



## A STUDY ON KNOWLEDGE, AWARENESS AND THE PSYCHOLOGICAL IMPACT OF COVID-19 IN WEST BENGAL

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### ABSTRACT

**Background:** The present scenario all over the globe involves dealing with COVID-19 and the pandemic situation. Despite tremendous efforts, the future of this pandemic is still unknown. **Aim:** The present study was conducted to assess the awareness levels about COVID-19 and the psychological impact it has had on the lives of the residents of West Bengal. **Settings and Design:** A cross-sectional analytical survey was conducted across the region of West Bengal. **Methodology:** During the tenure of April to November, 2020, the sample comprising of 784 (N = 784) participants were administered a self-designed questionnaire across online medium. The question was divided into four parts which included questions related to basic awareness levels people have about the disease and also the psychological impact the disease has had on their lives. **Statistical Analysis:** Analysis of the data was done using SPSS version 23.0 using chi-square and descriptive statistics. **Results:** Overall, the results revealed that 82.3% of the respondents were aware of the fact that COVID-19 is a viral disease. 93.7% of the respondents were aware of the basic symptoms of the disease. Around 39.8% of the respondents were not sure about how they would cope with the pandemic. **Conclusion:** Majority of the participants were aware about COVID-19. Future implications of the study include widening the avenues of health education and training programmes to include measures for people to be able to handle the ongoing crisis.

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## INTRODUCTION

A recent addition for all people across the world is the new virus – SARS-CoV-2, also known as Corona Virus. It is a highly infectious disease. This is further implied by the fact that it is contagious in terms of human-to-human transmission. It has been denoted as public health emergency with global concern<sup>1</sup> and is also considered a life threatening pandemic disease.<sup>2</sup> It comprises of symptoms of infection which includes fever, chills, cough, sore throat, breathing difficulties, myalgia, nausea, vomiting and diarrhoea.

It has been named as Severe Acute Respiratory Syndrome – Corona Virus (SARS-CoV2) or novel Coronavirus (2019-nCoV), and has been designated by the World Health Organization as Coronavirus disease. It was officially declared as a pandemic on 11<sup>th</sup> March, 2020.<sup>3</sup> Earlier reports indicate that the virus can spread to humans via intermediate hosts like bats.<sup>4</sup> Human-to-human transmission has mostly been reported via virus laden respiratory droplet.<sup>5</sup> The transmissibility rate has been estimated at 4.08<sup>6</sup>; which means that every case of COVID-19 can create up to 4 new cases. As per existing data, the average incubation period has been estimated to be 5.2 days<sup>7</sup> and asymptomatic spread is also warranted.<sup>8</sup> Disease severity has also been associated with cardiac injury, respiratory failure, acute respiratory distress syndrome and death also.<sup>9</sup>

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The rate also goes higher in people who are homeless and mostly live crowded in surroundings which are conducive to a disease epidemic. These people are also living in conditions wherein they don't have regular access to basic hygiene supplies and all of these can facilitate virus transmission. People experiencing homelessness are highly susceptible group as their potential exposure rate is equally high. It is estimated that these kind of people who are younger than 65 years of age also have an all-cause mortality which is 5-10 times higher than that of the general population.<sup>10</sup> A study conducted by Wang and his colleagues revealed that greater than 50% of the respondents reported that the psychological impact of the pandemic ranged from moderate to severe; 16.5% of the respondents reported depressive symptoms, 28% reported moderate to severe anxiety symptoms and another 8.1% reported moderate to severe stress levels owing to the pandemic.<sup>11</sup> In regard to risk potency of the virus, healthcare workers and other frontline workers are also at high vulnerability. A COVID-19 case can also go symptomless for days and infect others around unknowingly which also increases the susceptibility of getting the infection. However, the exact nature of the virus is still very unclear. With each passing day, the scientists are working very hard to decipher its actual features. Based on these premises, this survey was carried out to assess the basic understanding and awareness about COVID-19 in the regions of West Bengal. It also aimed to assess the additional psychological effects associated with the pandemic.

## METHODS

A cross-sectional online survey was conducted between the months of April to November, 2020. All residents of West Bengal, males and females, aged between 18 to 61 years who were willing to participate in the study irrespective of their infection status were included in the study. People who did not meet the above criteria were excluded from the study. Media personnel and healthcare workers were not included in the study.

### Outcome Measures

**Study Tool:** A survey questionnaire was conducted over Google forms. The survey questions were framed both in English and Bengali, Bengali being the regional language of West Bengal. The questionnaire consisted of 23 questions, 5 of which comprised of basic socio-demographic details. The socio-demographic variables included were gender, age, board of education, educational level and current employment status. The questionnaire was divided into four sections, the first consisted of basic demographic questions, the second section comprised of basic knowledge related to the novel coronavirus disease, the third section included questions related to the psycho-social impact of COVID-19 and the fourth section comprised of questions related to basic awareness about COVID-19. It was approved from subject matter experts before being administered to subjects. The people who were approached for the study were explained the purpose of the study and consent was obtained for participation. Data was collected using random sampling method and analyzed using SPSS version 23.0.

**Demographic Analysis:** The data collected from 784 respondents (male = 343, female = 410, prefer not to say = 8) (Figure 1) was analysed and presented in Tables and Figures. Demographic distribution with regard to educational level is shown in Table 1, with regard to educational board is displayed in Table 2, with regard to employment status is displayed in Table 3 and with regard to geographical location is displayed in Table 4. 82.3% of respondent responded correctly that COVID-19 is a viral disease (Figure 2). 96.8% of the respondents were aware about the correct route of transmission of the disease (Figure 3). 74.2% of the respondents were aware of the incubation period of the disease. 93.7% of the respondents knew about the basic symptoms of COVID-19 (Figure 4). 75% of respondents admitted of being afraid of the disease. Existing research in this domain indicates that anxiety and fear is very prevalent.<sup>12</sup> 58.3% of the respondents did not expect the pandemic to end soon. 13.4% of the respondents preferred to avoid meat during the pandemic. 51% of the respondents indicated that they were confident about coping with the crisis but around 39.8% of the respondents were not sure about coping with the pandemic (Figure 5).

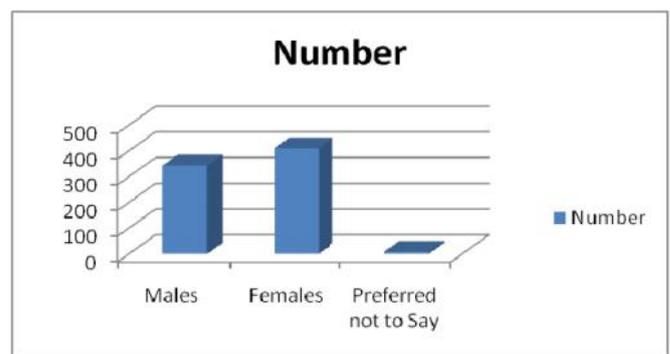


Figure 1. Distribution of Participants

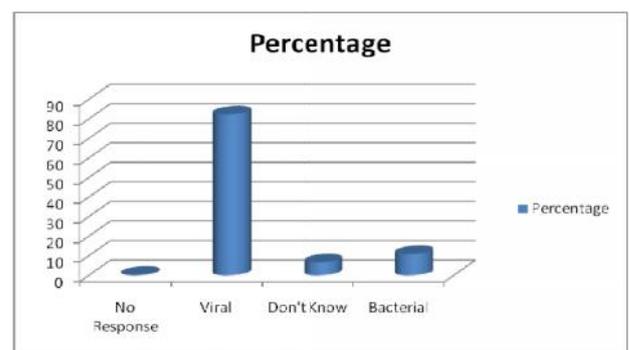


Figure 2. What type of infectious disease is COVID-19?

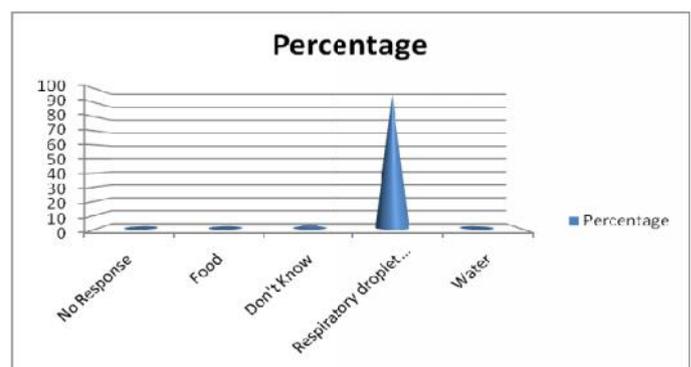


Figure 3. What is the main route of transmission of COVID-19?

**Table 1. Demographic distribution with regard to educational level**

Gender * What is Your Education Level? (Cross-tabulation)			What is Your Education Level?							Total
			10 pass	12 pass	Graduate	Graduate student	M Phil/PhD	Post Graduate	University student	
Gender	Female	Count	35	25	85	54	28	143	40	410
		% within Gender	8.5%	6.1%	20.7%	13.2%	6.8%	34.9%	9.8%	100.0%
		% within What is Your Education Level?	59.3%	48.1%	37.1%	66.7%	56.0%	61.1%	76.9%	54.2%
	Male	Count	24	24	143	27	22	91	12	343
		% within Gender	7.0%	7.0%	41.7%	7.9%	6.4%	26.5%	3.5%	100.0%
		% within What is Your Education Level?	40.7%	46.2%	62.4%	33.3%	44.0%	38.9%	23.1%	45.3%
	Prefer not to say	Count	0	3	1	0	0	0	0	4
		% within Gender	0.0%	75.0%	25.0%	0.0%	0.0%	0.0%	0.0%	100.0%
		% within What is Your Education Level?	0.0%	5.8%	0.4%	0.0%	0.0%	0.0%	0.0%	0.5%
Total	Count	59	52	229	81	50	234	52	757	
	% within Gender	7.8%	6.9%	30.3%	10.7%	6.6%	30.9%	6.9%	100.0%	
	% within What is Your Education Level?	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	

**Table 2. Demographic distribution with regard to Educational Board**

Gender * What was your School Board? ( Cross-tabulation)			What was your School Board?					Total
				CBSE	ICSE	Other	West Bengal Board	
Gender	Female	Count	3	35	38	30	304	410
		% within Gender	0.7%	8.5%	9.3%	7.3%	74.1%	100.0%
		% within What was your School Board?	100.0%	62.5%	63.3%	62.5%	51.5%	54.2%
	Male	Count	0	21	19	18	285	343
		% within Gender	0.0%	6.1%	5.5%	5.2%	83.1%	100.0%
		% within What was your School Board?	0.0%	37.5%	31.7%	37.5%	48.3%	45.3%
	Prefer not to say	Count	0	0	3	0	1	4
		% within Gender	0.0%	0.0%	75.0%	0.0%	25.0%	100.0%
		% within What was your School Board?	0.0%	0.0%	5.0%	0.0%	0.2%	0.5%
Total	Count	3	56	60	48	590	757	
	% within Gender	0.4%	7.4%	7.9%	6.3%	77.9%	100.0%	
	% within What was your School Board?	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	

**Table 3. Demographic distribution with regard to Employment Status**

Gender * Your Present Profession ( Cross-tabulation)			Your Present Profession						Total
			Homemaker	Other	Self employed	Service	Student		
Gender	Female	Count	0	116	27	38	117	112	410
		% within Gender	0.0%	28.3%	6.6%	9.3%	28.5%	27.3%	100.0%
		% within Your Present Profession	0.0%	96.7%	29.0%	37.3%	41.3%	71.3%	54.2%
	Male	Count	2	0	66	64	166	45	343
		% within Gender	0.6%	0.0%	19.2%	18.7%	48.4%	13.1%	100.0%
		% within Your Present Profession	100.0%	0.0%	71.0%	62.7%	58.7%	28.7%	45.3%
	Prefer not to say	Count	0	4	0	0	0	0	4
		% within Gender	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
		% within Your Present Profession	0.0%	3.3%	0.0%	0.0%	0.0%	0.0%	0.5%
Total	Count	2	120	93	102	283	157	757	
	% within Gender	0.3%	15.9%	12.3%	13.5%	37.4%	20.7%	100.0%	
	% within Your Present Profession	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	

**Table 4. Demographic distribution with regard to Rural and Urban Regional Distribution**

Gender * Where do you live? Crosstabulation			Where do you live?				Total
			Corporation	Municipality area	Rural area		
Gender	Female	Count	188	134	88	410	
		% within Gender	45.9%	32.7%	21.5%	100.0%	
		% within Where do you live?	62.0%	50.8%	46.3%	54.2%	
	Male	Count	114	130	99	343	
		% within Gender	33.2%	37.9%	28.9%	100.0%	
		% within Where do you live?	37.6%	49.2%	52.1%	45.3%	
	Prefer not to say	Count	1	0	3	4	
		% within Gender	25.0%	0.0%	75.0%	100.0%	
		% within Where do you live?	0.3%	0.0%	1.6%	0.5%	
Total	Count	303	264	190	757		
	% within Gender	40.0%	34.9%	25.1%	100.0%		
	% within Where do you live?	100.0%	100.0%	100.0%	100.0%		

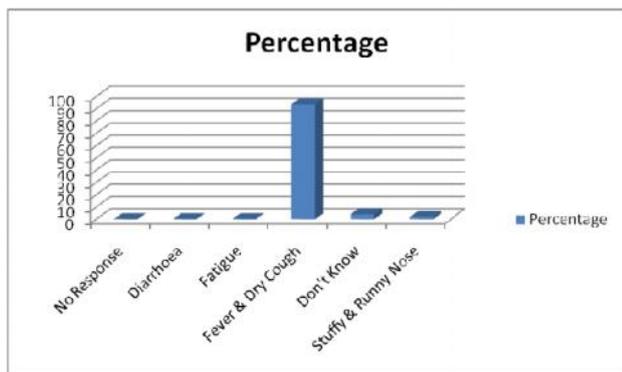


Figure 4: Basic Symptoms of COVID-19

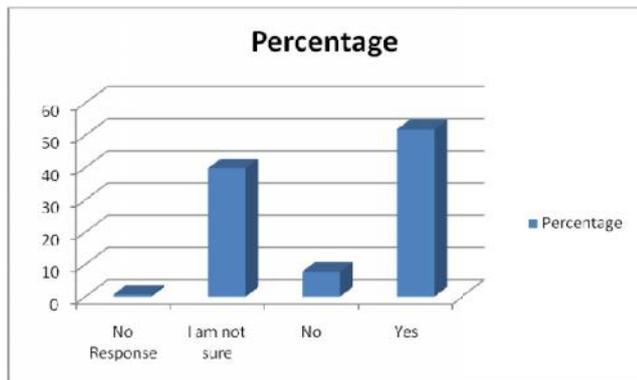


Figure 5: Coping with the crisis

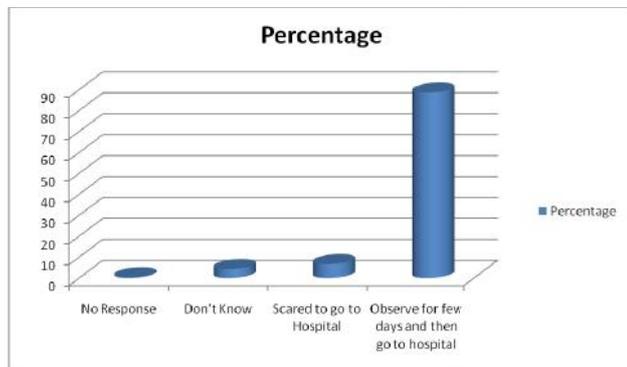


Figure 6: Seeking Treatment

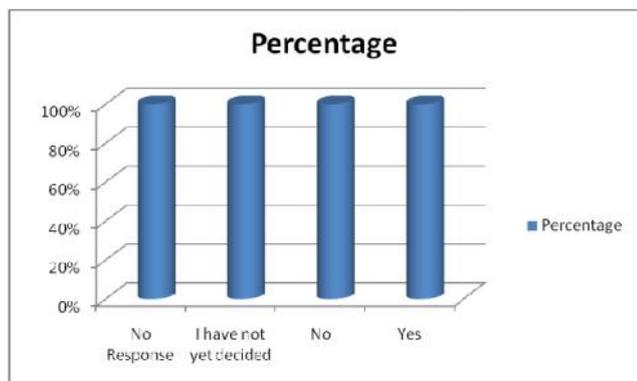


Figure 7. Maintaining precautions even after pandemic

Almost 69.5% of the respondents felt that the pandemic was indeed hampering both their profession and education.

Academic students have already reported that their performance was going to get hampered .<sup>[13]</sup> 88.6% of the respondents reported that they did not want to go to the hospital and would prefer staying at home till situations worsens (Figure 6) and 6.7% reported that they were scared to visit the hospital as they might get infected from the hospital itself. Earlier studies have also shown that people were indeed highly apprehensive about leaving their house and felt much safer inside their homes.<sup>14</sup>

A vast majority, 95% of the respondents believed in following Government instructions in dealing with the pandemic situation. 73.5% of the respondents believed that they would prefer to wait and watch how the situation goes on before returning back to their normal life. 93.7 % of the respondents reported that they would continue wearing masks and maintaining social distancing norms even after the pandemic gets over (Figure 7). Previous findings also indicate that people have also incorporated certain changes in their behaviour like avoiding physical contact (86.5%) and would also indulge in washing their hands more (87%) .<sup>15</sup> Overall, the data reveals that the pandemic has indeed had a significant impact on the lives of the residents of the state of West Bengal. However, it is noteworthy that the results reveal that the people are willing to follow necessary steps and precautions and are also supportive of the Government measures taken to curb the spread of the pandemic.

## CONCLUSION

The present study indicated that most of the respondents have a fair amount of knowledge about COVID-19. Majority of the respondents were willing to take necessary precautions to safeguard themselves and also had faith in the administrative measures being taken to curb the spread of the disease. The study also highlighted the adverse effects of the pandemic on academic and professional fields and also on the coping skills of the people. This clearly indicates that health education and training programmes maybe conducted for people to impart further knowledge about the disease and to address the underlying fear they have related to the disease. It will also help address whether there is any lack of coping resources or skills they have in general in relation to the disease. This in result will help in the larger goal of building up efficient skills in dealing with this global pandemic.

**Declaration of competing interest:** The authors declare that they have no competing interests.

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## REFERENCES

1. Bhat BA, Khan S, Manzoor S, Niyaz A, Tak Jasmin H, et al. 2020. A study on Impact of Covid-19 Lockdown on Psychological health, Economy and Social Life of People in Kashmir. International Journal of Research & Review., 5:36-46.
2. Pandey S, Gupta A. Bhansali R, BalharaS, KatiraP and Fernandes G. 2020. Corona Virus (COVID-19) Awareness

- Assessment - A Survey Study amongst the Indian Population. *J Clin Med Res.*, 2(4):1-11.
3. WHO Director-General's opening remarks at the media briefing on COVID-19 –11th March. World Health Organization. [www.who.org](http://www.who.org).
  4. Paules CI, Marston HD, Fauci, A.S. 2020. Coronavirus Infections-More Than Just the Common Cold. *JAMA*.
  5. Huang C. 2020. Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. *Lancet*; 395:497–506.
  6. Cao Z. 2020. Estimating the effective reproduction number of the 2019-nCoV in China. *MedRxiv*.
  7. Li Q. 2020. Early Transmission Dynamics in Wuhan, China, of Novel Coronavirus Infected Pneumonia. *N. Engl. J. Med.*
  8. Rothe C. 2020. Transmission of 2019-nCoV Infection from an Asymptomatic Contact in Germany. *N.Engl. J. Med.*
  9. Holshue ML. 2020. First Case of 2019 Novel Coronavirus in the United States. *N. Engl. J. Med.* <https://economictimes.indiatimes.com/markets/stocks/news/-how-coronavirus-outbreakcan-impact-india-world-economy/limitedroom-for-action/slideshow/74114825.cms>
  10. Baggett TP, Hwang SW, O'connell JJ, *et al.* Mortality among homeless adults in Boston: shifts in causes of death over a 15-year period. *JAMA Intern Med* 2013; 173: 189–95.
  11. Wang C. 2020. A novel coronavirus outbreak of global health concern. *Lancet*, 395, 470–473.
  12. Xu K, Cai H, Shen Y, Ni Q, Chen Y, Hu S, *et al.* 2020. Management of corona virus disease-19 (COVID-19): The Zhejiang experience. *Zhejiang Da Xue Xue Bao Yi Xue Ban.* 49(1). [PubMed: 32096367]
  13. Bhat BA, Khan S, Manzoor S, Tibetbaqal A, Anees SM., *et al.* 2020. A Study on Forecasting of Daily Deaths using Statistical Models and Consciousness of Students towards COVID-19 in Kashmir. *International Journal of Research and Review* 7:194-207.
  14. Balkhi F, Nasir A, Zehra A, *et al.* 2020. Psychological and Behavioral Response to the Coronavirus (COVID-19) Pandemic. *Cureus*, 12(5): e7923. DOI 10.7759/cureus.7923
  15. Bhat BA, Ashraf SS, Ali A, Nusrat, Naveena, N, Sultan MM. 2020. Awareness, Attitude and Practice of Rural People in Kashmir Towards COVID-19: A Sample Survey. *IJS DR*; April, 66-73

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