How to Cite:

A survey on prophylactic measures taken by the hyderabadi’s during the 2nd wave of COVID-19

Shanmuka Priya
B-Pharmacy, Marri Laxman Reddy Institute of Pharmacy, Dundigal, Gandimaisamma (M), Hyderabad-500043, MedchalDist. T.S

Sindhushavishwanatha
B-Pharmacy, Marri Laxman Reddy Institute of Pharmacy, Dundigal, Gandimaisamma (M), Hyderabad-500043, MedchalDist. T.S

Sunil Kumar Kadiri
Department of Pharmacology, Marri Laxman Reddy Institute of Pharmacy, Dundigal, Gandimaisamma (M), Hyderabad-500043, MedchalDist. T.S
Corresponding author email: drksunil.mlrip@mlrinstitutions.ac.in

Arunabha Mallik
Department of Pharmacology, Marri Laxman Reddy Institute of Pharmacy, Dundigal, Gandimaisamma (M), Hyderabad-500043, MedchalDist. T.S

Abstract---The study’s goal is to conduct a survey on prophylactic measures taken by the hyderabadi’s during the 2nd wave of COVID-19. The current online survey has been conducted by posing 18 questions regarding the extent of prophylactic measures taken by the Hyderabadi’s during the second wave of the SARS COVID-19 by distributing online Google forms randomly to a large group of the Hyderabadi population which includes 3000 individuals. The Google form contained 18 prominent questions regarding the preventive measures of Covid-19. The results obtained from the survey indicated that 46.3% of individuals were interested to wear an ordinary mask without compulsion, 35.3% of individuals used a surgical mask, 51.5% of individuals followed double masking during the second wave of the COVID-19 and 78.7% majority of individuals had not been tested positive for COVID-19. Few individuals of the population were found to be more prone to consume antibiotics (28.7%), especially Azithromycin and corticosteroids (8.1%) such as betamethasone and dexamethasone as a prophylactic measure for the corona infection. The majority of the Hyderabadi population who responded to the survey was found to be extremely serious about the occurrence
and prognosis of covid-19. Steroids and antibiotics must be used with appropriate caution as they have deleterious effects on human health. Therefore it is suggested to maintain an intact immune system to avoid the spread of Covid-19 through a regular healthy diet and consumption of immune boosters containing ginger, tulsi, ashwagandha, ginseng, black pepper, turmeric, etc.

**Keywords**---online survey, COVID-19, prophylactic measures, antibiotics, immune system.

**Introduction**

Advancing pandemics exhibit that people are defective, and social orders should be ready. The World Health Organization has reported a pandemic after a Coronavirus was first recognized toward the finish of 2019. Different nations answered the viral pandemic in various ways (Williams & Burgers, 2021). Social distance, lockdown, Case discovery programs, isolating, contacting the following, and quarantine of exposed people were demonstrated to be the best ways of preventing the infection from spreading (Akhtaruzzaman et al., 2021). Notwithstanding, the second rush of COVID-19 in India has had outrageous results with inside the state of spiraling cases, diminished components of essential medicines, and increased deaths. An absence of mindfulness about the rising sickness can create disarray and dread in the overall local area during a pandemic. Moreover, negative perspectives and works with respect to novel infectious sicknesses can enhance epidemics, prompting pandemics (Michie & West, 2020; Alfani & Murphy, 2017; Ferriani & Natoli, 2021).

Severe Acute Respiratory Coronavirus 2 causes COVID-19 illness (SARS-CoV-2). Coughing discharge contaminates surfaces and moves the infection between individuals (Obied et al., 2020). Although a few people with the infection are asymptomatic, others might encounter influenza like side effects, for example, fever and coughing, which can deteriorate in specific cases (Chen et al., 2021). Because of pneumonia, cytokine storm, and multi-organ failure, the intensity of side effects has been exhibited to be worse in the older, as well as those with fundamental constant medical problems (Almutairi et al., 2020; Leung et al., 2003). SARS-CoV-2 infects human cells by the action of Angiotensin-converting enzyme 2 (ACE2), which is found in lung alveolar cells (Seale et al., 2020). Subsequently, the lung is the organ in the human body that is most impacted. In a few nations, community preventive and control groups were made to victimize individuals who had a fever and report the objective of oppressing individuals who had a fever and revealing them as COVID-19 suspects, as well as keeping the infection from spreading (Betsch, 2020). Besides, a few government and non-administrative associations were eager to bring issues to light about prevention and control through hand washing and the utilization of masks and gloves (Sharot, 2011; Eastwood et al., 2009). SARS-CoV-2 is as yet viewed as a consistent danger to humans today. By sharing exact information, society won't just be directed through such emergencies yet will likewise be more ready for future epidemics. The spread of the causative infections has been shown to be eased back by increased information on the illness, as well as great attitudes and
ways of behaving towards it (Alkhamees et al., 2020). New advances should be taken to stay away from future epidemics and pandemics by creating immunizations and enhancing public awareness (Marmot et al., 2020). Now, the most prominent need is to determine the mode for transmission between people. Thus, increased focus around public awareness should be put to be ready to battle the pandemic. In this online survey, prophylactic measures taken by the Hyderabadi public during the second wave of COVID-19 were studied and concerns about COVID-19 prevention, as well as the level of awareness and understanding, were assessed.

**Materials and Methods**

**Materials**

Forms was utilized to disseminate the questionnaire (3000 participants). There were two segments to the questionnaire. The first segment discusses about demography and background data like name, age, gender and Email id. The second segment, on the other hand, inquired about the participants' level of awareness and prophylactic measures taken. As a result, all of the data was gathered through a single survey with several components.

**Factors that lead to the design of the survey**

With regards to return as "waves," the COVID-19 pandemic's conduct isn't especially noteworthy. The underlying occurrences were recorded towards the finish of 2019 and the epidemic immediately expanded all through the globe in 2020, killing over 2.8 million individuals all around the world (Irigoyen-Camacho et al., 2020). It is still going strong. In light of the historical backdrop of pandemics, one can guarantee with some conviction that the COVID-19 pandemic's way of behaving as far as return as "waves" isn't especially remarkable (Lee et al., 2020).

Wave designs in pandemic transmission have been connected to a few causes. Opening and closure of schools, changes in temperature during the pandemic, human behavior changes because of the episode, seasonal fluctuation in transmission intensity, and immunity's duration. SARS-CoV-2 and other Corona viruses have an elevated degree of cross-immunity, control measure intensity, and timing, isolation, and therapy of debilitated individuals are two essential ways to deal with pandemic containment that have remained for all intents and purposes unaltered for centuries. Quarantine techniques were utilized to hold the illness back from spreading (Almofada et al., 2019). Personal defense mechanisms, proper communication and information dissemination to the general public, and inability to apply at least one of these components appropriately resulted in a loss of control over the situation. What's more, there have been a few misfortunes on this front, because of which India encountered a huge second wave.

The Epidemic Act's prohibitions were active across the nation, and mass gatherings were disallowed in many states. The limits then again, have been routinely, obtrusively, and freely violated. Covid-inappropriate way of behaving
because of an absence of fear of disease, pandemic fatigue, miss outs, and super-spreaders and expanded conglomerations due to elections, marriage season and school openings, crowded public transportation, and other factors are probably going to fault for the deteriorating of the second wave (Herrera-Diestra & Meyers, 2019).

In other words, every pandemic management principle has been thrown out the window. Communication and information dissemination to the public, which was strong in the early phases of the epidemic, has suffered as well. Because of the drop in the number of cases, some publications suggested that India would not witness a second huge wave of COVID and that we were now on the verge of herd immunity. The population seems to have been impacted as a result. As an outcome, India had a critical expansion in cases during the second wave. India confirmed 11,000 cases on the tenth of February, the first day of the second wave, and the daily average for the next 50 days was roughly 22,000 cases. However, during the next ten days, the number of cases grew massively, with the daily average reaching 89,800. The increment is being credited to large religious meetings, the reopening of most public areas, and packed election rallies, A mixed up feeling of predictability set in, and nobody, including residents and government pioneers, took anything to forestall the subsequent wave (Mummert & Weiss, 2013).

In the second wave, the number of day to day deaths has expanded emphatically. India recorded 1,761 fatalities in a single day, bringing the absolute number of individuals killed by the pandemic to very nearly 180,000 since it started (Brooks et al., 2020). In certain regions, crematoriums were open 24 hours every day, and families must wait hours to have their loved ones burned or buried (Campion et al., 2020). Solid-organ transplant, severe mental illness, dementia, chronic renal disease, CVD, diabetes, hypertension, cancer, and COPD were revealed to be predictors of COVID-19 mortality and severity among the co-morbidities studied in diverse studies. The frequency of co-morbidities was also shown to be substantially linked to COVID-19 fatalities and severity. After accounting for demographic and co-morbidity factors, researchers have found that old age is the most important risk factor for mortality and severity (Pierce et al., 2020).

**Results and Discussion**

**Sample characteristics**

Based on percentages, 136 young adults are described. 2.8% of the participants were under the age of 18. There were 15.1% of people under the age of 19 in this group. There were 17.9% of people under the age of 20 participants. 20.8% of participants are under the age of 21. 11.3% of participants are under the age of 22. 14.2% of individuals fall under the age group of 23. 1.9% of participants were under the age of 24. 0.91% of individual falls under the age of 25. 0.91% of individual falls under the age of 30. 0.91% of Individuals fall under the age of 34. And 0.91% of the individual falls under the age of 35. 0.91% of individual falls under the age of 38. And 0.91% of the individual falls under the age of 40. 1.9% of participants were under the age of 42. And 0.91% of individuals fell under the age of 45. And 1.9% of participants were under the age of 46. And 0.91% of
individuals fell under the age of 47. And 0.91% of individuals fell under the age of 48. And 0.91% of individuals fell under the age of 53. And 1.9% of participants were under the age of 60. 0.91% fell under the age of 104. 65.1% were females made up of the total participants. Male participants, on the other hand, were around 34.9%.

![Age Distribution](image1.png)

**Fig. 1:** The sample characteristics of the Covid-19 online survey i.e percentage of participants with respect to age.

![Gender Distribution](image2.png)

**Fig. 2:** Percentage of Male and Female participants in the online Covid-19 survey

**Prophylactic measures taken during the second wave of COVID-19**

**Tendency to wear a mask**

46.3% of participants showed interest in wearing a mask during the second wave of covid-19. 4.4% of participants showed disinterest in wearing a mask. 38.2% of individuals said they were wearing a mask as it is a compulsion. 11% of participants were lightly interested in wearing a mask.
Type of mask used

23.5% of participants have used the N-95 mask during the second wave. 35.3% of participants used surgical masks. 34.6% of participants used cloth/fabric masks. 4.4% of participants preferred homemade regular masks. 2.2% of individuals used other types of masks. Whereas none of the individuals preferred valved/air-filtered masks.
Double masking during the 2nd wave of COVID-19

51.5% of individuals followed double masking during the second wave of COVID-19. 41.2% of individuals did not follow the double masking. Whereas, 7.4% of individuals have might/might not follow the double masking.

![Fig 5: Preferences of the participants for double masking during Covid-19 2nd wave](image)

Tested positive for COVID-19?

The majority of individuals 78.7% have not tested positive for COVID-19. Whereas, 21.3% of individuals have tested positive for COVID-19.

Isolated when tested positive for COVID-19

33.8% of individuals have isolated themselves when they developed symptoms or when they were detected as COVID-19 positive. 11% of individuals did not isolate themselves when they noticed any symptoms or tested positive for COVID-19. 1.5% may have isolated themselves. Whereas, 53.7% of individuals have never had any symptoms of COVID-19.
Fig. 6: Responses of the participants regarding isolating themselves if developed any symptoms of Covid-19

**Type of treatment preferred during Covid-19 symptoms**

39.7% of individuals opted/ would like to opt for Allopathy treatment to cure COVID-19. 37.5% of individuals opted/ would like to opt for Home Remedies to cure COVID-19. Whereas, 5.9% of individuals opted / would like to opt for Ayurveda treatment to cure COVID-19. 4.4% of individuals opted / would like to opt for Homeopathy to cure COVID-19. Only 1.5% of individuals opted / would like to opt for Unani to cure COVID-19. However, 11% of individuals opted / would like to opt for other types of methods to cure COVID-19.

Fig. 7: Preferences of the participants for the type of treatment during symptoms of Covid-19

**Prophylactic measures taken to stay protected against COVID-19**

82.4% of individuals ensured that they will be vaccinated as soon as possible. 69.1% of individuals often wore a face mask around other people or pets. 71.3%
of individuals washed their hands with soap and water/alcohol-based sanitizer for at least 20 seconds. 66.2% of individuals covered their mouth and nose with their elbow or a tissue when they coughed or sneezed and washed their hands right away. 53.7% ensured surfaces frequently touched were cleaned and disinfected. 55.1% isolated themselves from work, school, and public areas, except to get health care. 54.4% avoided public transportation, taxis, and ride-hailing services. 53.7% sought medical attention as soon as they noticed any symptoms.

Fig.8: Preferences of the participants for the protective measures during covid-19 2nd wave

**Measures taken in the name of building immunity during COVID-19**

In the name of building immunity during the second wave of COVID-19, it was found that around 66.2% consumed fruits and vegetables daily, while 44.1% consumed herbal fluids having therapeutic/medicinal properties. Whereas 37.5% of respondents have started to take multivitamin/ vitamin c pills and 38.2% of respondents stated daily steam sessions, only about 14.7% of respondents started to exercise daily.
Receiving intravenous fluids to stay hydrated

The majority of the respondents around 85.3% didn’t receive any intravenous fluids to stay hydrated, while 11.8% of respondents have received intravenous fluids. Only 2.9% responded that they may have received the intravenous fluids to stay hydrated.

Purchasing a pulse oximeter

While in terms of purchasing a pulse oximeter during COVID-19, 45.6% have purchased and 52.9% have not purchased the oximeter. However, 1.5% responded that they may have purchased the pulse oximeter during the second wave of COVID-19.
Fig. 10: Responses of the participants regarding purchase of pulse oximeter during covid-19

**Downloading the Arogya setu app**

The majority of the respondents around 61.8% have downloaded the Arogya setu app and 37.5% didn’t download the Arogya setu app. However, 0.7% responded that they may have downloaded the Arogya setu app.

Fig. 11: Responses of the participants regarding downloading of Arogya setu app during covid-19

**Taking important precautions while purchasing the goods out of doors**

The majority of 90.4% of respondents have taken important precautions while purchasing goods out of doors during the second wave of COVID-19. Only 7.4% haven’t taken any precautions. However, 2.2% responded that they may have
taken important precautions while purchasing the goods out of doors during the second wave of COVID-19.

**Drugs used for prophylaxis and treatment of SARS covid-19**

Out of 136 respondents, 28.7% preferred Antibiotics when it comes to the prophylaxis of COVID-19. 8.1% of respondents have used steroids for the treatment of COVID-19 during the second wave. Multivitamin pills were used by 27.2% of respondents. Whereas, 5.9% of respondents preferred other methods of treatment for COVID-19. However, the majority of the respondents have never contracted COVID-19.

![Fig. 12: Responses of the participants regarding drugs used for the prevention and treatment of covid-19](chart)

**Pre-existing medical conditions**

The majority 94.1% of the participants responded that they didn’t have any pre-existing medical conditions, but, 1% responded to having Diabetes, 2% responded that they have Obesity, 2% responded to suffering from Hypertension and anxiety, 1% responded having Hypothyroidism and 0% responded of having any Heart-related problems. However, 1% responded as ‘No’ of having any pre-existing medical conditions.
The goal of this study was to determine the general level of public awareness, practice, and attitude regarding the growing covid-19 disease in Hyderabad. The majority of the participants had a significant level of general viral awareness, attitude, and practice. However, less understanding was identified in different elements connected to the study, according to the responses of the participants related to the drugs used to treat covid-19, double masking during the 2nd wave, isolating when tested positive for the virus, methods opted / would like to opt for treatment, immunity building, purchasing a pulse oximeter, downloading the Arogya setu app. According to the findings of this study, female participants had a somewhat higher level of awareness than male participants. When it comes to wearing a mask, women displayed slightly more practice and interest than males. Female participants practiced more double masking during the second wave compared to male participants. When compared to males, the majority of females were not tested positive for covid-19 during the second wave. Perhaps this is due to the majority of women being household managers who stay at home. Females were more observant than men when it came to isolating themselves when they got symptoms or tested positive for the virus. Coming to the following prophylactic measures, both males and females showed significant interest in ensuring they are vaccinated as soon as possible, often wore a face mask around other people or pets, washed hands with soap and water/alcohol-based sanitizer for at least 20 seconds, covered mouth and nose with an elbow or a tissue when cough or sneeze and washed hands right away, ensured surfaces frequently touched were cleaned and disinfected, isolated themselves from work, school and public areas, except to get health care. Upon analysis, the majority of the participants consumed herbal fluids having therapeutic/medicinal properties, fresh fruits, and vegetables daily. While in terms of purchasing a pulse oximeter during covid-19, majority of people have not purchased a pulse oximeter, indicating a lack of interest. However, the majority of the participants, on the other hand, had downloaded the Arogya setu app, showing that they are self-aware. During the second wave, some of the respondents took significant measures when purchasing things outside, demonstrating that people are
responsible and aware of the virus's repercussions. When it came to therapy medicines for the covid-19 virus, however, the majority of people chose multivitamin tablets and steroids, indicating a lack of sufficient information and knowledge, which is alarming. In the study, some participants reported that they had pre-existing medical conditions such as obesity, diabetes, hypertension, anxiety, and hypothyroidism. In each age group, there was a substantial variation in the practice score. The better practice was noted in the 18–46 age group compared to the over 60 age group, which might be explained by the younger group's higher use of various social media outlets spreading awareness. Overall, only a few respondents were precautious and were engaged in significant practices taking appropriate prophylactic measures during the second wave of Covid-19, indicating poor knowledge and awareness.

Governments should make more efforts to raise public awareness about pandemics through various means of communication to enhance people's level of knowledge about pandemics. Amidst the government's and health authorities' efforts to provide information and knowledge about COVID-19 in a variety of languages and across a variety of platforms, people with lower socioeconomic status may require alternative channels for receiving information about the virus's risk and prevention. This may be accomplished by suggested techniques that focus on drawing the attention of this population in the most often frequented locations, such as shopping areas and grocery stores, etc. People must also make an effort to develop knowledge and awareness to safeguard themselves and their environment during pandemics.

The primary limitation of this study is that it is confined to the city of Hyderabad in the Indian state of Telangana. Participants in the research were limited to those living in Hyderabad, India. Furthermore, the number of male participants is lower than the number of female participants. The authors anticipated that the difference in response rates between men and women led to an increased female engagement. Despite the authors' best efforts to promote the survey evenly across their professional and personal social media platforms, the study demonstrates that gender affects online survey response behavior.

**Conclusion**

After a coronavirus was first found at the end of 2019, the World Health Organization declared a pandemic. COVID-19 being a highly contagious and recurring disease, awareness and preventive measures must be taken to overcome the high transmission rate. The overall result of this study states that only a few respondents were precautious and were taking prophylactic measures during the second wave of COVID-19. People are more interested in taking allopathic medications than ayurvedic or homeopathy because of the rapid onset of action. Relief senses that most of the people are vaccinated and often wear masks and isolate themselves even in the work area. Consuming healthy food and ensuring to have herbal fluids as preventive and immune-building methods. This questionnaire can be used for further part of an analysis of current conditions of preventive measures taken by the people and the areas which lack importance like using N-95 masks, taking ayurvedic medicine which builds immunity and provides strength, using double masks at work and in crowded areas. Lack of
awareness and negligence may be reasons for few individuals for taking precautions but prevention is better than cure.

**Acknowledgement**

The authors are grateful to the management of Marri Laxman Reddy Institute of Pharmacy, Hyderabad for supporting our research

**Authors Contribution**

The authors have contributed equally.

**Conflict of Interests**

The authors declare that they have no conflict of interest regarding this article.

**References**


