

**A CROSS SECTIONAL STUDY ON GERIATRICS DURING COVID-19 PANDEMIC****<sup>1</sup>Dr. Santhosh Kumar S.S., <sup>2\*</sup>Sowparnika Treasa Sabu and <sup>3</sup>Dr. Manju S. Nair**<sup>1</sup>Deputy Superintendent, Associate Professor in Emergency Medicine and Orthopaedics, Govt. Medical College, Trivandrum.<sup>2</sup>Assistant Professor, Dept. of Pharmacy Practice, Ezhuthachan College of Pharmaceutical Sciences, Trivandrum.<sup>3</sup>Professor, Dept. of Economics and Hon. Director Centre Agroecology and Public Health University of Kerala.**\*Corresponding Author: Sowparnika Treasa Sabu**

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**ABSTRACT**

The COVID-19 pandemic is impacting the global population in drastic ways. In many countries, older people are facing the most threats and challenges at this time. Although all age groups are at risk of contracting COVID-19, older people face significant risk of developing severe illness if they contract the disease due to physiological changes that come with ageing and potential underlying health conditions. COVID-19 is often more severe in people 60+yrs or with health conditions like lung or heart disease, diabetes or conditions that affect their immune system. From our study results, we understood that geriatric population from Kerala have better understanding than other states about Covid-19 pandemic. Majority knows about the importance of quarantine but still many are in the view that contact with other persons who are regularly going is not a problem. By proper counseling and through media Government should educate our elderly population more about the importance of reverse quarantine procedure for preventing the pandemic.

**INTRODUCTION**

The research for effective therapies and vaccines is going on worldwide for the Covid-19 pandemic. The large number of fatalities are causing irrespective of age, race, sex, and physiological conditions. A report has suggested that everyone will be exposed to the SARS-CoV-2 and that most of the world's population will be infected with COVID-19. Although COVID-19 affects all ages, individuals having comorbidities, such as diabetes, asthma, hypertension, cerebro-cardiovascular abnormalities, cancer, as well as immunocompromised and elderly people, are affected more severely, and exhibit a higher mortality rate. Age is believed to be a significant determinant of the clinical outcome, severity, disease course, and prognosis of the disease

COVID-19, which was initiated regionally at Wuhan of China, has become a global pandemic by infecting people of almost all the world. Human civilizations are facing threat for their survival and livelihood. To prevent the infection socially, the lockdown was imposed globally, which resulted in the halt of all economic and social activity in society. This led to cease global supply chains badly resulting in the global economy in bad shape. Quarantine and Reverse quarantine are commonly used terms in connection with pandemic COVID-19. Quarantine is found to reduce the risk of COVID-19 disease by 44–81% and mortality by 31–63%. Proper timing and duration of quarantine and the ability of the people and health care providers to adhere to the

quarantine procedures determine the success rate of quarantine.

During this COVID-19 pandemic, it has been observed that older people, individuals with diabetes, hypertension, lung disease, kidney disease and immunocompromised individuals are at risk of severe illness and considerably greater mortality with SARS-CoV-2 infection. So it is important to check the knowledge of geriatrics regarding the reverse quarantine procedures and life style they are following to prevent the further mortality.

**AIMS:** To conduct a research study in detail about the Reverse quarantine practice followed in India during Covid-19 pandemic.

**OBJECTIVES:** Testing knowledge about reverse quarantine measures of geriatric population in India.

**METHODOLOGY**

STUDY AREA: Whole of India

STUDY DESIGN: Cross sectional study

STUDY PERIOD: 6 months (SEP 2020- FEB 2021)

**Inclusion Criteria**

- Geriatric population above 60 years
- Those elderly population not previously infected with Covid-19 infection

- Family members having geriatric population at home.

#### Exclusion Criteria

- Those who are not willing to participate
- Those with severe psychiatric illness

#### Data Collection and Analysis

Our study was cross-sectional, carried out by a convenience, non probability sampling technique in India. This technique was cost-effective and time-saving. Researchers choose these samples just because they are easy to fix, approach and train. A semi-structured questionnaire was developed in straightforward, understandable English by using Google form. The questionnaire was disseminated to known through

Whats-App, e-mails and other social media platforms. The participants showed enough interest in giving their responses and forwarded it to their contacts, which resulted in getting responses from all over the country. Participants who possess smart phones with internet connectivity have participated in this study, which is very common in modern society.

#### Relevance of The Topic

Understanding about the Reverse quarantine practice is of high importance in current scenario to prevent the elderly population from further deaths.

## RESULTS

**Table 1: Age of The Senior Citizen.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	50 - 55	14	1.1	1.1	1.1
	55-60	18	1.4	1.4	2.6
	60-65	362	29.0	29.0	31.5
	66-70	268	21.4	21.4	53.0
	71-75	199	15.9	15.9	68.9
	76-80	167	13.4	13.4	82.2
	81-85	109	8.7	8.7	91.0
	86-90	77	6.2	6.2	97.1
	91-95	23	1.8	1.8	99.0
	96-100	13	1.0	1.0	100.0
	Total	1250	100.0	100.0	

**Table 2: Present Status of The Elderly.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	kooli	11	.9	.9	.9
	own business	52	4.2	4.2	5.0
	retired	846	67.7	67.7	72.7
	UNEMPLOYED	238	19.0	19.0	91.8
	working as employee	103	8.2	8.2	100.0
	Total	1250	100.0	100.0	

**Table 3: Family Income.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20-26000	152	12.2	12.2	12.2
	26-30000	10	.8	.8	13.0
	30-40000	155	12.4	12.4	25.4
	40-50000	146	11.7	11.7	37.0
	above 50000	533	42.6	42.6	79.7
	upto 20000 per month	254	20.3	20.3	100.0
	Total	1250	100.0	100.0	

**Table 4: Centre of Reverse Quarantine Facility.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	OWN HOME	1211	96.9	96.9	96.9
	RENTED	39	3.1	3.1	100.0
	Total	1250	100.0	100.0	

Table 5: State Which You Belong.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Andhra	10	.8	.8	.8
	Assam	28	2.2	2.2	3.0
	BIHAR	24	1.9	1.9	5.0
	Delhi	56	4.5	4.5	9.4
	Goa	29	2.3	2.3	11.8
	Gujarat	10	.8	.8	12.6
	HARYANA	14	1.1	1.1	13.7
	Karnataka	50	4.0	4.0	17.7
	Kerala	854	68.3	68.3	86.0
	Maharashtra	40	3.2	3.2	89.2
	MP	10	.8	.8	90.0
	Rajasthan	11	.9	.9	90.9
	Tamil Nadu	23	1.8	1.8	92.7
	Telangana	14	1.1	1.1	93.8
	UP	77	6.2	6.2	100.0
Total	1250	100.0	100.0		

Table 6: State Which You Belong \* Urban/Rural.

		Urban/Rural		Total
		Rural	Urban	
STATE WHICH YOU BELONG	Andhra	0	10	10
	Assam	13	15	28
	BIHAR	11	13	24
	Delhi	28	28	56
	Goa	0	29	29
	Gujarat	0	10	10
	HARYANA	0	14	14
	Karnataka	10	40	50
	Kerala	300	554	854
	Maharashtra	5	35	40
	MP	0	10	10
	Rajasthan	0	11	11
	Tamil Nadu	10	13	23
	Telangana	14	0	14
UP	13	64	77	
Total	404	846	1250	

Table 7: State Which You Belong \* Educational Status.

		Educational Status							Total
		Degree	Diploma	Pg	Phd	Primary level	Secondary level	Uneducated	
STATE WHICH YOU BELONG	Andhra	5	0	0	0	5	0	0	10
	Assam	10	13	5	0	0	0	0	28
	BIHAR	24	0	0	0	0	0	0	24
	Delhi	28	0	0	0	14	14	0	56
	Goa	10	0	5	0	0	14	0	29
	Gujarat	8	0	2	0	0	0	0	10
	Haryana	10	0	4	0	0	0	0	14
	Karnataka	20	0	30	0	0	0	0	50
	Kerala	359	103	128	13	98	139	14	854
	Mhrstra	40	0	0	0	0	0	0	40
	MP	0	0	0	0	0	10	0	10
	Raj	11	0	0	0	0	0	0	11
	TN	10	3	10	0	0	0	0	23
	Telang	14	0	0	0	0	0	0	14
	UP	50	0	14	0	0	13	0	77
Total	599	119	198	13	117	190	14	1250	

Table 8: State Which You Belong \* Type of Family.

		TYPE OF FAMILY			Total
		Joint	Nuclear	Single	
STATE WHICH YOU BELONG	Andhra	0	10	0	10
	Assam	28	0	0	28
	BIHAR	0	24	0	24
	Delhi	28	28	0	56
	Goa	0	29	0	29
	Gujarat	0	10	0	10
	HARYANA	0	14	0	14
	Karnataka	37	13	0	50
	Kerala	248	360	246	854
	Maharashtra	14	26	0	40
	MP	0	10	0	10
	Rajasthan	0	11	0	11
	Tamil Nadu	13	10	0	23
	Telangana	14	0	0	14
UP	37	14	26	77	
Total		419	559	272	1250

Table 9: State Which You Belong \* Is Room Quarantine Required For Elderly?

		Is Room Quarantine Required for Elderly?		Total
		NO	YES	
State Which You Belong	Andhra	0	10	10
	Assam	28	0	28
	BIHAR	24	0	24
	Delhi	42	14	56
	Goa	15	14	29
	Gujarat	10	0	10
	HARYANA	0	14	14
	Karnataka	14	36	50
	Kerala	431	423	854
	Maharashtra	40	0	40
	MP	10	0	10
	Rajasthan	0	11	11
	Tamil Nadu	10	13	23
	Telangana	14	0	14
UP	27	50	77	
Total		665	585	1250

Table 10: State Which You Belong \* Quarantine Will Reduce The Risk Of Covid 19.

		Quarantine Will Reduce the Risk of Covid 19		Total
		NO	YES	
State Which You Belong	Andhra	0	10	10
	Assam	0	28	28
	BIHAR	0	24	24
	Delhi	0	56	56
	Goa	0	29	29
	Gujarat	0	10	10
	HARYANA	0	14	14
	Karnataka	0	50	50
	Kerala	29	825	854
	Maharashtra	0	40	40
	MP	0	10	10
	Rajasthan	0	11	11
	Tamil Nadu	0	23	23
	Telangana	0	14	14
UP	0	77	77	
Total		29	1221	1250

**Table 11: State Which You Belong \* Elderly Should Not Come In Contact With Other Members Who Go Out Regularly.**

		Elderly Should Not Come In Contact With Other Members Who Go Out Regularly		Total
		NO	YES	
State Which You Belong	Andhra	0	10	10
	Assam	0	28	28
	BIHAR	20	4	24
	Delhi	14	42	56
	Goa	15	14	29
	Gujarat	0	10	10
	HARYANA	0	14	14
	Karnataka	13	37	50
	Kerala	156	698	854
	Maharashtra	20	20	40
	MP	0	10	10
	Rajasthan	0	11	11
	Tamil Nadu	0	23	23
	Telangana	0	14	14
UP	14	63	77	
Total		262	988	1250

**Table 12: State Which You Belong \* Visitors Must Be Reduced During Pandemic Time.**

		Visitors Must Be Reduced During Pandemic Time	Total
		YES	
State Which You Belong	Andhra	10	10
	Assam	28	28
	BIHAR	24	24
	Delhi	56	56
	Goa	29	29
	Gujarat	10	10
	HARYANA	14	14
	Karnataka	50	50
	Kerala	854	854
	Maharashtra	40	40
	MP	10	10
	Rajasthan	11	11
	Tamil Nadu	23	23
	Telangana	14	14
UP	77	77	
Total		1250	1250

**DISCUSSION**

Older age and underlying diseases are the challenges being faced in controlling and treating COVID-19. In 2019, 703 million of the global population was older than 65 years of age. The estimated mortality due to COVID-19 in people older than 76 years of age is reportedly 18%. Frequent infections in older people, higher disease severity, and increased mortality are major challenges in the implementation of appropriate preventive measures and future strategies to protect against this disease in geriatric population. Poor health status, weak immune function, lowered organ function, increased probability of multiple underlying diseases, and poor attention to personal health can increase the susceptibility to various diseases in the geriatric population. Concerning inadequate immunity, the

decrease expression of receptors and exaggerated pathophysiologic responses can be debilitating. However, future studies will reveal the hidden facets in these aspects in this COVID-19 catastrophe.

In our study, our sample of geriatric population was between 50-100 years. Majority was in age group 60-65 years (29%), followed by 66-70 years (21.4%). Majority of our population (67.7%) was retired. Majority of our sample (42.6%) had a family income of above 50,000 Rs/month and 20.3% have income of upto 20,000 per month. 96.9% have their own home as centre of reverse quarantine.

68.3% of the sample was from Kerala, followed by UP (6.2%) and Karnataka (4%). In Kerala, 300/854 sample

are from rural side and 554/854 from urban. In states like Gujarat, Goa, Haryana, Karnataka, MP and Rajasthan we didn't get any sample from rural area which may have affected the results. For all other states, majority of the population had degree level of education which shows that they have a good knowledge of pandemic prevailing in our country. In majority of the states, sample had a nuclear type family followed by joint family.

In Kerala, 423/854 sample responded that room quarantine is required for elderly and 431/854 responded that it is not needed which indirectly gives a relevant result showing the attitude of the people from Kerala about room quarantine. Majority of the people from AP, Haryana, Karnataka, Rajasthan, TN and UP also responded that room quarantine is required. Shockingly, all the samples from Assam, Bihar, Gujarat, Maharashtra, MP and Telangana responded that room quarantine is not required for geriatrics.

825/854 sample from Kerala responded that quarantine will reduce the risk of Covid-19. All the 100% samples from other states also supported the idea. So in short we understood that majority know that quarantine will reduce the risk of Covid-19.

698/854 sample from Kerala responded that elderly should not come in contact with other members who go out regularly. 20/24 from Bihar and Maharashtra also 20/40 from mentioned that elderly contact with other members is not an issue. All the study subjects (1250) replied that (100%) visitors must be reduced during pandemic time.

## CONCLUSION

The COVID-19 pandemic is impacting the global population in drastic ways. In many countries, older people are facing the most threats and challenges at this time. Although all age groups are at risk of contracting COVID-19, older people face significant risk of developing severe illness if they contract the disease due to physiological changes that come with ageing and potential underlying health conditions. Over 95% of these deaths occurred in those older than 60 years. More than 50% of all fatalities involved people aged 80 years or older. Reports show that 8 out of 10 deaths are occurring in individuals with at least one comorbidity, in particular those with cardiovascular disease, hypertension and diabetes, but also with a range of other chronic underlying conditions.

From our study results, we understood that geriatric population from Kerala have better understanding than other states about Covid-19 pandemic. Majority knows about the importance of quarantine but still many are in the view that contact with other persons who are regularly going is not a problem. By proper counseling and through media Government should educate our elderly population more about the importance of reverse quarantine procedure for preventing the pandemic.

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