

Research Article

Self-Care and Preventive Measures of Coronavirus: Evidence from India

Manoj Kumar¹, Satyanarayan Kishan Kothe², Renu Bala³, Surendra Kumar Sagar⁴,
Chanam Sonia Devi⁵, K Kaveri Krishna⁶, Kapil Kaushik⁷, Mohini Saran⁸

¹Centre for Economic Studies & Planning, Jawaharlal Nehru University (JNU), New Delhi, India.

²Mumbai School of Economics and Public Policy, University of Mumbai, Mumbai, India.

³Department of Economics, Indira Gandhi University IGU, Meerpur, Haryana, India.

⁴Department of Zoology, Swami Shradhanand College (University of Delhi), Delhi, India.

⁵Department of ACEE, Manipur University, Manipur, India.

⁶Department of Business Development, MW Partners, Hyderabad, India.

⁷Assistant Professor, Department of Geography, K.R. (P.G.) College, Mathura, UP, India.

⁸Research Scholar Department of Geography, Banasthali University, Jaipur, India.

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I N F O

Corresponding Author:

Renu Bala, Department of Economics, Indira Gandhi University IGU, Meerpur, Haryana, India.

E-mail Id:

renu.bala3@gmail.com

Orcid Id:

<https://orcid.org/0000-0001-5765-4476>

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A B S T R A C T

Introduction: Coronavirus cases increased across countries so quickly, and in response, no country was ready to handle it. India is the most populous country; inadequate healthcare infrastructure and lack of insurance coverage were the main concerns. Here, self-care and preventive measure is the only option to deal with the pandemic and such virus. Objective: To analyze the awareness about the self-care and preventive measures for Coronavirus in India.

Methods: This study analyses the self-care and preventive measures taken against the Coronavirus by the people in India. The study collected the data of 517 Indian respondents through the questionnaire (i.e., based on a convenience sampling technique). The statistical tools used frequency, percentage, and correlation.

Results: Most respondents reported the Coronavirus infection causes symptoms like cough, fever, shortness of breath, stomachache, sore throat, and cold (i.e., 86.3, 87.8, 81.4, 88.4, 77.4, and 72.0 percent of respondents, respectively). Most of the respondents agreed that wearing masks (77.2 percent), gloves (66.9 percent), and hand hygiene (88.8 percent) could prevent the spreading of the virus.

Conclusion: The findings concluded that most people were aware of self-care and preventive measures and Coronavirus symptoms. Social media acted as the fastest route to make people more aware of information dissemination which prevented pandemics' outbursts.

Keywords: Self-Care and Preventive Measures of Coronavirus, Public Health and Health Insurance Coverage in India

Introduction

Coronavirus is a medical pandemic that disrupted health, social life, and the global economy (Liu et al., 2020). First, the virus had observed in China (Teti et al., 2020). After that, Coronavirus cases were reported throughout the world so quickly that neither the World Health Organization (WHO) nor any infected country was ready to handle it (Paudyal et al., 2021). The Coronavirus disease was declared as a pandemic in 2020 by World Health Organization (Sumalatha et al., 2021). In 2020, the Coronavirus became a primary cause of death; directly and indirectly.

The Ministry of Health & Family data indicates severe, moderate, and mild cases of COVID-19. From the beginning, it was realized that unless a vaccine is developed to cure Coronavirus, prevention would be the only option, and the people have to adjust and survive (Isaac & Sadanandan, 2020). To prevent the spread of Coronavirus, 'stay-at-home' the WHO and most governments had recommended. Likewise, the Indian Government also announced lockdown in phases, then self-help and self-care became the only option (Matias et al., 2020). The WHO treated the information of self-care and preventive measures against Coronavirus, and its dissemination is the only factor to grapple with the Coronavirus. India has inadequate healthcare infrastructure and health insurance coverage. (Kumar & Renu, 2019). Indian population experienced a health crisis during the pandemic. That turns out to be a lack of ability to pay huge payouts for healthcare (Bala et al., 2021). Thus, the Coronavirus prevention measures through social distancing, hand hygiene, and lockdown policies are a mere option (Vibhu Paudyal SS, 2021). Since the last century, personal and public hygiene in India has constantly deteriorated because most people follow an unhygienic lifestyle, which makes health care a prime concern (Kumar & Bala, 2018). Here understanding of the self and preventive care against Coronavirus becomes a crucial option (Paital et al., 2020). Self-care helps deal with the specific challenges posed by Coronavirus (Justin Jay Miller, 2021). Handwashing is a hygiene behavior that prevents the spread of Coronavirus (NaTasha D.Hollis, 2021). Global efforts to prevent the spreading of this virus with political decisions and individual behavior count on the individuals' awareness level (Kebede et al., 2020). Here, knowledge and awareness remain the only source to deal with such pandemics. Forthwith, self-care and preventive measures become the only option available to the mass population.

The study objective is to analyze the awareness about the self-care and preventive measures of Coronavirus among the people in India.

Materials and Method

The study aimed to analyze self-care and preventive

behavior with an online data set of 517 responses (male 287 and female 230). The preventive measures assessed as per the WHO recommendations, like wearing face masks, hand sanitizing, gloves, and perpetuating social distance similar adopted by (Vaishali Gautam, 2021) (Mojgan Firouzbakht, 2021). As considered by (Mojgan Firouzbakht, 2021), a similarly current study had adopted the self-care behavior.

The data had collected through a questionnaire method across the Indian states and Union Territory Haryana, Uttar Pradesh, Telangana, and Delhi. The time duration for data collection was from June 1, 2020, to September 30, 2020.

Indian states enforced the lockdown policy due to the Coronavirus pandemic, and during the lockdown, face-to-face questioning was not practicable. Hence, this study adopted a similar convenience sampling methodology (Hager et al., 2020). The responses had collected from those who had internet access over mobile or laptops. Thus, participants accessed the questionnaires, prepared in English with the help of google forms (i.e., based on the convenience sampling technique) through email and social media networks (i.e., WhatsApp, Facebook, and LinkedIn).

The questionnaire comprised four sets of (16) questions extracted from the pilot survey focused on Coronavirus awareness (Kaveri Krishna et al., 2021). The four sets of questions summarised, namely demographic background (6 questions), source of information on Coronavirus (1 question), knowledge of Coronavirus symptoms (2 questions), 19 self-care, and preventive measures (5 questions) against Coronavirus.

The present study applied social cognitive theory for explaining Individual health behaviour.

The social cognition model has seven components: self-efficacy, behavioral capability, expectations, expectancies, self-control, observational learning, and reinforcements. This study has adopted three components of the social cognition model: self-efficacy, behavioral capability, and self-control related to the Coronavirus. The study examines social cognition with self-care and preventative measures associated with Coronavirus. Self-care is associated with self-efficacy, self-control, preventive measures are associated with self-control, and behavioral capability-care is a set of activities where someone looks after their health and wellbeing individually (Fatemeh Moradi, 2020).

The study excluded those respondents who had no internet access. During the data cleaning process, respondents were excluded based on incomplete information.

To analyze the self-care and preventive measures against Coronavirus in India. The study used frequency, percentage, and correlation for statistical analysis with the help of Statistical Package of Social Sciences (SPSS), version 22.

Results

Table 1. Demographic and Awareness Profile of Respondents

Variable	Categories	N	(%)
Gender	Male	287	55.5
	Female	230	44.5
Age	0-17	17	3.3
	18-35	406	78.5
	36-58	83	16.1
	59-70	11	2.1
Education	Below 10th	4	0.8
	10th	5	1.0
	12th	52	10.1
	Graduate	161	31.1
	Post Graduate	201	38.9
	PhD	91	17.6
	Others	3	0.6
Occupation	Student	231	44.7
	Businessmen	23	4.4
	Housewives	15	2.9
	Unemployed	24	4.6
	Servicesmen	219	42.4
	Others	5	1.0
Information Source	Television News	234	45.3
	Social Media	250	48.4
	Friends and Family	24	4.6
	Public Health Banners	6	1.2
	From Family Doctor	3	0.6
	Total	517	100

Source: Primary Data

The results illustrate that 78.5 percent of the respondents were in the age group of 18 to 35. The rest of them were (16.1 percent) in the age group of 36 to 58. The rest of the respondents were between 0-17 and 59-70. As per educational qualifications, 38.9 percent of the respondents were Post Graduates, 31.1 percent were Graduates, 17.6 percent were Ph. D. holders, and higher secondary certificate holders were 10.1 percent.

55.5 percent of the respondents were male, and 44.5 percent were female. As an occupation, 42.4 percent

were in service, and 44.7 percent were students. The rest were from other professions like business, housewife, and unemployed (Table 1).

Next, the results exhibit the symptom of the virus, information source, and preventive measures. Information dissemination plays an essential role in combating and controlling the spread of pandemics, and accurate and timely transmission of information of a large-scale pandemic can be crucial to outbreak control strategies (Wong & Sam, 2010). The information source could be television, newspapers, social media, electronic media, family, and friends. The finding revealed that the primary source of information (48.4 percent of respondents) remained social media; this finding is similar to the previous study (Vinod Pavarala, 2020). The secondary (45.3 percentage) source of information was the television. The rest information sources were family and friends, doctors, and banners.

As per WHO guidelines, the most common symptoms of Coronavirus are fever, cough, fatigue, and cold. The sore throat, headache, persistent pain in the chest, diarrhea, a rash on the skin, skin discoloration, red and irritation in eyes, muscle or joint pain, and nausea were coming in other symptoms categories. Meanwhile, the severe symptoms were shortness of breath, chest pain, and loss of mobility/confusion.

Awareness of COVID Symptoms

Table 2 exhibits that most respondents reported the Coronavirus infection symptoms like cough, fever, shortness of breath, stomach ache, sore throat, and cold (i.e., 86.3, 87.8, 81.4, 88.4, 77.4, and 72.0 percent of respondents, respectively). It means that most of the respondents knew the symptoms of Coronavirus.

The WHO issued a scientific brief on March 29, 2020, and updated it on July 9, 2020. Both the briefings enlist the symptoms of Coronavirus in pre-infection and post-infection scenarios. The briefing states the possible transmission modes for Coronavirus, including contact, droplet, airborne, fomite, fecal-oral, bloodborne, mother-to-child, and animal-to-human transmission. Infection with Coronavirus primarily causes respiratory illness ranging from mild diseases to severe disease and death, and some people infected with the virus never develop symptoms (World Health Organisation, 2020a). The virus primarily spreads through contact and respiratory droplets to the best of our understanding. Under some circumstances, airborne transmission may occur (World Health Organisation, 2020a). Hand hygiene and respiratory hygiene are essential preventive measures (World Health Organisation, 2020b). The most cost-effective measure for containing Coronavirus spread is wearing a mask and hand hygiene (MoHFW-Gol, 2020) (World Health Organisation, 2020c).

Table 2. Awareness of Symptoms of COVID-19

Symptoms	Categories	N	(%)
Cold	Don't Know	145	28
	Yes	372	72
Cough	Don't Know	71	13.7
	Yes	446	86.3
Sore Throat	Don't Know	117	22.6
	Yes	400	77.4
Fever	Don't Know	63	12.2
	Yes	454	87.8
Shortness of Breath	Don't Know	96	18.6
	Yes	421	81.4
Diarrhea	Don't Know	445	86.1
	Yes	72	13.9
Stomachache	Don't Know	457	88.4
	Yes	60	11.6
Eye Redness	Don't Know	429	83
	Yes	88	17
Skin Irritation	Don't Know	474	91.7
	Yes	43	8.3
Nausea	Don't Know	412	79.7
	Yes	105	20.3
Bodyache	Don't Know	495	95
	Yes	22	4.3
	Total	517	100

Table 3. Preventive Measures of COVID-19

Variables	Categories	N	(%)
Hand Hygiene	Yes	459	88.8
	No	20	3.9
	Maybe	38	7.4
Mask	Yes	399	77.2
	No	26	5
	Maybe	92	17.8
Gloves	Yes	346	66.9
	No	42	8.1
	Maybe	129	25.0
Use of Antibiotic	Yes	85	16.4
	No	187	36.2
	Maybe	245	47.4
	Total	517	100

Source: Primary Data.

Table 3 illustrates that most of the respondents agreed that wearing masks (77.2 percent), gloves (66.9 percent), and hand hygiene (88.8 percent) to prevent the spreading of the virus.

Antibiotic does not work against viruses; it works on bacterial infections. A virus caused Coronavirus disease. The antibiotic is not a means of prevention/or treatment of Coronavirus (MoHFW-Gol, 2020). 16.4 percent of respondents said that antibiotics could cure the virus. Meantime, 36.2 percent said antibiotics are not useful at all, and 47.4 percent were unsure of it. 70.4 percent of respondents knew where to go for treatment if infected (not shown in Table).

Table 4. Where to go for the Treatment after Developing Symptoms of COVID-19

Categories	N	(%)
Yes	364	70.4
No	85	16.4
I Know People Who Might Know	68	13.2

Source: Primary Data.

Table 5 indicates that the responses given by the respondents are cohesive. The respondents agreed that wearing masks, gloves, and hand hygiene is essential to prevent the spread of Coronavirus, while they did not agree that antibiotics prevent Coronavirus infection. The results interpreted in the sample of the young age group include 78.5 percent of participants under the age group of 18 to 35. Additionally, education plays a significant role, as most participants (70.0 percent) were graduate and post-graduate. These results are similar to earlier studies reported by (Li et al., 2020) (Haischer et al., 2020) (Zeng et al., 2020) (Zhang et al., 2020). Meanwhile, they hardly agreed that antibiotics might be preventing the Coronavirus.

Table 5. Correlation Matrix of COVID-19's Preventives Measures

Kendall's tau b (Correlation Coefficient)	Hand Hygiene	Wearing Mask	Wearing Gloves	Use of Antibiotic
Hand Hygiene	1			
Wearing Mask	0.417** (0.000)	1		
Wearing Gloves	0.271** (0.000)	0.494** (0.000)	1	
Use of Antibiotic	0.023 (0.578)	0.051 (0.22)	0.111** (0.006)	1

Note: ** Indicates correlation is significant at the 0.01 level (2-tailed). Source: Primary Data.

Discussion

The study results agreed with others that effective preventive measures are the mere option to counteract COVID-19 (Deepak Pradhan, 2020) (Deblina Roy, 2020). While answering that antibiotics could cure the virus, most respondents were indecisive as 16.4 percent of respondents remained agreed, 36.2 percent remained disagreed, the rest (of 47.4 percent) did not say anything. Symptoms of the Coronavirus revealed most respondents knew of cough (86.3 percent), fever (87.8 percent), shortness of breath (81.4 percent), sore throat (77.4 percent), cold (72.0 percent). How and from where to get the treatment, most respondents (70.6 and 13.2 percent, respectively) knew it. Similar results were reported by (Yousaf et al., 2020).

During the Coronavirus outbreak, an increase in the number of infected cases has heightened the concern of public health and wellbeing. How and from where to get the treatment, most respondents (70.6 and 13.2 percent, respectively) knew it. Similar results were reported by (Farid Rahimi, 2020). Social media remained the primary source of information on Coronavirus. Hence, self-care and preventive measures act as input in making people healthy. These measures become a crucial component in combating pandemics like Coronavirus.

The study findings revealed that most people knew self-care and preventive measures of Coronavirus. The results of this study are similar to earlier studies (Munnoli et al., 2020) of self-caring, and preventive measures need to be taken care of by wearing masks and hand sanitizing. Then, self-care is to use soap, wear masks, and disinfectants. The study has similar results (Banerjee & Bhattacharya, 2021) if it is impossible to maintain social distancing in the Coronavirus pandemic. Whereas, in information dissemination about Coronavirus, social media acted as the fastest route in making people aware in a country like India. Information dissemination through social media needs adequate access to people. Information technology infrastructure and equipment with access to the internet are required, as seen in the recent services revolution (Kothe, 2019). That has brought an unprecedented change in the way people use telecommunication services.

The findings similar to previous studies during the Coronavirus pandemic, social media emerged as the leading medium for information dissemination (Oweis, 2021) (Debanjan Banerjee, 2021) (Rai et al., 2021) (Kaya, 2020) (Prasad Singh et al., 2020) in preventing the Coronavirus. The study also agrees to dissimilar results of (Kadam & Atre, 2020), where social media users are about 350 million. Most of them are unaware of fact-checking sources, which led to stock out of masks and sanitizers in lockdown. Therefore, the Government of India needs to take care of its limitations.

The important findings were that the personal hygiene is one of the prevention measures of COVID 19, similarly made by (KarthikeyanI yengara, 2020). The study acknowledge the role of social media in spreading awareness among people to prevent the coronavirus, as reported by (Rai et al., 2021) (Kaya, 2020), after taking care of its limitations, depicted by (Kadam & Atre, 2020). The study also agreed with the critical role of telemedicine in the Indian health infrastructure.

Limitations

This study's results are affected by its limitations which need to be taken care of while interpreting the results. The first limitation is that the outcomes purely depend on the data of 517 respondents which was non-probability sample. The second limitation is related to the time of the study, which is, from June 1, 2020, to September 30, 2020. The probability is that the results may differ if another study takes different periods from the current one. This study adopted an online questionnaire method based on a convenient sampling technique for data collection. The results may differ if a study adopts another sampling and data collection method from this study. The study's results can't be generalized because of the limited and non-represent sample.

The scope for further studies is with different sample sizes, sampling techniques, and time duration to verify and generalize the results of self-care and preventive measures against pandemics like Coronavirus.

Conclusion

The awareness of self-care and preventive measures of Coronavirus was good. Social media acted as the fastest route in making people aware about the pandemic. It is recommended that findings can be used for further strengthening the awareness program in the country.

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Conflict of Interest: None

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