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# **Original Research Article**

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# Treatment seeking patterns of the COVID-19 first wave patients: a narrative study from Dhaka, Bangladesh

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#### **ABSTRACT**

**Background:** The COVID-19 has already taken the lives of 4,088,281 people worldwide. To date, the deadly virus has killed 17,894 people in Bangladesh following a sharp increase in death per day. The current article focuses on the treatment-seeking patterns of COVID-19 patients during the first wave of the pandemic in the country.

**Methods:** This is a qualitative study based on semi-structured interviews with 30 respondents selected purposively. The interviews were transcribed verbatim and analyzed narratively.

**Results:** The study shows that 28 out of 30 participants pursued treatments from home, whilst, two individuals with comorbidity got admitted to the hospitals for weeks. This indicates that there is an association between comorbidity and hospitalization of the COVID-19 patients. The study reveals that the use of telemedicine service amidst COVID-19 has initiated a new era of health-seeking among people in Bangladesh. Similarly, media and the internet played a significant role in the quick access to information about the pandemic as well as to decide on the response and healing patterns of the participants. Besides the pharmaceutical drugs, using herbs was a common remedial process among the patients in the study.

**Conclusions:** Like other countries, people in Bangladesh are also puzzled about the coronavirus and its treatment procedures. A proper response to the current situation, an effective preparedness policy, and public awareness are crucial for tackling the further destruction resulting from a highly infectious disease.

Keywords: Bangladesh, Coronavirus, COVID-19, First wave, Treatment seeking patterns

#### INTRODUCTION

The current century has already exposed to several infectious diseases such as, SARS, MERS, Ebola, and the most recent the COVID-19 also known as the novel coronavirus (2019-nCoV) outbreak which was first identified in Wuhan Province of China begins at the end of 2019 and spreads across the world in a short period. Till now, COVID-19 has already taken the lives of 4,088,281 people worldwide. Available data shows that the COVID-19 has the common features of the SARS outbreak; the first pandemic of the twenty-first century

which killed 774 people worldwide during the year 2003.<sup>2</sup> Nevertheless, COVID-19 is more communicable than SARS, hence, it is very difficult to control its spread.<sup>3,4</sup> The basic symptoms of the deadly coronavirus are fever, cough, dyspnea, sore throat which are similar to SARS, because of this in the initial stage this has been named SARS-CoV-2.<sup>3-5</sup> The mode of transmission of this virus is human to human through droplet and close contact and confirm diagnosis of the COVID-19 positive is relied on real-time polymerase chain reaction or in short RT-PCR test.<sup>6</sup> Unfortunately, there is no established treatment and medication to fight coronavirus yet.<sup>7-9</sup> Therefore, the management practice to control COVID-19 is changing

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frequently since its emergence.<sup>5</sup> Recently invented vaccines by different countries and companies have brought a light of hope in the world to combat the coronavirus but these are still in the developing stage.<sup>9-10</sup>

In Bangladesh, the first case of COVID-19 was identified on 8 March 2020 and the first death is reported on 18 March of the same year. 11 To date, the deadly virus has killed 17,894 persons nationwide by following a sharp increase in death per day. Since the identification of the first case government makes an institutional response to set corona units in different hospitals as well as open laboratory test centers for the individuals with COVID-19 symptoms. Moreover, some government and private organizations launched home services for sample collection and telemedicine facilities. Unfortunately, in a short time, most of the places dedicated to COVID-19 treatment were full of patients and corona became a major problem related to public health in Bangladesh. 12 As the number of patients increases, some private hospitals also made corona units; but most patients could not buy their services due to the high cost.<sup>13</sup> In one stage, both types of the patients having symptoms and RT-PCR positive (without any severe health problem) were suggested to stay home following a 'self-isolation'. The reason for such a proposition was to reduce the rushes in the hospitals.14

The current study aimed at exploring the health seeking patterns of the patients in Dhaka during the first wave in Bangladesh. It is noteworthy that Dhaka has been and is the most affected area or epicenter of COVID-19 in the country.15 There is a plethora of studies have been published regarding coronavirus and its overall impact on people and society in Bangladesh. Nevertheless, to our knowledge any narrative study on the COVID-19 infected individuals is still absent, the current study is an attempt to fill the gap. Current study shows that most COVID-19 infected individuals got cured from their illness from home, a similar finding has been seen in Al-Zaman's study. As with Luo et al in China and Richardson et al in New York City, our study also postulates that there is an association between comorbidity and hospitalization with regards to corona-infected patients. In a similar vein, like the Panyod et al in Taiwan, the current study also shows that the use of herbs as complementary preventive therapies from corona infection has been significantly practiced. Unlike the Taiwanese, our study shows that the use of biomedicines, as well as different herbs have been found as common remedial process among the people in Dhaka which is similar to Ahmed et al study conducted recently.

#### **METHODS**

This is a qualitative study based on semi-structured interviews with 30 respondents made over the telephone during the period of September to October 2020. All the interviewees were from Dhaka and they were selected by using purposive sampling method. The researchers

reached the participants through their friends, colleagues, and acquaintances for collecting the primary data of the study. The respondents were told about the purpose of the interview when contacted by the connections for their consent as well as a convenient time for interview. Later, each interested individual was contacted by one of the researchers and they were told about the purpose of the interview again. To this end, the interviews were made upon their final consent. The interviews were conducted in Bengali and later transcribed in English by the researchers themselves. The interview data have been transcribed verbatim and analyzed narratively. In this article, the names of the interviewees and their identifying information have been kept anonymous.

#### **RESULTS**

#### Socio-demographic data of the participants

Defining the population through presenting sociodemographic data is important for any social research. In this study the socio-demographic data has been presented in a table to place a snapshot of the studied individuals. The study shows that among the 30 respondents, 16 were female and 14 males. The average age of them was about 39 years; the lowest and the highest age of the respondents was 22 and 60 years respectively. Most of them were married, whilst only three were unmarried. The majority of respondents completed a master's degree and for five of them, education level was up to primary school. Among the respondents, 13 worked in the private sector or business, seven were government employees, and four of them were physicians who worked for government hospitals and the rest included four homemakers and two students (Table 1).

# Symptoms and the healing patterns of the infected individuals in the study

It is assumed that the peak of the first wave of COVID-19 in Bangladesh took place from June to August 2020.16 In fact, all the respondents in this study got infected with the virus during these months and the symptoms of the disease they noticed varies from person to person albeit many of them had some symptoms similar to the common clinical features of the COVID-19. In the study multiple response analyses found that a total of 12 different symptoms were seen among the study participants, wherein, the most common symptoms were; fever, cough, anosmia. The presence of muscular pain, weakness, sore throat, dyspnea, headache, and diarrhoea were also noticed in a considerable number of respondents during their sickness period. Apart from these, anorexia, hair fall, and rashes found in some participants too, counting as other symptoms during data analysis (Figure 1).

Among the 30 participants, 27 of them were confirmed about their infection through the RT-PCR test. In addition to RT-PCR, several participants did some other laboratory tests too, e.g., CBC, D-dimer, serum ferritin,

CRP, CT-Scan chest, X-ray chest, ECG, and USG, etc. However, three interlocutors did not make any laboratory test as they were sure about their COVID-19 infections by analyzing the contact history and symptoms by themselves. Two such cases can be disclosed to elaborate it. For instance, a 27-year-old woman called Naznin Nazu said: "I began suffering from all the acute symptoms of COVID-19, e.g., fever, dry cough, headache, body ache, weakness, and anosmia. I had taken it for granted that I got corona infection, hence, I isolated myself from the other members of the family. After two days of isolation, I realized mild breathlessness then I called the government helpline. They suggested me for laboratory test but I did not do so. I avoided it because if the presence of the personnel from a test center or hospital caused infection for any others in my family. Reversibly, if I would have gone to a test center that could deteriorate my health condition as most of the test centers were over crowed."

Another such a case can be heard from 34-year-old women named Samanta Sarkar, who said: "my husband got the symptoms of COVID-19 and he tested positive. After some days I began to suffer from the same clinical features but did not go for laboratory tests. As all the symptoms were the same, I assumed that I got corona too, so making the laboratory test would not make any difference for my situation, rather I continued taking the same drugs and home remedial measures as my husband."

The number of sources the participants sought help for treatment varies, e.g., 21 participants relied on a single source, eight of them knocked double sources, and only one participant used triple sources. The participants who sought treatment from a single source, most consulted with a physician and two of them consulted with nonphysician (one was a COVID-19 suffered neighbour and the other was the owner of a medicine shop). Whilst, those who sought treatment from double sources, did so because they were not satisfied with the suggestions received from the first source, therefore, they contacted a medical consultant. And the one who went through three sources did so because he was in a confusing stage regarding the proper medication against COVID-19. The cases of two participants are presented here to know why they clicked more than one source for seeking treatment. For example, a 55-year-old man Nasir Uddin said: "at first, I contacted the chief medical officer of the office where I work and received his suggestions. Nevertheless, I thought that calling a medicine consultant over the phone would be wise, therefore I called a professor of medicine working in a private hospital and followed the prescription provided by him."

One more such case can be presented here by hearing a 29-year-old female participant named Jahura Khatun, who explained: "after I get confirmed about the infection thorough laboratory test, I called to the government helpline for suggestions and medication. However, I felt that the suggestions I received from the helpline were not

enough to resolve the problem I had been suffering from. Hence, I consulted a doctor over the phone with whom I was acquainted while taking treatment previously."

The 45-year-old man named Aminul Haque who sought help from three different sources mentioned: "all the members in our family got fever at the same time. I called the helpline of the institute of epidemiology, disease control and research (IEDCR), they advised for corona test and prescribed some medicines to get rid of the fever. After receiving the corona test result, I called a doctor using telemedicine service found on Facebook. I also collected the prescriptions from some of my relatives, friends, and acquaintances who had already recovered from corona. I took the most common medicines from the collected prescriptions. I wanted to be sure whether I was going to take the proper medicine or not. I also suggested the others in my family to do the same."

The respondents in this study practiced mainly two different healing methods; for instance, pharmaceutical drugs as well as herbs. The pharmaceutical drugs they took included; paracetamol, antibiotics, ivermectin, zinc tablets, vitamins, cough syrup, antihistamine, inhaler, montelukast and other drugs. Moreover, three of them bought oxygen cylinders at home to address emergency oxygen supply. The herbs they took as home remedial process included; lemon tea and spice tea mixed with e.g., black cumin, ginger, bay leaf, cardamom, and cloves. Besides these, many of them drank green tea too. Moreover, all the participants also inhaled steam and gargling, drank warm water with honey, and ate fruits a lot that contain vitamin C as a part of home remedy. For instance, a 44-years-old woman named Israt Khanom said: "when I got corona positive, I called the government hotline number to know whether I should take medicine or not. I was suggested to eat anti-biotics but I cannot remember their names now. Besides the anti-biotics, I tried all sorts of home remedial measures including, drinking green tea, ginger tea, spice tea, and warm water with lemon and honey."

The reason for practicing both, biomedicine and herbs has been described by other respondents too, for example, a 30-year-old man named Mokbul Hosen mentioned: "when I got to know about COVID-19 positive, I called one of my friends who is a doctor. He prescribed me antibiotics, ivermectin and vitamin D, C and Zinc tablets, and fexofenadine. I took all these medicines. Moreover, I drank lemon tea, warm water with honey and lemon, and spice tea a lot. I also inhale the steam as frequently as possible." Some respondents even bought oxygen cylinders as a precaution for the emergency, for example, a 54-year-old woman named Salma Khatun described: "me and my husband both were corona positive. We did not consider going to the hospital as there was a huge rush. As both of us are in the corona risk group, we decided to buy oxygen cylinder to tackle any unwanted situation."

Table 1: Socio-demographic data and its distribution (n=30).

Variables	Categories	N
Sex	Male	14
	Female	16
Age (years)	≤30	6
	31-49	20
	≥50	4
Marital status	Married	26
	Unmarried	3
	Widow	1
Family member	< 3	11
	4	11
	≥ 5	8
Education	≤ Class 5	5
	≤HSC	4
	Bachelors	9
	Masters	12
Monthly family income (in taka)	≤ 20,000	4
	21,000-50,000	8
	51,000-100,000	3
	> 100,000	12
	do not Know	3
Profession	Physician	4
	Job (Gov. sector)	7
	Job (Private sector)+business	13
	Students	2
	Homemaker	4

## Period of sufferings of the participants

The current study reveals that among the 30 participants, duration of sufferings varies significantly. The average duration of suffering for the interlocutors was 19 days. The highest and the lowest duration were 60 days and 7 days respectively (Figure 2). It has been found that those who suffered for a longer duration had comorbidities, such as hypertension, diabetes, asthma, heart disease, cancer, and kidney diseases. The patients with comorbidity needed hospitalization and stayed in the hospitals as long as they were out of risk. For example, a 45-year-old respondent Shahin Khan expressed: "once I got the corona symptoms, I got admitted to a hospital where authorities arranged COVID-19 test for me and I was diagnosed positive. After two days, I began suffering from severe respiratory distress and was taken to ICU, where I was admitted for 10 days. I have had a heart problem for years, unfortunately, the coronavirus infection worsened my condition. I stayed at the hospital for 30 days at a stage. When I returned home my corona infection was over but I felt fatigue for two months from the beginning of the infection."

The suffering of one more such individual is presented to further the issue, Zahidul Islam, a 48-year-old respondent

told: "I was corona negative after 14 days of the infection but I got pneumonia which made me stay at the hospital even after getting cured of the infection. When I was released from the hospital, I had neither corona nor pneumonia but my diabetes and hypertension deteriorated than the previous level which made me suffered for two months altogether. For these two months, I could not eat any solid food due to anorexia and only relied on liquids."

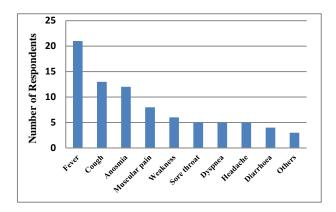


Figure 1: COVID-19 symptoms and its distribution (n=30).

Reversibly, the patients without comorbidity could return to normal physical conditions within a short duration. For instance, a 33-year-old man Kamran Khan told: "I got high fever suddenly. I called a doctor whom I knew before to share my situation. He suggested me to do corona test. I called IEDCR and they came to collect the sample. Later, I got a text message from there regarding my corona infection. I called again to the same doctor and he prescribed me some medicines which I continued for seven days. After seven days, I neither had fever nor any other symptoms and I was completely cured. I did not make any follow-up test though it was suggested by the doctor."

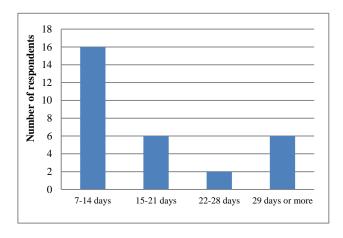


Figure 2: Duration of sufferings due to COVID-19 infection (n=30).

The same happened with a 35-year-old woman named Sabrin Ahona who said: "last year this time I got seasonal flu but it was over in a week after taking paracetamol.

This year when I got a fever the corona pandemic already in peak. I called IEDCR and they came to collect the sample from our home. On the next day, I got a text message from them which confirmed that I was COVID-19 positive. I called a doctor whom I got introduced earlier through my husband for medication, he prescribed me some medicines which I took for four days then all the symptoms subside. However, after seven days I reached to a normal physical condition. I did not even feel to make the follow-up test."

#### The role of media in health seeking against COVID-19

Mass media and the internet media played a significant role in building awareness among the individuals about the COVID-19 pandemic as well as to decide on their response and treatment pattern once they were infected with the virus. Most of the respondents in the current study more or less kept their eyes on television, facebook, and You Tube to gather news about the ongoing pandemic, whilst many respondents searched information on google too. Those who were not accustomed to internet media, for them, newspapers and radio was a significant source of getting news about corona. Three respondents gave their expressions regarding this. For example, a 35-year-old female named Yeasmin Ara told: "since the beginning of the COVID-19, I follow different news, clips, and texts available on facebook and YouTube. There has been huge news coverage about coronavirus in all sorts of media but for me following the internet was easiest as I can always avail it through smart phone. However, once I got the COVID-19 symptoms, I searched the telephone number of a test center through google search and picked one from there. I also found a doctor through google and talked to him over the zoom. Since then, when necessary, I contacted him till I was tested negative."

Our study shows that a considerable number of participants gathered information regarding coronavirus pandemic through reading newspapers. As it has been illustrated by a 27-year-old woman named Shapla Tuli, who mentioned: "during the time of my illness, besides taking the pharmaceutical drugs, I tried several herbs too. And I came to know about these herbs through reading newspapers. I still read the newspapers regularly, nowadays, there are a lot of news about the corona pandemic in the newspapers."

Two respondents who were not accustomed to or could not avail other media, radio was a good source for them to follow the news about COVID-19. As a 35-year-old watchman named Sabbir Hasan illustrated: "I work as a watchman in a building and most of the time stay in the building premises. During my duty hours, every now and then, I hear radio using my mobile phone. Since the advent of corona disease, there has been much talks about the virus on radio, which made me know many things about corona. In fact, knowing about the virus beforehand helped to keep me mentally strong during my infection."

#### **DISCUSSION**

As the COVID-19 outbreak is a new crisis in the public health domain, therefore, response to its symptoms and the treatment patterns among the individuals vary in many respects.<sup>17</sup> Especially, during the first wave the scenario was even worse than what it now with regard to treatment facilities and the perception of COVID-19 in Bangladesh. However, most participants of the current study relied on the laboratory test to diagnose whether they were COVID-19 positive or not. Reversibly, those who avoid laboratory test assumed that they got infected with the virus by analyzing the contact history and respective symptoms.<sup>18</sup> They also wanted to avoid the hassle of making lab test as well as to skip any further problems that could have arisen from visiting a test center or calling someone to home for collecting samples. Patients with minor problems avoid hospitalization as they considered it problematic and stressful. 19 Our study reveals that ninety-three percent of patients followed home isolation while they had been suffering from the infection. Reversibly, the current study as well as some other relevant articles show that the hospitalization rate among the patients with comorbidity was high.<sup>20,21</sup> As its consequence, in one stage, the government hospitals had to face overwhelming pressure in managing the rushes of the patients.<sup>22</sup> To some extent, the intervention of private hospitals and clinics helped to reduce the pressure on the government hospitals, though private hospitals have been found expensive and were out of reach for the commoners.18

In recent decades the concept of telemedicine set a milestone for health-seeking, but people, in general, were not that much accustomed to this service in Bangladesh.<sup>23</sup> However, a new era of telemedicine has been introduced and got popularity in the country, especially in Dhaka with the advent of the COVID-19 pandemic.<sup>24</sup> It can be mentioned that 26 interlocutors out of 30 in this study availed telemedicine service during the diseased time. In Bangladesh, visiting the traditional healers is common practice among the people belong to all walks of life for health-seeking.<sup>25</sup> Nevertheless, none of the infected patients in this study visited or took an attempt to seek health from such practitioners.

As with other article, the current study finds that relying on vitamin C, D, multivitamins, and zinc tablets to boost up immunity were common among the patients to fight against COVID-19.<sup>26</sup> Although, there was no trusted and reliable study on the mode of action on ivermectin and antibiotics in the remedial process of COVID-19 infection, but a considerable number of the interlocutors took these pharmaceutical drugs considering those can help to get rid of the disease.<sup>27</sup> The current study as well as some other articles claims that the use of herbs as complementary preventive therapies from corona infection has been practiced significantly.<sup>25,27,28</sup> Mass media and internet media had an influential role in this regard.

Most of the interlocutors used a single source for their medication through consulting a medical doctor over the phone. These doctors include relatives, friends, previously known consultants as well as physicians at the telemedicine service centers. Those who went through more than one source for treatment purpose, they did it just to receive a better treatment to fight the unknown virus. Three interlocutors even bought oxygen cylinders as a precaution of the emergency but they did not need those. Although, this has been considered as a precaution by them, but the others in need could have been disenfranchised because of such practice.

#### CONCLUSION

History proclaims that infectious diseases are not a new phenomenon in the world. When the outbreak of an unknown communicable disease happens that brings peril to human life where it exists. Once it turns into a pandemic that causes boundless damage for human health as well as the global economy. COVID-19 is such an infectious disease that has turned into a pandemic within a short time and has already caused massive morbidity, mortality, and disability across the world. Like the other countries in the world, the medical professionals as well as the common people in Bangladesh, are puzzled about the curative and preventive measures of the unknown virus since its advent in the country in March 2020. Unfortunately, any particular medicine is yet to invent to combat the deadly virus, though some progress has been made, these are still on trial. A huge pool of people from all walks of life does not give any heed to the health norms of the highly contagious pandemic, which is ultimately deteriorating the public health situation in the world including Bangladesh. Building awareness among the masses has been a big challenge for the concerned authorities to fight against the COVID-19 before it blows up the human existence across the world. Everybody's responsibility is now to save oneself as well as help to save the lives of others against the deadly coronavirus through maintaining the basic health measures. Physical distancing, wearing face mask, frequent handwashing and maintain hand hygiene are fundamental to prevent the spread of COVID-19 which we all should comply with.

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