

A Study on the Perception and Precautionary Measures taken by the General Public Amidst COVID-19

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ABSTRACT

Purpose: This paper aims to identify the perception and the various precautionary measures taken by the general public during the rapid spread of COVID-19.

Design/Methodology/Approach: A Cross Sectional Analysis is carried out to find out the perception and precautionary measures amid COVID-19 with the help of a questionnaire distributed online.

Findings: The results revealed that majority of the respondents are well aware about the COVID-19 and they have taken considerable amount of precautions on their own before the government announced the lockdown. The respondents are worried about the COVID-19 being spread rapidly in India than themselves getting infected.

Research Limitations/Implications: The data collected confines mostly to the people of Coimbatore, Tamil Nadu so the results may not be applicable to other parts of the population. The data was collected when the disease was rapidly being spread across India and the feeling of fear, confusion could have had an impact on the perception towards this disease.

Practical Implications: This study is based on a smaller number of samples in a population although the the disease is widespread across the world.

Social Implications: The government of India has taken certain challenging and need of the hour measures to curb the increase in the number of positive cases of the COVID-19 and this could have an impact on the respondents while answering the questions.

Paper type: Research paper

KEYWORDS: Awareness level, Precautionary measures, COVID-19.

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I. INTRODUCTION

A pneumonia of unknown cause was detected in Wuhan, China and was first reported to the WHO Country Office in China on 31 December 2019. Corona virus disease (COVID-19) is an infectious disease caused by a newly discovered

corona virus. Most people infected with the COVID-19 virus will experience mild to moderate respiratory illness and recover without requiring special treatment. Older people, and those with underlying medical problems like cardiovascular disease, diabetes, chronic respiratory disease, and

cancer are more likely to develop serious illness. The COVID-19 virus spreads primarily through droplets of saliva or discharge from the nose when an infected person coughs or sneezes. The outbreak was declared a Public Health Emergency of International Concern on 30 January 2020.

A. COVID-19 in India

The first case of the 2019–20 coronavirus pandemic in India was reported on 30 January 2020, originating from China. As of 6 April 2020, the Ministry of Health and Family Welfare have confirmed a total of 4,067 cases, 292 recoveries (including 1 migration) and 109 deaths in the country. Protective measures were first applied in January. The Government of India issued a travel advisory to its citizens, particularly for Wuhan, where about 500 Indian medical students study. It directed seven major international airports to perform thermal screening of passengers arriving from China.

B. Preventive measures to slow the transmission of COVID-19 as announced by the World Health Organization

- Washing hands regularly with soap and water, or cleaning them with alcohol-based hand rub.
- Maintaining at least 1 metre distance between oneself and people coughing or sneezing.
- Avoiding touching the face.
- Covering the mouth and nose when coughing or sneezing.
- Staying home if one feels unwell.
- Refraining from smoking and other activities that weaken the lungs.
- Practicing physical distancing by avoiding unnecessary travel and staying away from large groups of people.

Purpose of the study

The Indian Government has advised the people to be in a lockdown to avoid the spike in COVID-19 positive cases. Only for basic needs and emergency situations, the people can come out of their places by following the practice of social distancing. The government alone in this cannot fight back this virus and the people should provide all kinds of support to the government but, this is possible only when they know about the virus and how it can be spread. This paper is aimed to understand how the people of Coimbatore district are well aware about the COVID-19 and what kind of precautionary measures they have taken to avoid getting infected.

C. Review of Literature

Kaiyuan Sun, Jenny Chen and Cécile Viboud (2020) in their study "Early epidemiological analysis of the coronavirus disease

2019 outbreak based on crowd-sourced data: a population-level observational study" revealed that delays between symptom onset and seeking care at a hospital or clinic were longer in Hubei province than in other provinces in mainland China and internationally. The authors have interpreted that News reports and social media can help reconstruct the progression of an outbreak and provide detailed patient-level data in the context of a health emergency.

Kin On Kwok, Kin Kit Li, Ho Hin Chan, Yuan Yuan Yi, Arthur Tang, Wan In Wei, Yeung Shan Wong (2020) in their study "Community responses during the early phase of the COVID-19 epidemic in Hong Kong: risk perception, information exposure and preventive measures" found out that most respondents were worried about COVID-19 (97%), and had their daily routines disrupted (slightly/greatly: 98%). The anxiety level, measured by the Hospital Anxiety and Depression Scale, was borderline abnormal (9.01). Nearly all respondents were alert to the disease progression (99.5%). The most trusted information sources were doctors (84%), followed by broadcast (57%) and newspaper (54%), but they were not common information sources (doctor: 5%; broadcast: 34%; newspaper: 40%). Only 16% respondents found official websites reliable. Enhanced personal hygiene practices and travel avoidance to China were frequently adopted (>77%) and considered effective (>90%). The adoption of social-distancing measures was lower (39%-88%).

Cuiyan Wang, Riyu Pan, Xiaoyang Wan, Yilin Tan, Linkang Xu, Cyrus S. Ho and Roger C. Ho (2020) conducted a study on "Immediate Psychological Responses and Associated Factors during the Initial Stage of the 2019 Coronavirus Disease (COVID-19) Epidemic among the General Population in China" and found out that during the initial phase of COVID-19 outbreak in China, more than half of the respondents rated their psychological impact as moderate-to-severe, and about one-third reported moderate-to-severe anxiety. Female gender, student status, and specific physical symptoms were associated with a greater psychological impact of the outbreak and higher levels of stress, anxiety, and depression. Specific up-to-date and accurate health information and certain precautionary measures were associated with a lower psychological impact of the outbreak and lower levels of stress, anxiety, and depression.

II. RESEARCH METHODOLOGY

Research Objectives:

- To determine the perception towards COVID-19 among the general public in Coimbatore district.
- To study about what kind of precautionary measures have the general public in

Coimbatore district have taken to avoid getting infected.

Research Design:

Convenience Sampling method was chosen for this study and a structured online questionnaire was distributed to collect the data.

III. RESULTS

TABLE 1- DEMOGRAPHIC FACTORS

PARTICULARS		%
Age of the respondents Years	18-28	95.8%
	29-39	2.5%
	40-50	0.8%
	Above 50	0.8%
Gender of the respondents	Male	38.3%
	Female	61.7%
Occupation	Student	80.8%
	Private Employee	14.2%
	Entrepreneur	2.5%
	Others	2.5%
Where do you live?	Urban	63.3%
	Semi-urban	20%
	Rural	16.7%
Type of family	Nuclear family	76.7%
	Joint family	23.3%
Income of the family per annum	> 2 lakhs	33.3%
	2-3 lakhs	37.5%
	4-5 lakhs	14.2%
	< 5 lakhs	15%
Under which circumstances do you visit the hospital?	Only when there is a medical emergency	85.8%
	For routine medical checkups	10%
	Others	4.2%
Which of the following media do you prefer the most to get updated on the latest news?	Newspaper	6.7%
	Mobile phones (Internet, social media)	53.3%
	Television	39.2%
	Others	6.7%
Have you ever self-medicated yourself without a doctor's prescription?	Yes	42.5%
	No	57.5%

TABLE 2- DEPENDENT FACTORS

PARTICULARS		%
Are you aware of COVID-19?	Yes	97.5%
	No	2.5%
Do you think you have sufficient knowledge about COVID-19?	Yes	60%
	No	6.7%
	Maybe	33.3%
Which of the following sources you trust	Ministry of Health and Family	35.8%

PARTICULARS		%
and refer the most when it comes to the latest updates about COVID 19?	Welfare of India's website	
	Social Media	17.5%
	TV news channels	39.2%
	Newspapers	6.7%
	Others	0.8%
When was the first time you heard about the COVID-19 spread?	Before January 2020	14.2%
	In January 2020	36.7%
	In February 2020	40.8%
	After the disease came to India	8.3%
From whom/where did you come to know about the COVID-19?	Family/Friends	14.2%
	Newspapers	7.5%
	From World Health Organization's website	6.7%
	Social Media	47.5%
	TV/Radio	21.7%
	Others	2.5%
Do you take protective measures to avoid getting infected from the COVID-19?	Yes	96.7%
	No	4.2%
How do you protect yourself from getting infected?	Using hand sanitizers/Washing hands frequently using soap	30%
	Avoided crowded places	29.2%
	Wore masks in public places	12.5%
	All the above	70%
Do you think wearing masks are effective in protecting against this disease?	Yes	42.5%
	No	19.2%
	Maybe	38.3%
What is the first thing you would do when you come into contact with an infected person or if you appear to show symptoms of this disease?	Self-isolate yourself in your home	33.3%
	Call the health care providers using the helpline number	36.7%
	Visit a nearby hospital	30%
Which of the following you are worried about the most?	COVID-19 being a health problem	16.7%
	Worried about contracting the disease	3.3%
	Worried about family members/friends acquiring the disease	15%
	COVID-19 being spread in India	65%

ANOVA Test - 1. Age of the respondents and confidence levels in the source of information obtained on COVID-19

Null Hypothesis (H₀): There exists no significant relationship between age of the respondents and confidence levels in the source of information obtained on COVID-19.

Alternate Hypothesis (H₁): There exists a significant relationship between age of the respondents and confidence levels in the source of information obtained on COVID-19.

Source	DF	Sum of Square	Mean Square	F Statistic	P-value
Between groups	6	4405.36	734.23	401.51	0.00000
Within groups	1447	2646.083	1.83		
Total	1453	7051.44	4.85		

2. Occupation of the respondents and agreement levels regarding COVID-19 awareness:

Null Hypothesis (H₀): There exists no significant relationship between occupation of the respondents and agreement levels regarding COVID-19 awareness.

Alternate Hypothesis (H₁): There exists a significant relationship between occupation of the respondents and agreement levels regarding COVID-19 awareness.

Source	DF	Sum of Square	Mean Square	F Statistic	P-value
Between groups	11	99.29	9.03	23.09	0.001
Within groups	1447	2646.08	1.83		
Total	1453	7051.44	4.85		

Linear Regression for gender of the respondents and precautionary measures taken by the respondents to avoid getting infected by COVID-19:

Null Hypothesis (H₀): There exists no significant relationship between gender of the respondents and precautionary measures taken by the respondents to avoid getting infected by COVID-19.

Alternate Hypothesis (H₁): There exists a significant relationship between gender of the respondents and precautionary measures taken by the respondents to avoid getting infected by COVID-19.

Factors	Coefficients	Standard error	t-Stat	p-value
Intercept (b)	1.688866	0.0614730	27.473327	
Avoided shaking hands with other people (X)	-0.0544904	0.0398889	-1.366054	0.17
Intercept (b)	1.729709	0.0675442	25.608535	
Were more attentive to cleanliness (X)	-0.0802667	0.0425067	-1.888330	0.06
Intercept (b)	1.696957	0.0662328	25.621093	
Used hand sanitizers (X)	-0.0529387	0.0384538	-1.376685	0.16
Intercept (b)	1.675481	0.0651482	25.717999	
Washed hands more often (X)	-0.0422618	0.0409988	-1.030805	0.30
Intercept (b)	1.655291	0.0629311	26.303220	
Avoided large gatherings of people (X)	-0.0291504	0.0411247	-0.708829	0.48
Intercept (b)	1.712113	0.0636793	26.886500	
Avoided eating food in restaurants (X)	-0.0564216	0.0327748	-1.721494	0.08
Intercept (b)	1.603692	0.0722163	22.206793	
Wore a mask (X)	0.00730953	0.0366073	0.199674	0.84
Intercept (b)	1.708949	0.0586769	29.124745	
Avoided travel to COVID-19 infected areas (X)	-0.0738255	0.0397106	-1.859086	0.06

III. FINDINGS OF THE STUDY

Out of 240 respondents, majority **95.8%** of the respondents belong to the age category of **18-28 years**. **61.7%** of the respondents are **females**. Among the respondents, **80.8%** are **students** and **63.3%** live in **urban areas**. **76.7%** of the respondents come from a **nuclear type of family** and **most of the respondents' family income** is

around **2-3 lakhs per annum**. Majority of the respondents (**85.8%**) visit the hospital **only when there is a medical emergency** and a little more than half (**57.5%**) of the respondents say they have **not taken medicines without the prescription of the doctors**. **53.3%** of the respondents use the internet and social media to get to know about the news. It is evident that the majority of the respondents are **very well aware of the COVID-19**

and **trust the TV news channels** to get the update news on this disease. As the majority of respondents are young, they have **come to know about this disease from social media platforms**. All the respondents except a very few of them, have taken precautionary to safeguard themselves from getting infected as **70% of the people have avoided going to crowded places, washed their hands frequently**. The respondents have a mixed opinion about what will they do if they came into contact with an infected person. The analysis shows that the respondents will **isolate themselves (33.3%), call the health care providers using the helpline number (36.7%) and 30% of them will visit a nearby hospital**. More than half of the respondents are worried that the COVID-19 is spreading across India day-by-day. There exists no significant relationship between age of the respondents and confidence levels in the source of information obtained on COVID-19. There exists no significant relationship between occupation of the respondents and agreement levels regarding COVID-19 awareness. There exists a significant relationship between gender of the respondents and precautionary measures taken by the respondents to avoid getting infected by COVID-19.

IV. CONCLUSION

The general public are well informed and alert during the COVID-19 pandemic. By following what the government and health care officials advises, people should stay inside of their homes and thereby, reducing the danger of getting infected or spreading the disease to others. The continuous efforts from all the citizens can ensure in the possibility of flattening the curve.

REFERENCES

- [1] Sun, Kaiyuan, Jenny Chen, and Cécile Viboud. "Early epidemiological analysis of the coronavirus disease 2019 outbreak based on crowdsourced data: a population-level observational study." *The Lancet Digital Health* (2020).
- [2] Kwok, Kin On, et al. "Community responses during the early phase of the COVID-19 epidemic in Hong Kong: risk perception, information exposure and preventive measures." *medRxiv* (2020)
- [3] Wang, Cuiyan, et al. "Immediate psychological responses and associated factors during the initial stage of the 2019 coronavirus disease (COVID-19) epidemic among the general population in china." *International Journal of Environmental Research and Public Health* 17.5 (2020): 1729.