

# Laypeople Perceptions about the Coronavirus Pandemic: Evidence from Khulna, Bangladesh

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## Short Report

**Keywords:** Coronavirus, Lay people, Perception, COVID-19, Pandemic, and Bangladesh

**Posted Date:** April 21st, 2020

**DOI:** <https://doi.org/10.21203/rs.3.rs-23308/v1>

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# Abstract

The coronavirus (COVID-19) has emerged as a global pandemic. Applying a qualitative approach, we interviewed 16 individuals of Khulna, Bangladesh to know about their perceptions about the pandemic. Interview transcripts were subjected to a thematic analysis. An initial analysis of the interviews revealed that while lay persons' views about the causes and mode transmission of the virus were in line with the WHO and national messages, a few participants held non-scientific views and engaged in potentially risky behaviors.

## Introduction

Recently, a deadly virus known as novel coronavirus (COVID-19) has grabbed all people's attention from all over the world. Considering its global spread and deadly consequences, on 11th March 2020, the World Health Organization (WHO) declared COVID-19 as a pandemic [1]. According to Morens et al. [2], a pandemic is an outbreak of a disease that occurs over a wide geographic area and affects an exceptionally high proportion of the population. An epidemic becomes a pandemic when its nature became worse than the former [2].

The first victim of this virus was diagnosed in China in December 2019 in the city of Wuhan [3]. Between December 2019 and 4<sup>th</sup> April 2020, 82,875 cases and 3,335 deaths were confirmed [4] and by the 6<sup>th</sup> April 77,078 recoveries [5] were reported in China. The infectious disease has spread to Italy, Spain, the United States of America, Canada, Iran and rest of the world, causing the deaths of thousands of people.

There are three main ways of preventing any contagious disease. These include: practicing personal hygiene, stopping transmission through social distancing, and immunization [6]. Due to the lack of vaccines and drugs, preventing the transmission of coronavirus became the primary goal of many national and international public health policies [7, 8].

Human action is influenced by their perceptions and belief patterns. To control this health threat different people especially the laypeople, who are not specialized in any particular area, respond in different ways according to their socio-demographic characteristics. Generally, these perceptions play a vital role in guiding coping responses to a health threat and day-to-day behaviors [9-12]. Sometimes, these perceptions produce and reproduce responses in relation to epidemics [13]. For this reason, the study of lay peoples' perceptions about COVID-19 is crucially important [14, 15].

However, to date few studies have explored lay persons' coronavirus-related perceptions, although epidemiological studies have been appearing in the wake of the rapid growth of the coronavirus cases worldwide. Although several studies have been conducted on lay perceptions in relation to influenza [16], till now only few studies have been devoted to exploring this important issue associated with the coronavirus pandemic. The focus of this ongoing study is to know about Bangladeshi lay people's perceptions about the coronavirus pandemic. Besides, this paper explores the sources of lay knowledge about COVID-19.

## Methods

Utilizing a qualitative approach, 16 unstructured in-depth interviews (IDI) were conducted. In order to maintain physical distance during this time of the pandemic, video conferences were organized with each participant who live in Khulna, Bangladesh.

Participants belonged to diverse occupations including students, housewives, businessmen, public servants, school teachers, and private sector professionals. All participants were above 18 years of age. In addition, half of the respondents were men and the rest were women.

An open-ended and loosely structured interview guide was used to elicit responses from the participants. The guide covered key areas such as personal views on the coronavirus, sources of knowledge, understandings and fear of transmission, behaviors relating to hygienic, social distancing, personal protection and so on.

## Coronavirus Scenario In Bangladesh

In Bangladesh, the first coronavirus case was reported on 7 March 2020. As of the 12<sup>th</sup> day of April, about 621 cases have been confirmed and 34 patients died while 39 infected persons recovered [5]. Like other countries, to combat this situation, the Government of Bangladesh have taken various measures such as banning public gatherings, institutional and home quarantine, shutting down offices and markets, and social distancing. By the 16<sup>th</sup> of March, the Government has shut down all educational institutions and banned all cultural and religious programs. Later, the Government announced public holiday from 26<sup>th</sup> March to 14<sup>th</sup> April and to control public movement, it restricted public and private transport. However, medical shops, grocery shops, and other emergency services were allowed to operate [17].

## Findings And Discussion

The findings of this ongoing study reveal four common themes about the source of the coronavirus. Firstly, some respondents believed that this virus had transmitted from animals to humans and Chinese food habits were the main reason. On this point a respondent said, *"It's known to all that bat, snake, and rat contain a lot of germs and, I think, by eating these animals without proper processing Chinese people have spread the virus from animal to human"* (37 years, an employee of the private insurance company, male).

Secondly, because of its novelty, some respondents perceived this virus was a biological weapon. For example, a 24 years old post-graduate male student mentioned, *"I believe this virus has been genetically modified in an unknown lab and deliberately spread among humans to control the population"*. On the same point, another respondent added, *"It seems to me the coronavirus outbreak happened from the virology lab of Wuhan in China"* (36 years, banker, female).

Thirdly, in contrast to the above viewpoints, another group of participants, who were more educated, perceived that this situation was a natural process and was happening in every 100 years. To emphasize this, a respondent argued, *"If you go through the history of epidemics, you can easily find that in every 100 years the world has experienced virus attack like the plague in 1720, cholera in 1820, Spanish flu in 1920, coronavirus in 2020"* (29 years, desk operator, male). Likewise, another respondent echoed, *"Due to global warming, the ice of the arctic region is melting down and exposing several unknown microorganisms to the environment. I think, this virus came from there and has spread in humans"* (51 years, public servant, male).

Fourthly, some participants believed that the coronavirus was an 'act of God'. They drew on their Islamic religious beliefs. To illustrate, a 56 years old male accountant stated, *"We have forgotten the path of Allah and have got involved in unethical activities. Thus, Allah has given this situation as a punishment and control our behavior"*. To support his opinion, he used the Quran as a reference. Therefore, the findings indicate that people explained the coronavirus based on their religious beliefs and learnings [13].

Now turning to the sources of coronavirus-related information, the findings of this study suggest that participants relied on used mass media such as TV news, Facebook, YouTube and newspapers. Most of the respondents knew that this virus spread not only through the droplets of the infected people, but also by direct contact (touching) of the infected people [7]. A few respondents also believed it [coronavirus] can spread through air. On this point a respondent said, *"I believe it can spread through air. Otherwise how a man becomes infected while he remains in quarantine?"* (46 years, call operator, female).

According to our findings, most of the respondents came to know about the severity of coronavirus when Wuhan city including 11 cities of the Hubei province of China were locked down on the 23rd of January [3]. But they paid less attention to it because they thought that it would not happen in Bangladesh because Bangladesh has no border with China. However, after knowing about the first Bangladeshi victim's information, most of the respondents became panicked and psychologically distressed. For example, a respondent expressed her worries by saying, *"Now I can't sleep well at night and even I'm using a spoon instead of my fingers to eat my meal. It seems to me that my hand is contaminated"* (35 years, marketing manager, female). Similarly, another respondent expressed anxiety, *"It seems to me that every person out there is infected"* (35 years, housewife).

Our study also shows that most of the laypeople attempted to follow WHO's guideline which includes, staying home, maintaining social distance of about 3 feet, using musk and hand gloves, using a handkerchief, tissue, or elbow for sneezing and coughing, washing hands with soap or hand sanitizer more than 20 seconds and so on [7]. A few respondents maintain a very long distance not only from outsiders, but also from their own family members under the same roof. A participant informed, *"Although none of us [family members] have traveled abroad within the last five-six months, to ensure each other's safety, we're staying in our rooms like self-isolation. Even we're taking our meal one by one"* (29 years, student, male). Besides, all the respondents were not welcoming any guest.

To ensure good health, WHO have advised to take healthy foods [7] during lockdown. Participants in this study, after obtaining information from sources such as Facebook, instead of meat, fish, and egg, many used to take hot water, tea, honey, and cloves. A narrated, *“Now I’m taking hot water and tea with adding some cloves five times or more in a day. I have seen a Facebook post where I found that initially, the coronavirus remains in our throat for three days. That is why we feel throat pain. At that time virus can be killed by drinking plenty of hot water”* (51 years, housewife, female). However, a few respondents to increase their immunity have increased their fruit consumption which contains vitamin C.

Some respondents believed that animal or birds were the sources of the coronavirus and so they have stopped consuming meat and egg. Concurrently, most of the respondents were performing daily prayers and some of them have visited religious institutions regularly. To explain this, a respondent mentioned, *“Generally I don’t get enough time to do my daily prayer, but now at this time, I do it. Apart from this, only almighty Allah can save us from this situation”* (33 years, salesman, male). Another respondent added, *“... I regularly go to mosque and still now I’m doing so. I hope the mosque cannot be a place of infection as it is a home of Allah. And each person is washing their hand with soap before entering the mosque”* (58 years, retired government officer, male).

The findings of our study indicate that the lockdown helped most of the respondents to increase family bond, improve family relationships and psychological well-being. This is in contrast to some reports which have shown globally domestic violence has increased during this pandemic [18]. To explain this point a respondent said, *“Generally I get little time to spend with my children, but now can stay with my children whole day and they are also enjoying it”* (42 years, school teacher, female). Another participant echoed, *“As I’m an accountant and have to stay in Dhaka... so I get less time to spend with my family. This lockdown helped me to spend fulltime with my parents... that generally does not happen even at the weekend...now I’m assisting my partner with her cooking and cleaning... taking care of my old parents... and they all are happy”* (32 years, accountant, male).

## Concluding Remarks

In conclusion, this study has revealed four common views of the laypeople of Bangladesh about the sources of coronavirus which include Chinese food habits, a biological weapon, global warming, and the act of god which are also associated with their age, education, sex and occupation. Although most of the respondent’s perceptions were informed by WHO and national guidelines, a few respondents appear to be misinformed and held non-scientific views about the transmission and cure of the coronavirus.

Participants’ beliefs in using hot water to kill the virus in the throat and visiting mosques to prevent the spread of the disease are two examples. Finally, based on the findings of this study, government, NGOs and civil society should pay more attention to using social media to share more authentic and clear information in relation to the coronavirus and its preventive measures to laypeople. Furthermore, lay perceptions about the coronavirus need to be considered when designing preventive programs in relation to the disease

Since this is a first exploratory study in Bangladesh, further study is needed especially in relation to the increase or decrease of domestic violence in the context of COVID-19 or similar infectious diseases. Here, our study revealed that during lockdown family bonding have increased whereas different reports [18] have shown domestic violence has increased. This study did not include people from lower socio-economic status because they were not accessible through video conferencing. Therefore, future research needs to explore perceptions of the lower socio-economic groups about the coronavirus.

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## **Declarations**

### **Ethics approval and consent to participate**

We obtained ethical approval from Gazi Medical College, Khulna.

### **Consent for publication**

All respondent have given their consent to submit and publish this manuscript.

### **Availability of data and materials**

Anonymized transcripts are available on request.

### **Competing interests**

The authors declare that they have no competing interests

### **Funding**

Not applicable

### **Acknowledgements**

Not applicable

### **Authors' contributions**

M.M. Abdullah Al Mamun Sony collected and analyzed the data. The manuscript was written by both M.M. Abdullah Al Mamun Sony and Md Kamrul Hasan. Tuhin Roy and Banga Kamal Basu provided advice in the design of the study and comments for improvement. The authors read and approved the final manuscript.