

## Analyzing the General Trends in Wearing of Face Masks during Covid-19 Pandemic among the People of India: A Survey Report

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Received: 17.08.2020 | Revised: 25.08.2020 | Accepted: 29.08.2020

### ABSTRACT

*The novel coronavirus that causes COVID-19 has emerged as a global pandemic and is affecting all the nations worldwide. Since the outbreak of this disease, the use of face mask has become ubiquitous in India and rest of the world. Masks or cloth face coverings have the potential to help in reducing the spread of COVID-19. The aim of present work was to analyze the use of face masks among the people during current viral pandemic. The survey was conducted in the month of July-August, 2020 by creating questionnaire on Google Forms and the link was posted on various Whatsapp Groups. Ten questions were included in the questionnaire related issues regarding wearing of face mask and 540 responses were received. It was reported that 96.1% of the people wear the face mask when they go outside the home while 0.4% of people refuse to wear face mask and 3.5% observed to wear face mask sometimes. The present study provides survey evidence on recent and prospective behavior of mask wearing by the people of India.*

**Keywords:** COVID-19, Face mask, Pandemic, Questionnaire, Outbreak

### INTRODUCTION

Coronavirus are minute sized (65-125nm) single stranded RNA viruses having spike on its surface and belong to family Coronaviridae. Chinese researchers identified the outbreak of  $\beta$ -group coronavirus at Wuhan city (China) in the month of December, 2019 and named it 'Wuhan Coronavirus' or '2019 Noval Coronavirus'. The International Committee on

Taxonomy of Viruses (ICTV) renamed it 'SARS-CoV-2' and disease caused by it was called 'Coronavirus Disease-19' or COVID-19 (Cui et al., 2019). It is a severe pandemic disease which rapidly transmits person to person mainly through virus containing aerosols exhaled during coughing and sneezing by an infected person (Riou & Althaus, 2020).

**Cite this article:** Kumar, S., Kumar, A., Mangla, C., & Jakhar, V. (2020). Analyzing the General Trends in Wearing of Face Masks during Covid-19 Pandemic among the People of India: A Survey Report, *Ind. J. Pure App. Biosci.* 8(4), 355-362. doi: <http://dx.doi.org/10.18782/2582-2845.8283>

World Health Organization (WHO) in its interim guidelines published on 5<sup>th</sup> June, 2020 have suggested hand hygiene, adequate physical distancing and use of face mask to prevent person to person transmission of COVID-19. Use of face mask and hand hygiene had reduced the transmission of influenza virus in household and also reported that both medical mask as well as N95 mask respirators equally useful to protect from this disease (Bartoszko et al., 2020). Cloth masks are not recommended for health workers due to its inferiority to N-95 respirators and medical masks, but these can be used at community level (Chughtai et al., 2020). Keeping in view the fast growing number of COVID cases in India, Ministry of Home Affairs (MHA) have made it mandatory to wear masks when any one go outside the home and at work places to minimize the risk of human to human spread of the disease. Present survey reports the trends of use of masks by different groups of the society and complications felt by the people while wearing the face masks for long period.

## MATERIALS AND METHODS

### STUDY DESIGN:

The study was undertaken in the month of July-August, 2020. The present work was typically based on specially designed online survey through Google Forms. A link was generated (<https://forms.gle/4XzLXQfgReT3Ug7E6>). The questionnaire was developed and all related issues regarding wearing of face mask were considered.

### PARTICIPANTS AND PROCEDURE:

The questionnaire prepared on google forms was shared through generated link on various social media platform specially on Whatsapp Groups. The data received from participants was included in the analysis. The work conducted is an online investigation based on the responses received from participants.

### QUESTIONNAIRE:

A questionnaire was prepared which included questions about participant's name, gender, date of birth, occupation, village/town/city/district, state, mobile number. Apart from this basic information of participant, the questions about wearing of face masks and suggestion were also considered (Table-1).

### RECORD OF DATA AND ANALYSIS:

The responses received from the participants were recorded and analysed. Simple tabulation was performed for each question.

### RESULT AND DISCUSSION

COVID-19 is an infectious disease caused by a newly discovered coronavirus. Different nations in the world have experimented with many public health measures to mitigate the spread of COVID-19. One particular measure that has been introduced widely is the use of face masks. In the present investigation, a general survey was conducted among the people of India regarding the use of face masks. Among all the 540 responses received from the people, it was found that 84.1% respondents were females as compared to only a limited number of males (15.9%) in the survey (Figure:1). A large number of female respondents could be due to more awareness amongst them. It is envisaged from the result that youth of the country is more competent and enthusiastic towards the betterment of the current situation. Result showed that 81.3% of the responses were received from students followed by the persons who belong to government sector (Figure: 2). A limited number of responses were received from private sector persons followed by self employed and home makers. Likewise, the results showed that 96.1% of the people wear the face mask when they go outside the home and 0.4% of people refuse to wear face mask (Figure: 3) . High percentage of the people wearing face masks shows that they are well aware of the consequences of the pandemic. Our findings are in conformity with the survey of Howard et al. (2020) who evidently showed efficiency and effect of mask on population. The main channel through which masks reduce transmission of SARS-CoV-2 is the reduction in aerosols and droplets, as argued by Prather et al. (2020). It is also clear that 13.7% of the participants wear face mask at home too while 34.6% participants do it sometime (Figure: 4). The result also showed that 51.7% of the participants do not wear the mask when they are at home. It is evident that 45.6% of the people of India prefer to wear two or more layered cloth mask while 25.6% wear home made single layered cloth mask, 10.9% wear N95 type of mask, 8.5% wear disposable mask

and limited number of people preferred handkerchief, towel or gamchha (Figure: 5). It has also been reported that surgical masks can intercept other human corona viruses during coughing (Leung et al., 2020). A large number of people using cloth masks as a simple, economic and sustainable alternative to surgical masks and it proved to control the transmission in the community (Esposito et al., 2020). In the present survey, it was found that most of the people (54.3%) wear mask for only 0-3 hours per day followed by 26.1% people wearing mask for 3-6 hours per day. This could be due to a high percentage of people feeling suffocation (33.9%) and breathlessness (13.7%) (Figure: 6, Table: 2). This could also be due to the less movement of people outside their houses. Only shopkeepers, health workers and other public servants wear mask for longer period. Keeping in mind the importance of morning and evening walk, a question was also put in the questionnaire about wearing mask during walk, a good response was received as 74.2% people were observed to wear mask as compared to 11.9% people who do not wear mask during their walk. Though it was clear from the results that

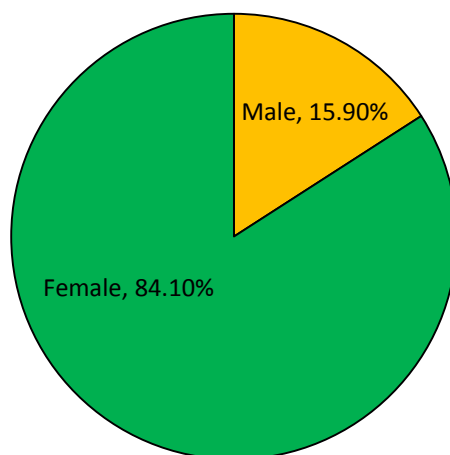
31.9% people do not feel comfortable wearing mask during their walking session as compare to the 68.1% people feeling comfortable (Figure: 7, Table: 2). Along with this, results also showed that 74.4% participants do feel comfortable wearing mask at their working place while 25.6% of the participants do not (Table: 2). Participants from various fields also responded on the comfort level while talking to others wearing mask on their faces. The survey showed that 67.2% people feel comfortable as compared to 32.8% people (Table: 2). Knotek et al. 2020 also surveyed the mask wearing behaviors and beliefs and found that most respondents were wearing masks in public but that some respondents are less likely to follow social distancing guidelines while doing so. Suphia et al. (2020) concluded that clear guidelines and strategies can help to increase the compliance of health care workers with rational use of face masks. A synthetic control method approach was used in Germany to assess daily growth rate in the infection of COVID-19 and concluded that face mask considerably help in reduction of such cases. (Mitze et al., 2020).

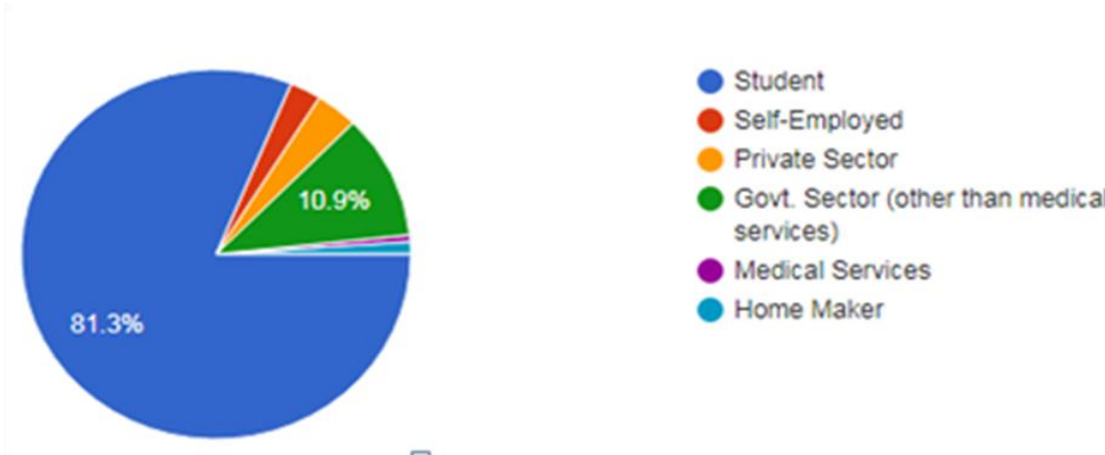
**Table 1: Summary of Survey Responses**

Sr.No.	Questions	Answer Options
1.	Do you wear mask when you go outside the home?	Yes/No/Sometimes
2.	Do you wear mask while you are at home?	Yes/No/Sometimes
3.	Which type of mask do you wear?	N-95 Surgical mask/Two or more layered cloth mask/Home made single layer cloth mask/Hankerchief/Towel/Gamchha/Disposable masks
4.	What is the average time of wearing mask per day?	0-3 hrs/3-6 hrs/6-9 hrs/ 9-12 hrs/ more than 12 hrs
5.	Do you wear mask during morning or evening walk?	Yes/No/Sometimes
6.	Do you feel comfortable with mask during morning or evening walk?	Yes/No
7.	Do you feel comfortable at work place with mask?	Yes/No
8.	Do you feel comfortable in talking with other having mask on face?	Yes/No
9.	What do you feel while wearing the mask continuously for more than one hour?	Suffocation/Breathlessness/Dizziness/Remains normal/Other problems
10.	What is your suggestion about use of mask on face?	Suggestion invited from each individual

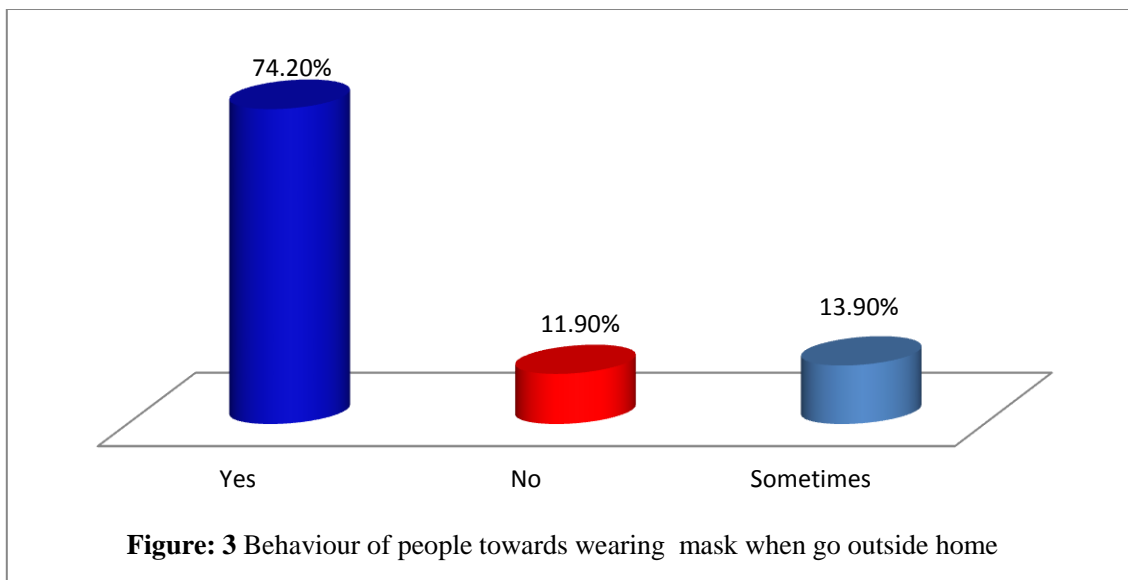
**Table 2: Trends of people towards wearing face mask**

Sr.No.	Question	Answer Options	Response %
1.	Do you feel comfortable with mask during morning or evening walk?	Yes/No	68.1% Yes 31.9% No
2.	Do you feel comfortable at work place with mask?	Yes/No	74.4% Yes 25.6% No
3.	Do you feel comfortable in talking with other having mask on face?	Yes/No	67.2% Yes 32.8% No
4.	What do you feel while wearing the mask continuously for more than one hour?	Suffocation/Breathlessness/Dizziness/Remains normal/Other problems	42.6% Normal 33.9% Suffocation 13.7% Breathlessness 8.0% Other problems 1.8% Dizziness
5..	What is your suggestion about use of mask on face?	Suggestion invited from each individual	A lot of suggestions were received such as mask should be mandatory, clean, multilayered etc. as it is the preliminary safety tool in combating the COVID-19.

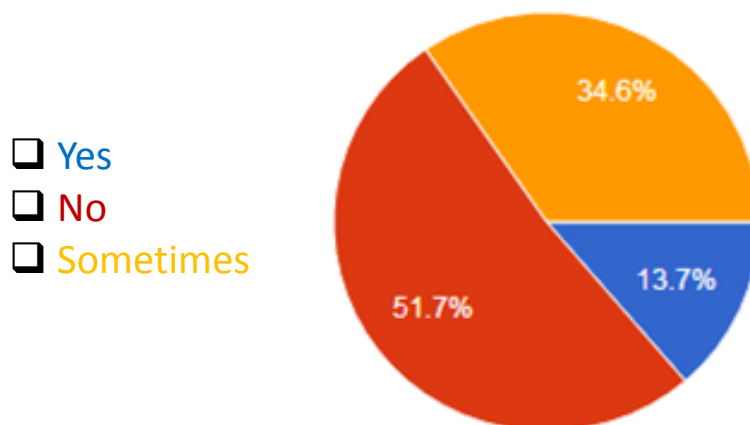
**Figure: 1** Comparative percentage of male and female respondents



**Figure:2** Occupation of people surveyed



**Figure: 3** Behaviour of people towards wearing mask when go outside home



**Figure: 4** Respondents behaviour for wearing mask while at

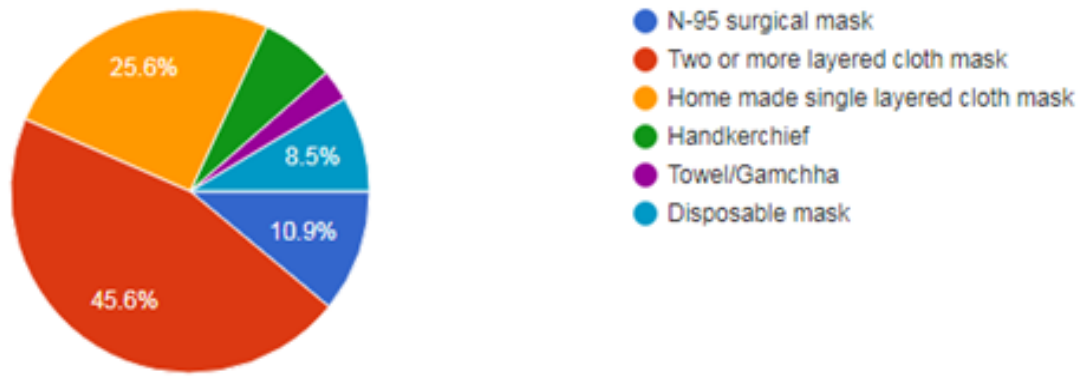


Figure: 5 Types of masks preferred by people

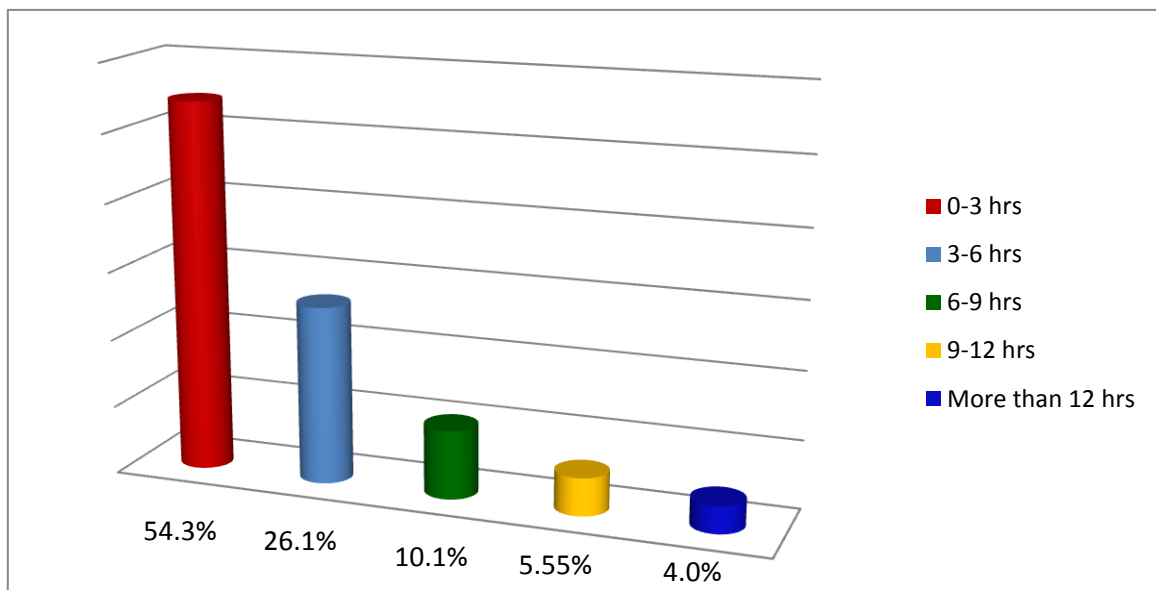
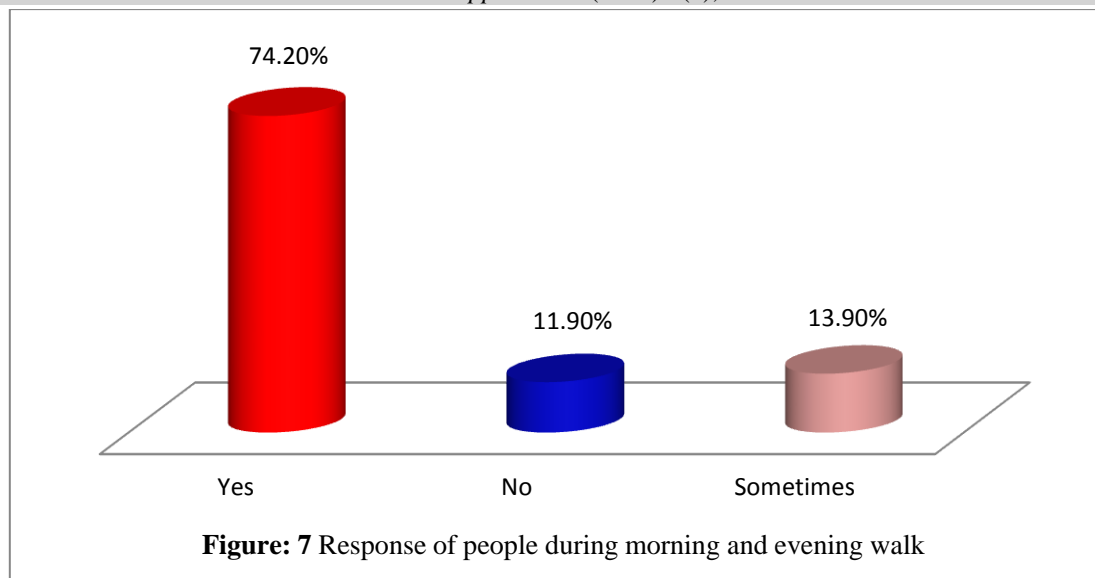


Figure: 6 Average time taken to wear mask



### CONCLUSION

The present study provides survey evidence on recent and prospective behavior of mask wearing by the people of India. Face masks have the potential to help in reducing the spread of coronavirus (COVID-19). We found that majority of the people of different levels prefer to wear a mask. However, people are well aware about the consequences of this disease. Mask should be always used as a measure to suppress the transmission or spread of this pandemic and save life of people globally.

### Acknowledgement

The authors are thankful to all the participants who spare their valuable time to carry out the survey on mask wearing behaviour.

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