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COVID-19: A systematic approach to solve the dilemma

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ABSTRACT

Corona Virus Disease (COVID-19)- the 2019-2020 pandemic, has augmented all over the globe. This virus is accountable for millions of infections and hundreds of deaths in people. It is dependent on humans for its transmission as the virus cannot spread on its own and survives only on contaminated surfaces for a definite period. The mortality rate scales low, but it harms the social, economic and psychological well being of people. There is mass hysteria about this disease in the society, leading to the outbreak of misinformation, misconception and rumours. Such false beliefs regarding this virus can worsen the effects of this disease. People believing these conspiracy theories have trust issues with the healthcare professionals, thus, making them disoblige the medical advice. In this moment of crisis, it is essential to dissect these conspiracy theories and have a fact check regarding all the aspects surrounding the disease. Otherwise, these myths will be an obstacle in the fight against COVID-19. In this paper, we have tried to resolve these myths through fact findings.

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INTRODUCTION

An outbreak of pneumonia occurred in Wuhan, China in December 2019 due to an unknown cause and augmented all over the country within a month.

The novel coronavirus was the pathogen of the disease, corroborated using the molecular methods. The World Health Organization (WHO) titled this disease as Corona Virus Disease- COVID-19 (previously denominated as 2019 novel coronavirus - 2019-nCoV) (Lai *et al.*, 2020).

Due to the global spread of this disease, the World Health Organization (WHO) and the Public Health Emergency of International Concern (PHEIC) declared it as the 2019-2020 pandemic (first pandemic due to a coronavirus) (Spagnuolo *et al.*, 2020). This virus is accountable for millions of infections and hundreds of thousands of deaths all over the globe.

Transmission of COVID-19

The first cases of COVID-19 were found in the Huanan Seafood Wholesale Market of Wuhan, which

was linked to direct exposure, and a presumption was made of the animal-to-human transmission as the primary mode of disease spread. But due to the un association of the subsequent cases with this exposure mechanism, it was concluded that the disease could also spread from human-to-human and through symptomatic individuals (Sarlar, 2020). This disease is transmitted-

1. Through people who are in proximity (within 6 feet distance).
2. Through respiratory droplets from an infected person while coughing, sneezing and talking.
3. Through aerosol transmission.

The disease primarily spreads within family members, healthcare professionals and other close contacts (Sarlar, 2020).

The clinical presentation of this disease is fever, dry cough, shortness of breath, fatigue and sputum (Zhou *et al.*, 2020). Mild to moderate respiratory illness can be observed in most of the patients infected with COVID-19, and they may recover without requiring any special treatment. A severe illness is likely to develop in geriatric patients and individuals suffering from medical conditions like cardiovascular diseases, chronic respiratory problems, diabetes and malignancies (Sarlar, 2020).

SAFETY MEASURES AGAINST COVID-19

The best course of action against this virus is primary prevention. Avoiding the COVID-19 hotspot areas and the known positive COVID-19 patients are the best practice for prevention (Bruns *et al.*, 2020). As known for any pandemic disease, a complete exposure avoidance is impossible so one must take the following safety measures against this virus.

1. Proper education and understanding of the risks and prevention of this virus.
2. Understanding the need for social distancing or self-quarantine.
3. Use of masks or covering your nose and mouth with cloth in public.
4. Thoroughly cleaning your hands with any soap or alcohol-based hand rub regularly.
5. Avoid touching eyes, nose and mouth and follow excellent respiratory hygiene like covering mouth and nose with a tissue or bent elbow while coughing or sneezing.

6. Avoid public places or social gatherings.
7. Seek medical attention if any symptoms seen- fever, cough and difficulty in breathing (Sarlar, 2020; Bruns *et al.*, 2020).

Myths regarding COVID-19

With the appearance of the 'pandemic' in headlines, people tend to be more frightful. With this terror, there approaches the outbreak of misinformation, misconception and rumours. As coronavirus continues to make the news, so are the myths surrounding this virus. Following are the myths and conspiracy theories currently circulating on social media and beyond regarding this COVID-19.

Myths about the origin of the virus

There is a rumour about this outbreak due to the consumption of bat soup. Although the scientists are sure about the origin of this virus from animals, there is no proof to suggest that it began from any soup. There is also a rumour that this virus spread through the laboratories in China. But there is again no evidence regarding the same.

Myths about virulence

There is a rumour that COVID-19 is highly compelling and is the deadliest virus. According to statistics, the mortality rate scales between 1% to 2%. This means that the number of fatal cases is less, and the majority of people affected by this virus are being cured. This virus spreads through respiratory droplets and touch, so following the hygienic handwashing regime and social distancing can prevent one from getting this virus (Sarlar, 2020).

MYTHS ABOUT THE TRANSMISSION OF INFECTION

1. Cats and dogs can spread coronavirus: Fact - Although the scientists are optimistic about the origin of this virus from animals, there is no confirmation about the spread through cats and dogs (Sarlar, 2020).
2. Parcels from China cause COVID: Fact - According to scientists, the virus cannot survive on letters or packages for an extended period. The survivability of this virus on surfaces is poor, and hence, there is very low likeability that this disease can spread through products or packaging that are shipped for days or weeks.
3. 5G mobile networks transmit COVID-19: Fact - COVID-19 spreads through respiratory droplets from an infected person while coughing, sneezing or talking and through aerosol transmission (Sarlar, 2020). Viruses are unable to

travel through radio waves. Also, COVID-19 has spread in countries having no 5G network. Hence, it is a myth that 5G network can spread this virus.

4. Mosquitoes can transmit COVID-19: Fact - There is no scientific evidence of mosquitoes being a vector in the transmission of this virus from person to person ([Sarla, 2020](#)).
5. Non-vegetarian food causes COVID-19: Fact - The Food Safety and Standards Authority of India (FSSAI) has confirmed that there is no scientific evidence regarding the spread of this virus through consumption of non-vegetarian food like chicken, meat or sea food ([Sarla, 2020](#)).

Myths about the status of research

There is a myth regarding the cure being found for novel coronavirus. At present, there is no known treatment for COVID-19, and a lot of treatments are currently being explored and will be tested through clinical trials ([Sarla, 2020](#)).

MYTHS ABOUT TREATMENT OPTIONS

1. Foods like garlic, mushrooms and ketogenic diet help prevent COVID-19: Fact - Our immune system may be reinforced with specific foods and diet, but there is no evidence that COVID-19 may be prevented by having certain foods and following specific dietary pattern ([Ghoch and Valerio, 2020](#)).
2. Vitamin C and D and minerals like zinc keep away coronavirus: Fact - Zinc supplements do not provide any protection against COVID-19. But there are limited and debated evidence of vitamin C and D preventing acute respiratory tract infections. However, this evidence is not specific to COVID-19 ([Ghoch and Valerio, 2020](#)).
3. Frequent warm water with salt or lemon or vinegar gargles clean the pharynx and prevents the entry of virus in the lungs: Fact - No evidence state that gargling can protect against COVID-19 ([Ghoch and Valerio, 2020](#)).
4. Pneumonia vaccine prevents COVID-19: Fact - There is no scientific testimony of pneumonia vaccine being able to prevent this virus ([Sarla, 2020](#)).
5. Antibiotics and antivirals can cure COVID-19: Fact - At present, the treatment is symptomatic, and oxygen therapy as a supportive treatment is

given to severely infected patients. There is no scientific evidence that any specific antibiotics or antiviral drugs can cure this disease ([Sarla, 2020](#); [Carbone et al., 2020](#)).

6. Exposure to sun prevents coronavirus: Fact - Exposing yourself in the sun or high temperatures cannot prevent COVID-19. The best way to prevent this disease is through following all the accurate safety measures recommended by the health professionals ([World Health Organization, 2020](#)).
7. Consuming alcohol reduces the risk of COVID-19: Fact - Regular and excessive consumption of alcohol can only increase the risk of health problems. Due to the increasing myths regarding alcohol, the WHO has stated that alcohol disinfects the skin, but it did not work the same inside the body. Alcohol consumption can only pose health risks ([World Health Organization, 2020](#)).
8. Holding breath for more than 10 seconds suggests that one is free from COVID-19: Fact - Difficulty in breathing is one of the symptoms of this disease. The patients suffer from shortness of breath ([Sarla, 2020](#); [Bruns et al., 2020](#)). But this doesn't mean that person holding breath for more than 10 seconds is free from this virus. The best way to confirm the disease is through medical tests and not through such misconceptions ([World Health Organization, 2020](#)).

MYTHS ABOUT MORTALITY DUE TO COVID-19

1. Everyone suffering from COVID-19 dies: Fact - This is a false statement. Data statistics suggest that the mortality rate scales between 1% to 2% depending on the patient's immunity, genes and background. Majority of fatal cases are seen in patients with compromised immunity or any pre-existing medical conditions ([Sarla, 2020](#); [Carbone et al., 2020](#)).
2. Only older people are at high risk: Fact - COVID-19 can infect people of any age group. However, people above 70 years of age who are infected with the virus develop severe disease. Geriatric people and individuals with medical history like diabetes, cardiovascular diseases, chronic respiratory diseases, malignancies are more vulnerable to this virus ([Lai et al., 2020](#); [Sarla, 2020](#)). Among these, patients with malignancies are at high risk as they have compromised immunity. Malignancy patients are more liable for progress to a severe illness which can be fatal ([Carbone et al., 2020](#)).

3. Children cannot be affected by this virus: Fact - As mentioned above, all age groups are affected by the virus. By far, most of the cases are seen in elderly patients, but there is no evidence that children have no possibility of developing COVID-19. According to data, children infected with this virus appear to have a mild illness but may serve as a vector for different transmission (Sarla, 2020; World Health Organization, 2020).

Role of social media in spreading the myths

There is a mass hysteria about COVID-19 in society. This is undoubtedly a result of the language used by social media to describe this pandemic. The black marketing of masks and hand sanitizers by the pharmacies and the rationing of toilet papers by the retailers is all due to the hype created by media about this virus.

The media is putting out the relentless coronavirus stories in a rhetorical way and adding fuel to the anxiety about this disease in society. COVID-19 is a contemporary disease, and there is a general feeling of the 'fear of the unknown'. So, this can be one of the reasons for the increasing panic, fear and anxiety in people's mind (Sarla, 2020).

How to analyze authentic information?

The most critical resource for dealing with this health crisis is trust in the recommendations from healthcare professionals. Generally, people believing in conspiracy theories lack trust in health professionals and are less likely to follow any medical advice. So, the first step against COVID-19 should be intervening and halting the spread of misinformation, misconception and rumours in the society. Various initiatives have been taken, and all the fake news and videos are being taken off from the internet regarding COVID-19.

The increasing conspiracy theories are such a significant problem that the World Health Organization has officially put up a 'myth busters' page on its website to help people tackle them. The social media platform is being used by the government to increase awareness regarding COVID-19. All safety measures are being informed to society through social media.

In this time of crisis, it is essential to dissect the myths and rumours and have a fact check regarding the authentic information of COVID-19. Judiciously following the medical advice and trusting the recommendations of only health professionals and organizations are the two important steps against this pandemic.

Future impact of disease

COVID-19 is dependent on humans for its transmission as the virus cannot spread on its own and survives only on contaminated surfaces for a definite time. Maintaining social distance and avoiding social gatherings, proper safety measures and administering comprehensive testing can help against this virus. Following this, the countries can downturn the infection rate thus declining the number of patients in hospitals and reducing the mortality rate.

This virus has disturbed the physical, economic, social and psychological lives of people. Travel restrictions have been imposed because of the global spread of COVID-19. Many countries have restricted the entry as well as denied access to people travelling from other areas as a prevention method (Brunns *et al.*, 2020).

As many people are sitting in their homes spending time with family, others are striving to go back home and facing difficulties even to meet their daily needs of food, water and shelter. Due to the lockdown, the economic status of individuals has been badly hampered. The current outbreak has led to fear, anxiety, mood swings and obsessive-compulsive behaviour in people. Due to the lack of social interaction, people are developing frustration, boredom and even depression.

The people who are diagnosed positive with COVID-19 are continually fighting against this virus for their lives in hospitals. And their family and people who were around them are also stigmatized. This pandemic has put forth the social, economic and psychological challenges in front of the entire globe.

CONCLUSION

COVID-19 is a rapidly spreading pandemic, answerable for millions of infections and hundreds of deaths in people. The mortality rate is low, but it harms the social, economic and psychological well being of people. In this moment of crisis, there is an increasing rise of conspiracy theories and rumours in the society. Due to this, there is uncertainty and the increasing threat of this virus, leading to havoc in society. These myths are an obstacle in the fight against COVID-19. It is found that people believing these conspiracy theories have trust issues with the healthcare professionals, thus, making them disoblige medical advice. Such false beliefs regarding this virus can worsen the effects of this disease. It is important to bust these myths and have authentic information regarding all the aspects surrounding this virus.

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Conflict of Interest

The authors declare that they have no conflict of interest for this study.

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