

Knowledge, Attitude and Perception Towards Covid19 Among the Indian Population During the End of The Second Wave

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ABSTRACT

Coronavirus is a single stranded RNA virus caused by the SARS-CoV-2 virus. The first case was reported on December 1, 2019 then it was distinguished as coronavirus by Chinese authorities. Covid-19 is different from both MERS-CoV and SARS-CoV and is considered as the seventh member of the coronavirus family that affects people. These spread through droplets or by a virus that may travel in the air from the suspect to the nearby person. Based on the current status it is obvious that the elderly population is most affected. It primarily affects the upper respiratory tract followed by severe pneumonia. This study aims to assess and compare the Knowledge, Attitude and Perception of the general population in South India through a cross-section survey. Questionnaires were sent to 800 people out of which 500 responded. The data were collected using google form and the results were interpreted. Among the responses, it was clear that the population has acquired adequate knowledge about the pandemics and they tend to act wisely to overcome them.

Keywords: Covid-19, Knowledge, Attitude, Perception

Article Info

Volume 9, Issue 4

Page Number : 80-85

Publication Issue :

July-August-2022

Article History

Accepted : 01 July 2022

Published: 10 July 2022

I. INTRODUCTION

The first pneumonia case with unknown causes was identified on December 31, 2019, then the cause was found to be due to a novel virus [1]. This new kind of virus (SARS-CoV-2) was distinguished on 7th January 2020 by Chinese authorities. The first case was actually reported in Wuhan, China on 12th December 2019 and later spread vigorously across the world threatening public health and safety [2]. This led the World Health Organisation (WHO) to declare coronavirus disease (Covid-19) as a public health emergency on March 13, 2020. Seven human coronaviruses have been isolated

till now of which OC43, NL63, HKU1 and 229E cause mild symptoms but SARS, MERS and SARS-CoV-2 are responsible for severe respiratory syndromes. The primary host for the SARS-CoV-2 is the rodents from where it is imparted to other hosts through genetic recombination, deletion, insertion, and missense mutations [3]. Within a short period, coronavirus had undergone numerous recombinations (SNP variants) and produced new strains of altering virulence. Exactly 149 mutations were found in 103 sequenced SARS-CoV-2 genomes [4]. Affected persons showed a wide range of symptoms like fever, chills, cough, sore

throat, loss of taste or smell followed by severe pneumonia [5].

Since the first case of Covid-19 has been reported, the world has recorded 260 million cases and 5.2 million deaths within 23 months. Covid-19 seems to be fatal in 2% of cases and serious illnesses like dyspnoea, sepsis, septic shock, and organ failure were noticed in 20% of cases but 80% of cases had mild symptoms. In India, the first case was reported on the 27th of January, 2020. It was during the month of march Covid19 spread abruptly in India and the nationwide lockdown was imposed on March 24, 2020. The first wave in India started in March 2020, achieved a peak in September 2020 with more than 90,000 confirmed cases/day, and there was a steady decline in late February 2021. Eventually, Covid-19 restrictions were diminished markedly. Lineage analysis in India showed the emergence of new SARS-CoV-2 variants, B.1.617.1 and B.1.617.2, during April 2021, which might be the key reason for the sudden upsurge of 400000 confirmed cases/day [6]. As per a study by the Indian SARS-CoV-2 Consortium on Genomics (INSACOG) the variant B.1.617 was a dominant strain which may have fuelled India's second wave. The study of the mechanism of pathogenicity and virulence is not yet completed. A serious effort is currently being devoted to studying the virus in depth. Meantime Various types of vaccines were developed across the globe. But no specific drug or vaccine that targets the new strains of coronavirus has been developed and this situation possesses a consternation among the people with weak immune systems [7].

The Covid-19 crisis is assumed to be a long-term process, therefore the only way to succeed in this battle is to know the right information and act in a coordinated way. This study aims to determine the Knowledge, Attitude, Perception and general lifestyle of the public during July and August 2021.

II. METHODS AND MATERIAL

2.1. Objective

This study was planned to assess and compare the Knowledge, Attitude and Perception of the general population in India with previous studies taken during this pandemic and to analyse the thoughts of the participants in order to overcome the pandemic in a better way.

2.2. Methodology

It was a cross-sectional study, based on a questionnaire-survey administered online via social media platforms. The questionnaire was framed in order to understand the following. 1. The basic knowledge about the disease through assessment questions based on the place of origin, symptoms, treatment methods and so on. 2. The attitude of the population towards the pandemic was based on how they would react if they are infected, and the remedial measures which they would take. 3. The questions on perception were based on whether an individual agrees with a common public perception or not. 4. General questions were included to bring a note of infected people, vaccination rate and so on.

2.3. Study design

A questionnaire, containing 19 questions was designed. It was then prepared as Google form and shared with the public through social media and individual email. Individuals who are Indian nationals and are above 18 years of age were included in this study.

III. RESULTS AND DISCUSSION

RESULTS

The questionnaire was sent to 800 individuals in India. Among them, 62.5% individuals came forward and assessed the questionnaire. The male participants were 224 (44.8%), and the female participants were 274(54.8)

3.1 Socio-demographic characteristics of the study participants

It was observed that the majority of the participants were from the age group 18-30 pursuing or completed undergraduate courses. People from age groups 31-40 (3.4%), 41-50 (2.2%) also responded. Interestingly people from the age group above 50 (2.4%) also responded to our queries.

3.2 Knowledge on Covid19

From the survey, it was evident that the majority of the respondents were quite aware of the origin (89%) and the symptoms (96.4%). But people had a mixed responses pertaining to the question on treatment methods (66.8%), post-covid symptoms (59.2%) or ending of the pandemic (69.8%). These clearly indicates that there is lack of scientific knowledge on Covid19.

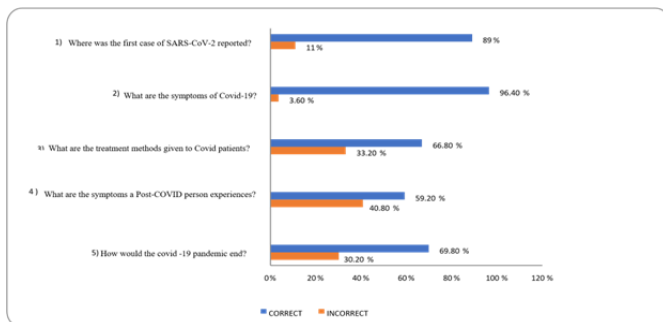


Figure 1: Knowledge among the participants related to Covid-19.

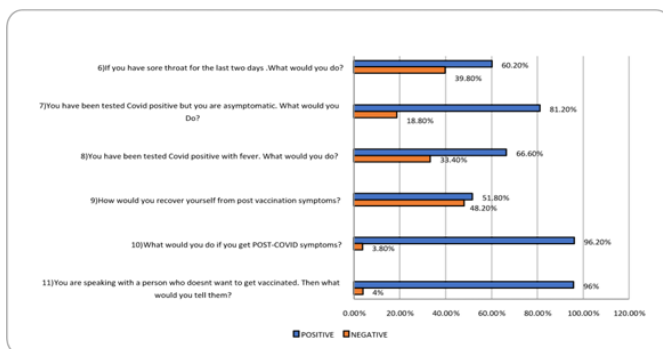


Figure 2: Attitude among the participants related to Covid-19.

3.3 Attitude of the participants

The survey apparently shows that the participants have good attitude towards covid 19. Nearly 75% of

the participants gave positive attitude towards Covid-19. Except the one question about the post vaccination recovery which had almost equal positive and negative responses. It is also eminent that 96% of respondents showed positive attitude to post-Covid symptoms and vaccination myths.

3.4 Perception on Covid19

This bar graph illustrates that respondents had a clear perception towards covid 19. Most of the people (92%) strongly agree that they get Covid-19 updates only through media and also 83.8% said yes for their hygienic practices. On the other hand, nearly 95% of people responded that they were under mental stress during pandemic. It is obvious that people struggle for immediate adaption to a situation.

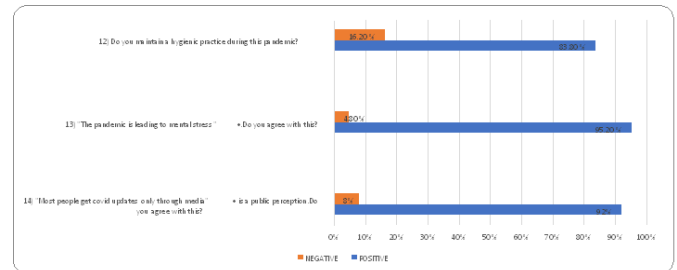


Figure 3: Public perception towards Covid-19

3.5 Common questions

Table 1 shows a set of general question which were commonly asked during the pandemic. It shows that majority (81.2%) of the participants have not been infected and 77.2% have been vaccinated. Majority of the population 63.6% prefer Covishield over other vaccines and 67.4% have been vaccinated with Covishield. Higher number of participants (20.2%) have reported arm-pain to be the major side-effect of vaccination.

Table 1: Other key questions towards covid 19

Questions	Response	Percentage
Have you been infected by Covid19 previously?	No	81.2%
	Yes	10%
	May be	5.2%
	Not sure	3.6%

Did you get your Covid vaccine?	Yes	77.2%
	No	22.8%
Which vaccine do you prefer?	Covishield	63.6%
	Covaxin	13.4%
	Sputnik5	8.2%
	anything	3.6%
	Covishield, Covaxin	2.4%
	Covishield, Covaxin, sputnik5	0.2%
	Covishield, Pfizer	2%
	Covishield, Sputnik5 Irrelevant	0.2%
What was the first dose you received?	Covishield	67.4%
	Covaxin	11.4%
	Sputnik V	1.2%
	Not yet vaccinated	18.4%
	Others	1.6%
Did you face any side effects with your vaccine?	Arm pain	20.2%
	Body weakness	5.2%
	Malaise	1.4%
	Fever	18%
	All of these	19.4%
	No side effects	9.4%
	Blanks	26.4%

Discussion

The population has an acquired knowledge about the endemics and they tend to act wisely to overcome them, but pandemics are infrequent happenings. The number of recorded cases has grown exponentially, in each wave in India. Therefore, the Assessment of Knowledge, Attitude, Perception and general lifestyle of the population towards the Covid -19 pandemic has primo importance.

It is heartening to know that knowledge related to SARS-CoV-2 is high among respondents. This study shows that almost all the participants had a correct idea about the place of origin and symptoms of Covid-

19. The government has implemented audio clip of caller tune to bring awareness to the public which proves to be a successful effort from this data. A little more than half number of participants had knowledge related to treatment methods given to Covid-19. A better knowledge of the same would help the people understand and follow the government directives properly.

Better knowledge may result in positive perceptions and attitudes and therefore in good practices, and effective management of infectious diseases. The knowledge and attitude of the participants regarding the post-Covid symptoms were good. Though an astonishing majority of patients with post-Covid symptoms show good healing but the duration, and long-term outcome of post-Covid syndrome are largely unknown [8]. So, there occurs a need to guide the population about the clinical, diagnostic, and therapeutic management of post-Covid symptoms. Little less than three quarter number of participants had correct idea of how the pandemic may end which also provides proof that the participants were eager to get vaccinated.

More than half of the participants showed eagerness towards RT-PCR test and getting admitted in case if they experience any symptoms. This is a positive attitude which may help the government with maximum amount of testing's for covid. Majority of the participants showed a positive behaviour if they are tested positive but asymptomatic which is in accordance with the SOP (Standard operating procedures) guidelines of WHO and CDC.

Compared with other studies [9] where the participants showed mistrust in the effectiveness of the vaccine and preferred natural immunity over vaccine our survey reported the majority of participants who believed that vaccinating would prevent death. A systematic review of Covid-19 vaccine acceptance rates in different parts of the world revealed high acceptance in Malaysia, Indonesia and China and very

poor acceptance rates in Italy, Russia, United States and France [10].

Compared to other studies [11], our survey uncovered markedly reduced number of participants who agreed social media to be a major source of covid updates. The alternatives to this may be world meter, radios, television, aarogya setu app, Internet (websites, blogs, etc) Friends, relatives, and/or neighbours, Local government officials, Announcements at work and so on. But infodemic (harmful information) circulated in media remains to be a great challenge during this pandemic [12], because the majority of participants believed rumours as the major reason behind not getting vaccinated. A greater number of participants has reported that the pandemic is stressful which may be due to excessive time spent online. The pandemic has caused a lot of mental health problems which leads to physical inactivity, insomnia, anxiety, and depression [13]. This fact needs to be taken seriously as mental health improvement is very necessary to cope with life.

The Janata curfew ensured that the seriousness of the disease was impressed and reflected in people taking good preventive measures to protect themselves as well as break the chain of transmission. The Standard Operational Protocol (SOP) of WHO as a precautionary measure to avoid Covid-19 was found to be followed, as majority of participants agreed that they maintain a hygienic practice during this pandemic. A majority of the participants preferred a flexitarian diet. Compared with other studies [14], only a smaller number of participants in our survey believed that vegetables would give protection against Covid-19.

Vaccine inequity is giving the Covid-19 variants a free pass to run wild. Our survey shows three quarter of the participants have been vaccinated. A very few participants were ready to take any covid vaccine. Compared with other studies [15] our survey reported a high number of participants experiencing arm pain as the major side effect of post-vaccination before fever.

Balanced number of participants showed a practical approach for recovery from post vaccination symptoms.

A rapid diagnosis of SARS-CoV-2 variants, strict cohesion to preventive measures, precise diagnosis and treatment, appropriate and rapid launch of vaccination throughout the whole population without any inequity and reporting the correct number of infection rate and death rates would help to restrict viral transmission in the Indian community and help people understand the severity of the disease.

IV. CONCLUSION

The coronavirus is a deadly series. The news was filled with infection, sickness, disappointment, unemployment and death. In the beginning, exposure to those types of news made even the optimistic feel frustrated. Therefore, in order to neutralise or override these negative stimuli, there is a need to focus on positive stimuli to protect our physical and mental health and hope for things to get even more better.

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Cite this Article

Karthika Rangasamy, PraveenRaj Rajkumar, Nivetha Lakshmanan, Syed Ibrahim, "Knowledge, Attitude and Perception Towards Covid19 Among the Indian Population During the End of The Second Wave", *International Journal of Scientific Research in Science, Engineering and Technology (IJSRSET)*, Online ISSN : 2394-4099, Print ISSN : 2395-1990, Volume 9 Issue 4, pp. 80-85, July-August 2022. Available at doi : <https://doi.org/10.32628/IJSRSET22949>
Journal URL : <https://ijsrset.com/IJSRSET22949>