

# Awareness Regarding COVID-19 Precautionary Measures in India- A Survey Study

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## ABSTRACT

**Introduction:** The COVID 19 pandemic has deeply impacted individuals from all walks of life. The rapid spread of the virus has not only caused health challenges but also economic, social and environmental challenges to the entire population. This survey study conducted in India attempts to highlight the amount of awareness in general population regarding the precautionary measures of COVID 19.

**Method:** This is an online survey-based study with 860 voluntary participants reached through snowball sampling.

**Results & Conclusion:** Our survey study analyses each precautionary measure using descriptive analysis for the responses and results conclude maximum awareness among general population with respect to Masks, Hand hygiene, Greeting Methods and Grocery cleaning. We however feel that practicing social distancing is of utmost importance and spreading more awareness regarding the same is yet required.

**Keywords:** COVID 19, Social distancing, Awareness, Precautionary measures

## INTRODUCTION

Novel corona virus also officially named as COVID 19 by WHO on 11<sup>th</sup> February 2020 now has its spread in 216 countries across the globe since its first outbreak in Hubei province of China on Dec 2019. Due to its global spread it was declared as a Pandemic by WHO on 11<sup>th</sup> March 2020, following which many countries adhered to practicing all possible preventive measures to combat the spread of the virus. <sup>(1, 2)</sup> India had its first case of COVID 19 infection in January 2020 following which the number of infected cases is on a spurge with more than 1 million confirmed cases till date. <sup>(3)</sup> Though India has practiced prevention to its best considering a high population density compared to many global countries, we still

have an unfortunate count of 26,200 deaths due to COVID 19 so far. <sup>(4)</sup>

Combating the spread of COVID 19 being the utmost concern for India due to its high population density, India was on imposed lockdown since 24<sup>th</sup> March 2020 however secondary to the imposed lockdown significant economic and financial losses have occurred, therefore it is now become important to unlock India gradually and get life back to normal. In order to tackle the spread of the virus and re-starting life like before we have to make sure that we are well aware of the important preventive measures while we began to bring economic stability for ourselves and for our Country. Considering the respiratory route of virus transmission preventive measures have been well defined and

updated by the WHO time and again which includes the following: <sup>(4)</sup>

1. Social Distancing: Practicing at least 6 feet of distance in public sphere will help combat the transmission of corona virus through direct or indirect contact amongst individuals. <sup>(2)</sup>

2. Wearing Mask: Updated guidelines of WHO issued on 5<sup>th</sup> June 2020, appeals wearing of mask by a healthy individual to protect himself from the virus and also by an infected individual to prevent further spread. WHO says that use of masks is a part of prevention measures package for COVID 19. Updated guidelines also advise on the correct way of wearing mask for individuals working in healthcare sector and for others as well. It highlights the importance of covering entire nose and mouth and also provides evidence on various types of masks used. <sup>(5)</sup>

3. Hand Hygiene: As the spread of corona virus is through droplets and surfaces with droplets from infected sources, importance of washing our hands frequently or after touching any object/surface outside home has been well emphasized by WHO. Hand washing with soap and water or an alcohol-based sanitizer for at least 20 seconds along with the diagrammatic presentation of 7 steps of hand washing has been issued. WHO also provides us with complete hand hygiene routine to be followed by healthcare worker and explains the importance of avoiding hand to face touch. <sup>(6)</sup>

4. Staying home and self-isolating if you have minor symptoms such as cough, headache, mild fever.

5. Avoiding crowded places, as you are more likely to come in contact with an infected person and it is difficult to practice social distancing in crowded places.

6. Always covering your mouth and nose while sneezing or coughing with your bent elbow or a tissue.

Along with these measures it is also important we ourselves take precautions and clean our groceries, avoid hand to hand contact with anyone while greeting and avoid any contaminated unhealthy eating

habits to keep us safe. Indian Government developed an app called “AAROGYA SETU” which is specifically designed to connect health services, trace a positive case around us and thereby protect the citizens by making them aware of all the positive cases in their neighborhood along with emphasizing on precautionary measures. <sup>(7)</sup>

As much as we understand the importance of adhering to these preventive precautionary measures, it is also evident that in a country like India where families stay together, where people have cultural beliefs associated with greeting someone, where eating fresh is a ritual and where every public place is crowded it is a testing time for everyone. After these 4 months of Lockdown and with one month of the unlock plan we have noticed that as the fear from corona virus is decreasing, people are moving out often and with that comes the responsibility to understand and practice all the precautionary measures for a better tomorrow.

Hence, we felt the need to conduct this survey and reach out to as many people as we can to understand their knowledge and awareness regarding the precautionary measures to be taken against the spread of the novel corona virus which we feel is the need of hour.

## METHODOLOGY

Ours was an online survey based cross sectional, observational study conducted in India. A structured questionnaire was developed by the 1<sup>st</sup> two authors using Google forms. The validation of the questionnaire was carried out under the guidance of the 3<sup>rd</sup> author. The study was accomplished using the Snowball Sampling technique wherein the link of the online survey questionnaire was sent through various social media platforms like WhatsApp, LinkedIn, and Email to as many people as possible using all the 3 investigators first point of contacts. The enrolled participants were requested to roll out the survey link to as many people as possible in their contact Socio-Demographic

variables of Age, Gender and Occupation were included in the first part of survey questionnaire and respondents were made aware of the survey being used for research purposes. Respondents voluntarily participated in our survey study and were requested to respond honestly.

The extent of the survey was limited to people understanding English, above the age of 18 years and having access to internet. Data Collection was initiated on 10<sup>th</sup> July 2020 and was closed on 20<sup>th</sup> July 2020.

The online questionnaire of total 21 Questions was developed by the investigators consisted of the five sections to understand awareness regarding various precautionary measures of COVID 19. Mask Awareness Section consisted of 5 Multiple choice Questions, Section on Hand hygiene comprised of 4 Multiple choice and 2 Dichotomous Questions, 2 Multiple choice questions gained insight into the section regarding awareness of Social Distancing norms whereas Dietary measures were understood with 2 Multiple choice and 1 Dichotomous Question and lastly 3 Multiple choice questions were built to know the general awareness of precautionary measures. All respondent's data was subjected to descriptive Analysis. Mean and Standard deviation of each Question response were used to interpret the results along with their graphical presentation.

## DATA ANALYSIS AND RESULTS

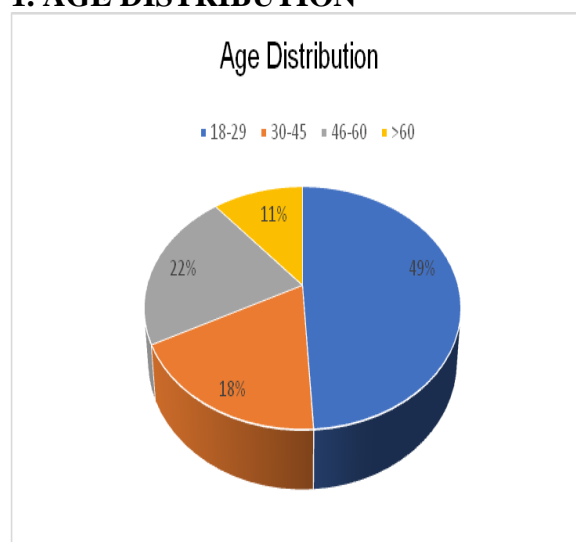
Out of 900 participants approached using the snowball sampling 860 participants responded well within time and their response for each question was analyzed descriptively. Demographic data result shows that Maximum participants (49%) ranged in the age group of 18-29 years, whereas 22% participants were between 46-60 years, 18% between 30-45 years and 11% were above the age of 60 years. This descriptive result demonstrates the wide variation and unbiased involvement of participants from varied age

groups. Gender distribution shows that 56% participants were females whereas males accounted for 44% of the total participants.

As the survey was divided into various sections consisting of questions pertaining to awareness regarding precautions in COVID 19, each question was individually analyzed to understand the level of awareness. Descriptive analysis shows that type of mask used varied largely with 38% participants using normal cloth mask, 36% opted for N95 Mask, 14% were using the 3 Layered Mask and 12% surgical mask. Analysis of Awareness regarding the area to be covered using mask shows excellent results with maximum number of participants being well aware so as to cover both their mouth and nose with the mask. Mask hygiene methods varied largely among participants with 36% using normal soap and water, 35% using antiseptic soap and hot water, 23% preferring mask disposal after every use, 2% using plain water and to our worry 4% not following any mask hygiene. Most of the participants preferred disposing their mask weekly. A small number of participants (less than 50%) felt the need to adjust their masks sometimes as they are not used to it.

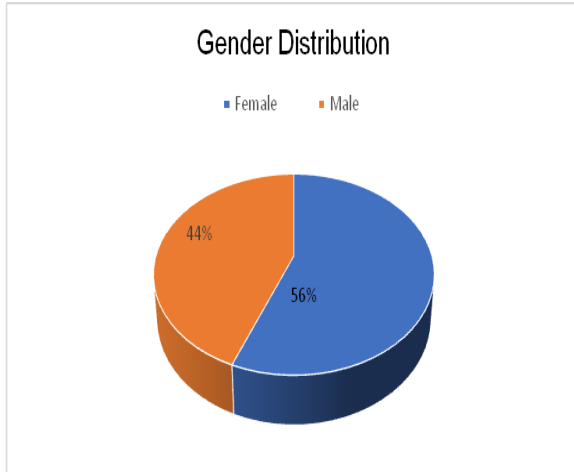
## Graphs & Tables

### 1. AGE DISTRIBUTION



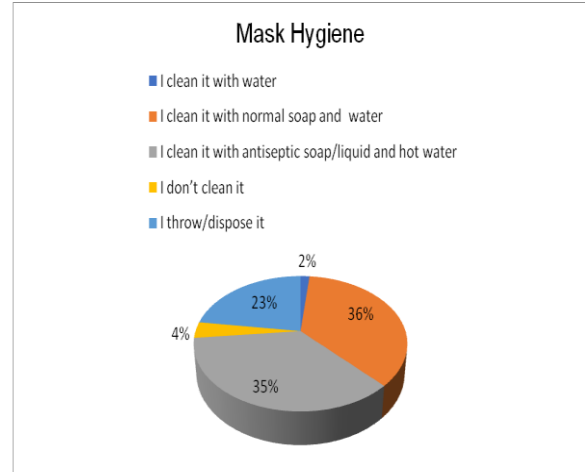
Graph 1: Age distribution statistic depicting the percentage of participants in each age group.

## 2. GENDER DISTRIBUTION



Graph 2: Gender Distribution results depicting the percentage of males and females out of total number of participants who took part in the survey.

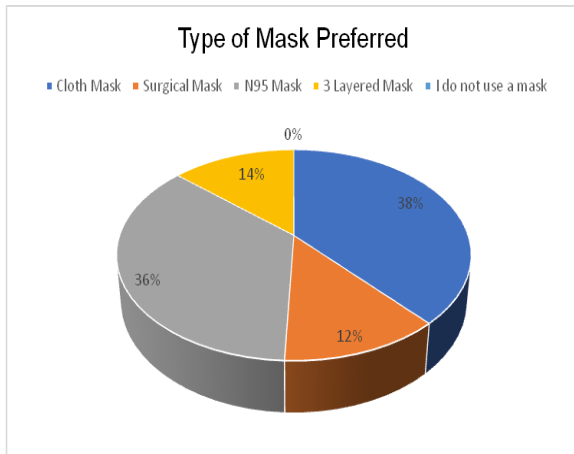
## 3C



Graph 3C: Results show percentage participants using various methods to clean their used masks.

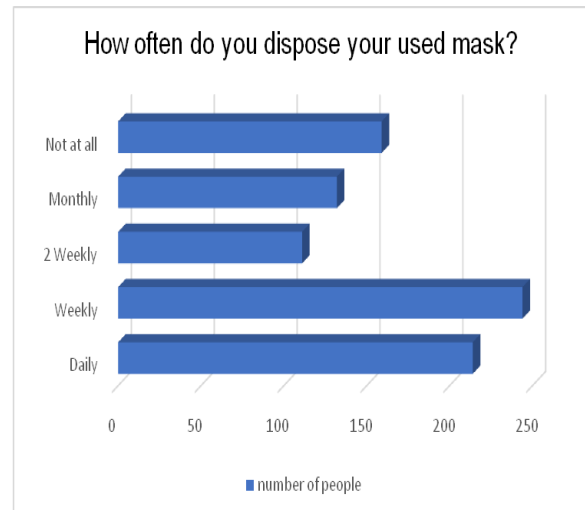
## 3. MASK AWARENESS SECTION

### 3A.



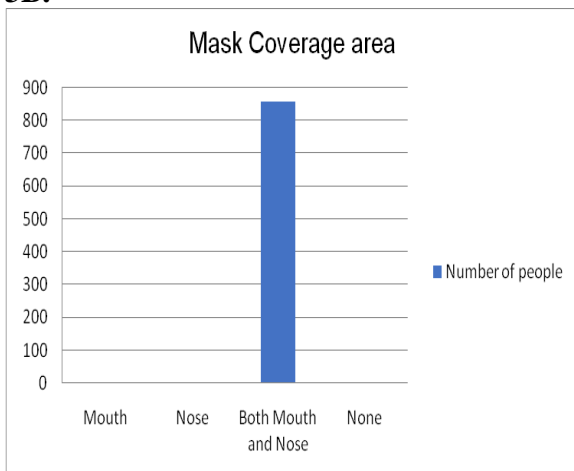
Graph 3A: Type of Mask preferred by the participants depicts the percentage of participants using a particular variant of mask, while everyone is using a mask.

### 3D



Graph 3D: Depicts the number of participants who dispose their used mask either daily, weekly, 2 weekly, Monthly or those who do not dispose it at all.

### 3B.



Graph 3B: Maximum Participants were aware of the Mask coverage required which is depicted by the bar graph.

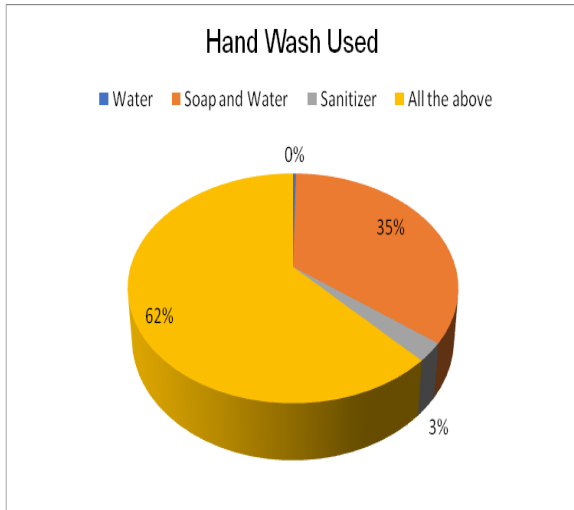
### 3E

Do You feel the need to adjust your mask often?	Number of Participants
YES	217
NO	269
SOMETIMES	374

Table 3E: Results show the number of participants who feel the need to adjust their mask often or sometimes which can be harmful.

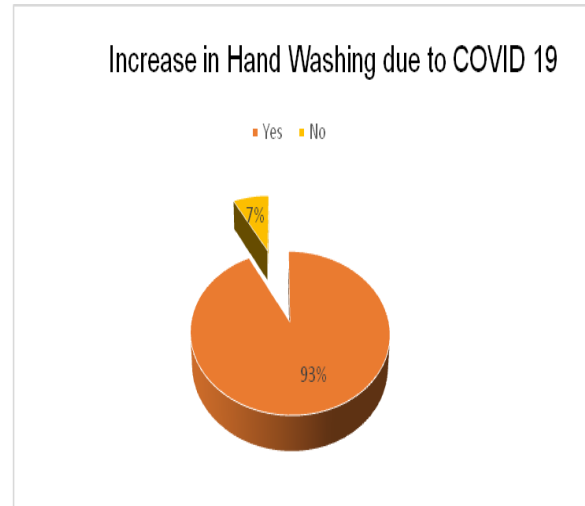
## 4. HAND HYGIENE AWARENESS

### 4A



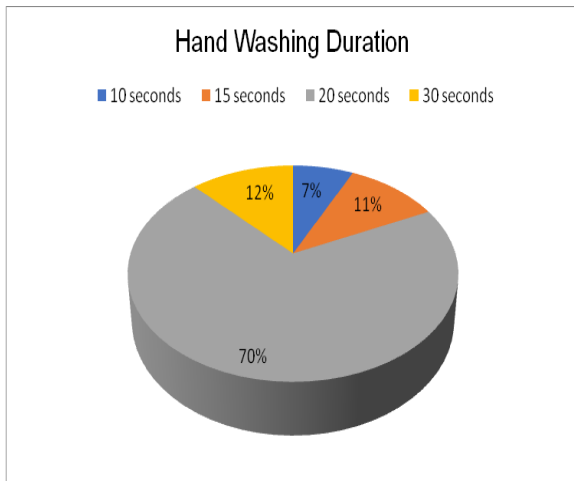
Graph 4A: Percentage of participants using various methods of Hand wash to maintain hygiene.

#### 4D



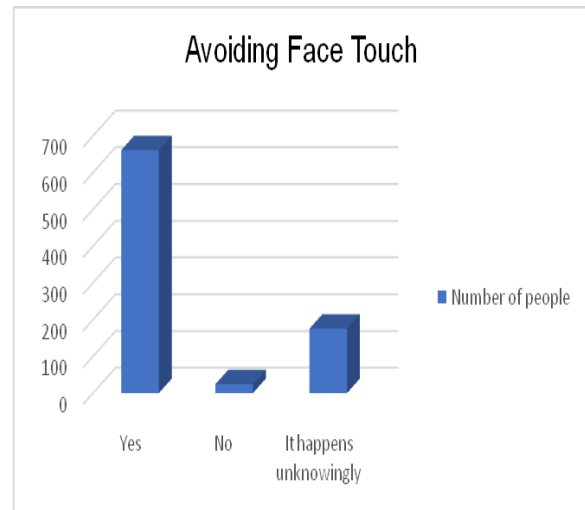
Graph 4D: 93% of Participants have increased their hand hygiene regime post COVID 19.

#### 4B



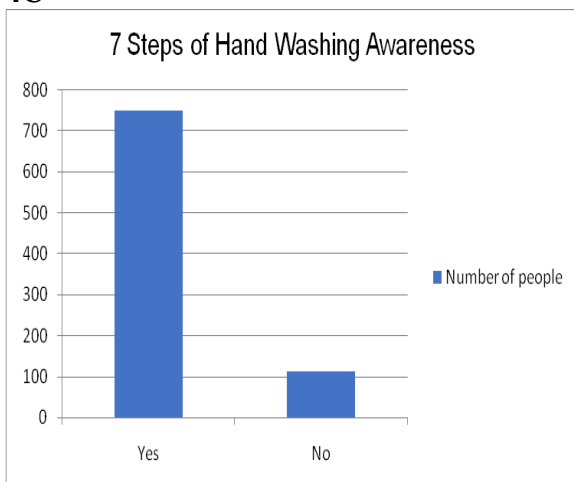
Graph 4B: Results in percentage depict awareness regarding the duration of hand washing as per WHO guidelines among the participants.

#### 4E



Graph 4E: Most of the participants avoid touching their face while outside whereas some participants feel it happens unknowingly.

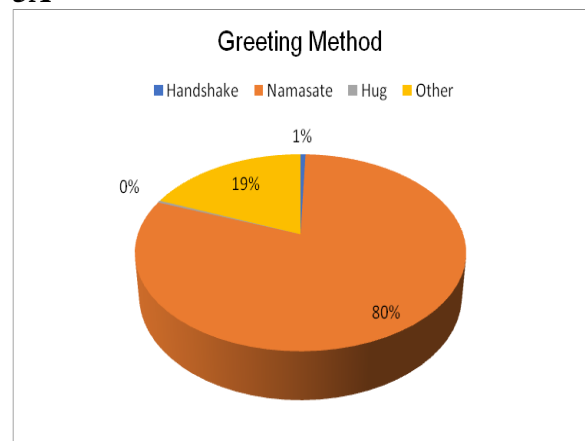
#### 4C



Graph 4C: Results show the number of participants aware regarding the 7 steps of hand washing as per WHO Guidelines.

### 5.SOCIAL DISTANCING AWARENESS

#### 5A



Graph 5A: Results depict the various methods of greetings preferred by a percentage of participants.

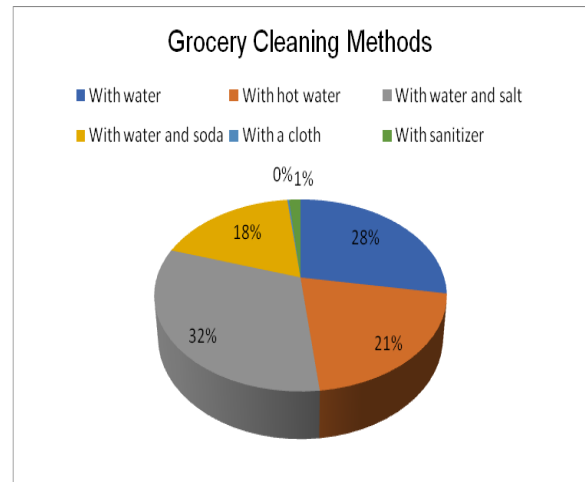
**5B**



**Graph 5B:** Results show the number of participants who are aware about the minimum distance to be maintained as per Social distancing norms.

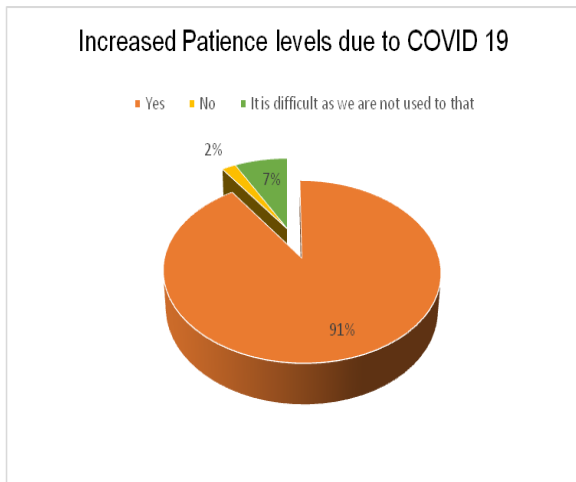
**6. GROCERY HYGIENE**

**6A**



**Graph 6A:** Participant Percentage depicts the various methods used for cleaning groceries.

**5C**



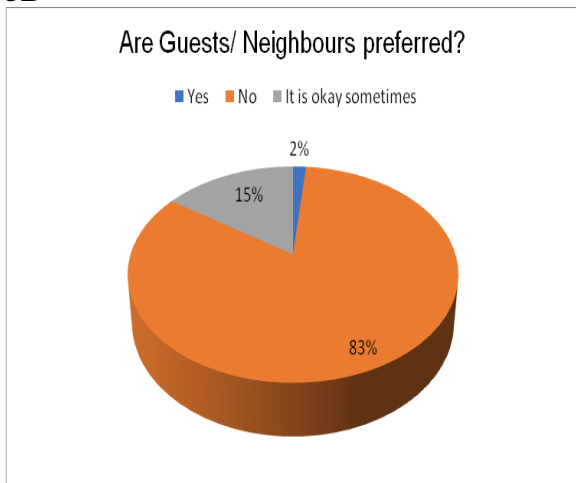
**Graph 5C:** Results depict the percentage of participants who have developed more patience and can stand in queue so as to practice social distancing.

**6B**



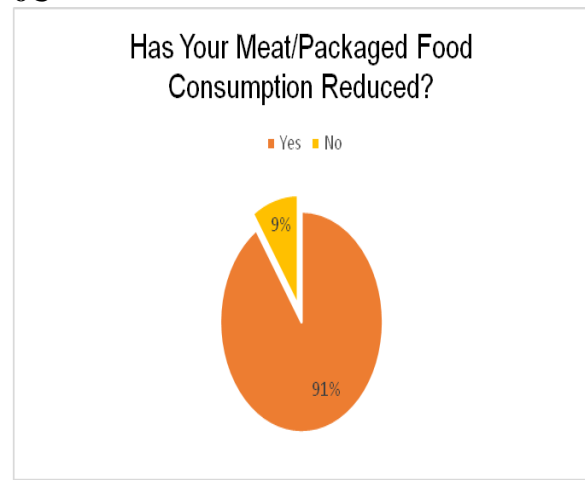
**Graph 6B:** While Maximum participants are scared to have outside food, small percent of participants feel it is okay at times.

**5D**



**Graph 5D:** While most participants do not prefer having guests during COVID 19, a small percentage feels it is okay at times.

**6C**



**Graph 6C:** Results show that a huge percentage of participants have reduced their meat or packaged food consumption in view of COVID 19 Precautions.

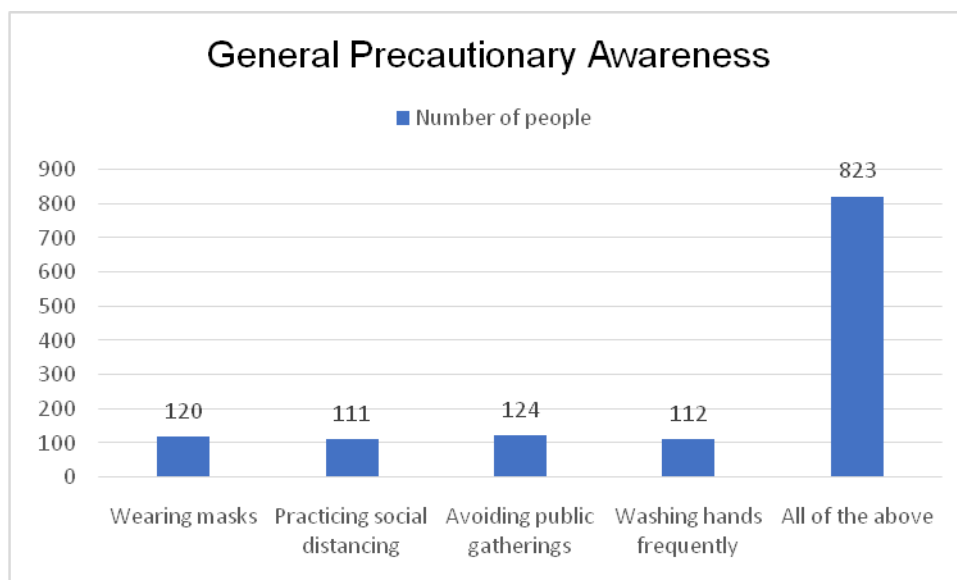
## 7. GENERAL AWARENESS & PRECAUTIONARY MEASURES

### 7A

Have you registered yourself on the 'Aarogya Setu app'(Govt of India Initiative)	Number of people
Yes	568
No	276
I think it is only for COVID 19 patients	16

Table 7A: Results depict the number the participants following the Government Guidelines and taking the required precautionary steps while a few participants are still confused about the same.

### 7B



Graph 7B: Results show general precautionary measures undertaken by the number of participants and their understanding of the same.

On analysis of awareness regarding hand hygiene, results depict that most participants (62%) use various methods like soap & water, sanitizer etc as required to maintain good hand hygiene. We also found that maximum participants (70%) wash their hands for at least 20 seconds and knew the 7 steps of hand washing as per the WHO guidelines. Maximum participants felt they have increased their hand hygiene routine and consciously avoid face touching due to COVID 19.

Social Distancing has its own difficulties in India due to large population ratio in spite of which we found that 80% of our participants have followed Indian Namaste as their way of greeting others whereas 19% use various other ways for greeting and only 1% still use handshake as their greeting method. Results show that only 31% participants were aware about the minimum distance to be maintained, whereas more than 51% participants thought that minimum social distance should be

between 3-5 feet and a small number of participants felt 2 feet distance was equally good. 91% participants felt that COVID 19 has helped them develop more patience and they now stand in a queue patiently when they step out. 15% Participants felt it was okay to have guest sometimes which is a worrisome number with regards to the pandemic spread.

As far as Grocery cleaning is concerned, participants have adopted various ways with 32% using water with salt, 28% using only water, 21% using hot water and 18% preferred cleaning groceries with soda and water. 65% participants said they are scared to have outside food and 91% participants have reduced their meat and packaged food consumption due to COVID 19.

General precautionary measures were followed by maximum participants and more than 50% participants had registered themselves on Aarogya Setu app



which is an initiative by Government of India.

## DISCUSSION

Our survey study was conducted to understand the level of awareness regarding the precautionary measures of COVID 19 Pandemic in India among adults. As our survey was conducted using snowball sampling technique, participants of varied age groups were included. At least 30% of included participants belonged to the vulnerable group for COVID 19. As per the WHO guidelines issued on 5<sup>th</sup> June 2020 regarding use of masks and considering the responses of our survey participants, Indian population seemed to be well aware with respect to the Mask usage. As Mask usage helps to have a source control and prevent virus spread<sup>(5)</sup> it was relieving to see that all participants wore a Mask, though a large number of participants preferred using a normal cloth mask followed by N95 mask, all participants were well aware regarding the coverage area and covered both their nose and mouth with Mask. As suggested by WHO, used Mask should be washed according to the linen/ fabric temperature tolerance,<sup>(5)</sup> most participants were found to follow a good mask hygiene but to our worry a small percentage still feels that mask hygiene is not important and may not have understood its importance which needs to be addressed. We also feel that N95 Mask should be reserved for use by the medical professionals who are exposed to the virus on a large scale and its use by the general population should be restricted so as to help a good supply to the needful. As COVID 19 spread occurs mainly through droplet transmission it is essential to consider its spread through fomites on surfaces infected with COVID droplets.<sup>(5)</sup> Any person coming in contact with these droplets directly (respiratory route) or indirectly (touching infected surfaces) is at a risk of infection and hence Hand hygiene measures are equally important.<sup>(5, 8)</sup> Our participants were well aware with respect to hand hygiene and followed the washing of hands

with soap, water and alcohol-based solution frequently. It was also noticed that participants consciously avoided touching their hands and were aware of the 7 steps of hand washing by WHO.<sup>(6)</sup> Greeting someone in India always was safe as we used Namaste which does not require direct hand contact and so opting for this was not a task for Indians. Social distancing is the most important and only solution to combat the spread of this virus until we have a vaccine. In India social distancing has many aspects,<sup>(2)</sup> and a study conducted by Rajesh Singh et al explains how social distancing is related to age and its variants along with the need of practicing it at various levels.<sup>(2)</sup> Through our survey analysis we felt there was an immense need to undertake more innovative measures to make sure people are aware and follow social distancing. We felt participants were not completely aware of the minimum distance of 6 feet required to be maintained between individuals and those who were aware found it difficult to practice owing to the large Population ratio. A few cultural norms which included no denying the guests and a mindset that having someone over is okay sometimes, seen with our survey is worrisome and people of India need to be made aware of the seriousness required in combating the spread of COVID 19 so as to return to normal ways of living. We felt participants were also not well aware about the use of Aarogya Setu app which is a Government of India initiative and were still confused as to what does the app do and who should register. Grocery cleaning and maintaining good hygiene was practiced widely.

Considering the responses and on analysis of our survey study, we feel there is still some need to spread more awareness regarding importance of Social distancing especially now that India is heading towards “Unlocking” and getting back to routine through various platforms or by undertaking stringent measures.



## CONCLUSION

In a country like India combating COVID 19 is a task in itself owing to its widespread and huge population ratio. Indians are making all efforts to get independent from this virus and get back to normal living. Though our survey depicts maximum awareness with respect to Masks, Hand hygiene, Greeting Methods and Grocery cleaning. We however feel that practicing social distancing is of utmost importance and spreading more awareness regarding the same is yet required.

## ACKNOWLEDGEMENT

We are extremely grateful to Dr Vijaykumar Verma (Senior Consultant, Interventional Cardiologist) for helping us in reviewing and editing our manuscript. We are also grateful to all the participants for volunteering in our study.

**Conflict of Interest:** None

**Funding and Support:** None

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How to cite this article: Verma VV, Vora TD, Verma CV. Awareness regarding COVID-19 precautionary measures in India- a survey study. Int J Health Sci Res. 2020; 10(10):114-122.

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