for regular checkups due to lockdown	35.183	125	.000	4.190	3.95	4.43
Your health used to get worse during COVID-19	99.177	125	.000	4.651	4.56	4.74
COVID-19 had restricted you from meeting your family and relatives	33.557	125	.000	3.706	3.49	3.92
You have used sanitizers and masks properly when going out	260.000	125	.000	4.952	4.91	4.99
You have maintained social distancing in public places	316.825	125	.000	4.968	4.94	5.00
You avoided public gatherings	110.680	125	.000	4.667	4.58	4.75

You followed all natural care recipes, yoga and other healthy techniques to boost immunity	104.669	125	.000	4.595	4.51	4.68

5. Results

In this study, most of the survey participants are 65 to 70 years old and 60 t0 65 years old. Most of the participants are male, belong to urban areas, completed graduation, live in a nuclear family, have children as caregivers, and all of them were aware of COVID-19. When it comes to daily life, it is found that COVID-19 has had a serious impact on their daily routine, as they were restrained by lockdown from meeting loved ones, children and friends. In addition, their daily income was also affected by lockdown.

Well, daily life was not the only aspect which was affected by COVID-19. They were exposed to many things which affected their mental health, such as negative updates and news, fake news on social media, and feeling of loneliness due to restrictions because they couldn't meet their loved ones. All such factors increase anxiety and fear in mind. In terms of physical health, the majority of participants couldn't see the doctor regularly for check-ups due to lockdown. However, some participants didn't face this issue because they used various digital mediums to contact doctors. Due to this reason, their health used to get worse during COVID-19.

In addition, COVID-19 has also affected family relations. For example, elderly people couldn't meet their family and relatives personally due to restrictions. This way, their events and social gatherings had been affected by the pandemic. However, they used video calls to socialise with friends and relatives. The best part is that all of the participants have taken preventive measures like masks and sanitizers, social distancing, yoga, and taking both doses of COVID-19 vaccine.

6. Conclusion

In a nutshell, anxiety and fear was created during the pandemic in everyone's life, especially affecting the elderly people. Several measures have been taken by the government to deal with these concerns. Some people were privileged enough to maintain the same lifestyle quality even when staying indoors. However, the majority of participants faced financial problems and other issues due to lockdown. Shortage of hospital beds and medical equipment also affected the mental health of elderly in the form of added stress. Hence, it is very important to pay special attention to this vulnerable group, i.e., by providing more support and measures to keep them active and stress-free to avoid fear and isolation.

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