

Knowledge About nCOVID-2019 Among the Population of Palashbari Upazilla in Gaibandha District

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Introduction:

At present, the whole world is facing a global alarming condition which is caused by a virus known as Coronavirus. It became a headache due to its catastrophic effect all through the world. Recently some cases of pneumonia of unknown etiology have been reported that frightened the people of China at first which was caused by a new strain of coronavi-

Abstract

Background:

Novel Corona virus-2019 (nCOVID-2019) is recognized as a major public health threat all over the world. This virus is spreading at a break-neck speed since its emergence from Wuhan, China in December 2019 and it is important to pull all the necessary resources to halt it. The outbreaks of Coronavirus infection among people are always of public health concern especially when they have little knowledge. Most infectious disease preventive campaigns assume that if rational knowledge is given, people's behavior will change and will favor control.

Objective:

The study was aimed to assess the public knowledge about nCOVID-2019.

Methods:

A descriptive type of cross-sectional study was carried out among the population of Palashbari Upazilla, Gaibandha district from 20 th January 2020 to 20 th February 2020. 1010 respondents were selected conveniently from 5 catchment areas. Data were collected through face-to-face interviews with a pre-tested structured questionnaire. Collected data were entered in the spreadsheet and analyzed in SPSS version 23.

Results:

The highest numbers of respondents were in the age group of 15 to 30 years (43.2%). Male and females of were almost equally distributed. 92.9% of the respondents heard the name of 2019-nCoV and 47.6% of them said that it was a respiratory tract infection. 57.5% respondents knew about the sign symptoms but only 26.6% among them could identify all sign symptoms satisfactorily. 40.8% were aware that it was transmitted through the air and only 31.2% knew humans as the source of infection, 19.8% of respondents had no knowledge and others told that wild animals, snakes, bats, cattle, and poultry could transmit the virus. A good percentage of respondents could tell about using masks (85.4%), hand washing (84.75%), avoid touching mouth nose and eyes with the unwashed hand (78.9%), avoid undercooked food (70.6%), avoid touching poultry and animals (71.2%) and the necessity to quarantine the suspected cases (71.3%), as beneficial for the prevention of Coronavirus infection but they had a lack of knowledge about the treatment (24.52%), 63.5% respondents knew that there was no treatment against Coronavirus infection whereas 11.9% didn't know about the treatment and only 22.6% had knowledge about the quarantine period.

Conclusion:

The study revealed that, though most of the respondents heard the name Coronavirus, people have limited knowledge about transmission, quarantine, and treatment against nCOVID-2019. Health care professionals have to work with enormous effort to control the outbreak of nCOVID-2019.

Keywords: COVID-19, Knowledge

rus. A novel strain of Coronavirus (temporarily named "2019-nCoV" by the World Health Organization) was first detected in December 2019 in Wuhan, a city in China's Hubei province.¹ Coronaviruses are enveloped non-segmented positive-sense RNA viruses belonging to the order Nidovirales and the family Coronaviridae and subgenus Sarbecovirus and the subfamily Orthocoronavirinae.² Human

coronaviruses were first invented in the mid-1960s and were found in poultry along with viral bronchitis. Six coronavirus species are known to cause human disease. Four viruses - 229E, OC43, NL63, and HKU1 are prevalent and typically cause common cold symptoms in immunocompetent individuals. The two other strains-Severe Acute Respiratory Syndrome Coronavirus (SARS-CoV) and Middle East Respiratory Syndrome (MERS-CoV) are zoonotic in origin. Coronaviruses are common in people, many different species, and animals including camels, cats, and bats. Rarely animal coronavirus can infect people and then spread between people such as with MERS-CoV, SARS-CoV, and now with 2019-CoV. All three of these viruses have their origin in bats. SARS-CoV was the causal agent of the Severe Acute Respiratory Syndrome outbreaks in 2002 and 2003 in Guangdong province of China. MERS-CoV was the pathogen responsible for severe respiratory disease outbreaks in the Middle East in 2012.³ SARS-CoV affected more than 8000 individuals and 800 deaths and MERS-CoV infected about 2494 individuals and caused 858 deaths worldwide.⁴ Mortality rate for SARS-CoV is 10% and for MERS-CoV is 34%. In December 2019, a series of pneumonia cases of unknown cause emerged in Wuhan, Hubei, China with clinical features greatly in resemblance to viral pneumonia. Deep sequencing analysis from lower respiratory tract samples indicated a coronavirus which was named "2019 Novel Coronavirus" (2019-nCoV). According to CDC, currently, the virus has been named "SARS-CoV-2" and the disease it causes has been named "Coronavirus disease 2019" (abbreviated as "COVID-19"). In late December 2019, several local health facilities reported clusters of patients with pneumonia of unknown cause that was epidemiologically linked to the seafood and wet animal wholesale market in Wuhan of China. Based on the last affected cases, it is seen that children from 0-10 years, older people, immunosuppressed persons, and people suffering from chronic diseases like COPD, Diabetes, Asthma, CKD, etc. are more prone to be affected by a Coronavirus. The virus is thought to spread mainly from person to person via droplet of an infected person's cough or sneeze, close personal contact (within 6 feet), touching, or handshaking. Touching objects or surfaces with the virus on them, taking unboiled meals, and sometimes fecal contamination may occur. Moreover, travel to the agreed areas of human to human transmission within 14 days and those who have a fever or a history of fever

and acute respiratory infection are categorized as suspected cases. The infection caused by 2019-nCoV is presented with fever, with or without recorded temperature along with headache, dyspnea, sore throat, radiographic evidence of pneumonia, low or normal white cell count or low lymphocyte count, no reduction in symptoms after antimicrobial treatment for 3 days.⁵ In humans, it commonly causes mild infections similar to the common cold and accounts for 10-30% of upper respiratory tract infections in adults.⁶ More serious infections are rare although Coronavirus can cause enteric and neurological diseases.⁷ The mean incubation period was 5.2 days. Though it starts with the common cold it can give rise to various complications like severe pneumonia, Acute Respiratory Distress Syndrome, sepsis, septic shock, multi-organ failure, and eventually can lead to death. The most effective way to discard this disease from being pandemic is through prevention. WHO recommended preventive measures include hand washing, using masks properly, checking temperature regularly, avoiding the large crowd and touching faces with uncleaned hands, taking properly cooked meals, and maintaining distance from people who are sick. Now being detected in 60 countries including the USA, it has been declared as a "Public Health Emergency of International Concern" on 30th January 2020 by IHREC of WHO. Bangladesh is also at risk of being affected due to traveling and economical purposes. For this reason, Bangladesh has to be prepared to fight against the virus and we should enrich our knowledge about 2019-nCoV. Therefore, the purpose of this study was to assess knowledge about "nCoV 2019" infection among the population of rural areas. A survey is an essential part of residential field site training, our aim was to know the level of knowledge among the population of Bangladesh. We performed this study in the rural and urban areas of Palashbari Upazilla, Gaibandha District. We hoped this study would help to evaluate knowledge about "nCoV 2019" infection through community participation. Thus we would be able to grow awareness among people which would help us to prevent the spread of this infection in Bangladesh.

Methods:

This descriptive type of cross-sectional study was conducted under the Department of Community Medicine, Rangpur Medical College, Rangpur from 20th January 2020 to 20th February 2020 to evaluate the knowledge about the 2019 Novel Coronavirus

(2019-nCoV) infection among the population of Palashbari Upazilla, Gaibandha district. A total of 1010 respondents were selected conveniently from 5 catchment areas, among them, 938 respondents heard the name of the disease and could complete the structured questionnaire. Data were collected through face-to-face interviews with a pre-tested structured questionnaire. All collected data were entered in the spreadsheet and statistically analyzed using the computer-based SPSS in 23.0 versions of windows.

Results:

A total of 1010 respondents were selected conveniently from 5 catchment areas, among them, 938 (92.9%) respondents heard the name of the disease. The highest numbers of respondents were in the age group 15 to 30 years (43.2%). Male and females were almost equally distributed. The majority of the respondents were housewives (39.2%). (Table-I)

Table-I: Socio-demographic Characteristics of the respondents (n=1010)

Socio-demographic Characteristics	Frequency	Percentage %
Sex		
Male	506	50.1
Female	504	49.9
Age (Years)		
15 to 30	436	43.2
31 to 50	418	41.4
51 to above	156	15.4
Occupation		
Farmer	123	12.2
Day Laborer	74	7.3
House wife	396	39.2
Service Holder	71	7.0
Business Man	139	13.8
Others	207	20.5

Among 1010 respondents, 92.9% (938) respondents heard the name 2019-nCoV. Majority (61.4%) of 938 respondents said that the virus caused the disease and 34.9% were not informed about the causative organism. Most of them (47.6%) said that it was a respiratory tract infection. About 57.5% of respondents knew about the sign symptoms but only 26.6% of them could identify all sign symptoms satisfactorily. 32.5% of the respondents told fever, 15.6% cough, 13.2% shortness of breath, and 6.5% sore throat. 40.8% were aware of the fact that it was transmitted

through the air and 35.2% had no idea about the transmission route. Most of the respondents (31.2%) knew humans as the source of infection, 19.8% of respondents had no knowledge and others told that wild animals, snakes, bats, cattle, and poultry could transmit the virus. (Table-II)

Table-II: Distribution of the respondent's knowledge regarding 2019-nCoV (n=1010)

Respondent's knowledge	Frequency	Percentage %
Heard the name (n=1010)		
Yes	938	92.9
No	72	7.1
knowledge about the organism (n=938)		
Virus	576	61.4
Bacteria	70.7	
Others	27	2.9
Not Known	328	34.9
knowledge about the type of infection (n=938)		
Respiratory infection	446	47.6
Gastrointestinal infection	18	1.9
Skin infection	18	1.9
Others	40.4	
Not known	452	48.2
knowledge about the sign & symptoms (n=938)		
Yes	539	57.5
No	399	42.5
knowledge about the name of sign & symptoms (n=938)*		
Fever	305	32.5
Cough	146	15.6
Shortness of breath	124	13.2
Sore throat	61	6.5
All	250	26.6
No knowledge	399	42.5
knowledge about the transmission of infection (n=938)		
Air	383	40.8
Water	14	1.5
Food	54	5.8
Contact	78	8.3
Animal	68	7.2
Others	11	1.2
Not known	330	35.2
knowledge about the source of infection (n=938)*		
Human	293	31.2
Wild animal	196	20.9
Snake	160	17.1
Bat	250	26.7
Others	50	5.3
Not known	186	19.8

*Multiple answer tables

People’s knowledge about the preventive measures was not so unsatisfactory. A good percentage of respondents could tell about using masks (85.4%), hand washing (84.75%), avoid touching mouth nose and eyes with the unwashed hand (78.9%), avoid undercooked food (70.6%), avoid touching poultry and animals (71.2%) and the necessity to quarantine the suspected cases (71.3%), as beneficial for the prevention of Coronavirus infection but they had a lack of knowledge about the treatment (24.52%), 63.5% respondents knew that there was no treatment against Coronavirus infection whereas 11.9% didn’t know about the treatment and only 22.6% had knowledge about the quarantine period. (Table-III).

Table-III: Respondent's knowledge regarding prevention and treatment of 2019-nCoV (n=938)

Respondent's knowledge regarding prevention and treatment	Frequency	Percentage %
Knowledge about the beneficial effect of using a mask		
Yes	801	85.4
No	74	7.9
Not known	63	6.7
Knowledge about hand washing as a preventive measure		
Yes	796	84.8
No	71	7.6
Not known	71	7.6
knowledge about touching mouth nose and eyes with the unwashed hand is harmful		
Yes	740	78.9
Not known	198	21.1
knowledge about the harmful effect of undercooked food		
Yes	662	70.6
Not known	276	29.4
knowledge about touching poultry and animals is harmful		
Yes	668	71.2
No	137	14.6
Not known	133	14.2
knowledge about the necessity to quarantine the suspected cases		
Yes	669	71.3
No	69	7.4
Not known	200	21.3
Knowledge about quarantine period	212	22.6
Knowledge about the treatment of coronavirus infection		
Had treatment against coronavirus	230	24.5
No treatment against coronavirus	596	63.5
Not known about treatment against Corona virus	112	11.9

Discussion:

WHO declared the COVID-19 pandemic as the virus affected more than 100 countries worldwide. More than 4000 people died already and both suspected and confirmed cases are rising day by day. The outbreak of COVID-19 has caused enormous stress among the people.⁸ A timely understanding of the public’s knowledge, perception of this infection, and its influence on individual behavior and emotion is still lacking. Public knowledge, perception, precautionary behavior, and active social participation have been found to be important in the control of pandemics.⁹ Our study reveals that 91.9% of people heard the name of the 2019 novel Coronavirus, where males (50.1%) and females (49.9%) were equally distributed. 61.4% of the respondents could say virus as the causative organism but only 47.6% of the respondents said respiratory infection as the type of infection. To find out the suspected cases it is necessary to know about the signs and symptoms. 10,11 57.5% of the respondents told that they knew about the sign symptoms but some people gave multiple answers. It is essential to know about the transmission¹² to interrupt the spread of infection but 35.2% of the respondents couldn’t identify the way of transmission and only 26.7% of them could inform the actual source of infection as a bat. Most of them (31.2%) identified humans as the source of infection. As there is no definitive treatment discovered yet, prevention is the only way to control the outbreak of the infection, and maintenance of personal hygiene is the best possible way in this regard.^{13,14} About preventive measures, 84.8% of the respondents knew about hand washing, 85.4% about using a mask, 71.2% of the of them told that touching poultry is harmful, 78.9% informed touching mouth nose and eyes with the unwashed hand is harmful. 70.6% are aware of the harmful effect of undercooked food. This survey reveals that 63.5% of the respondents are aware of the fact that there is no effective treatment discovered yet for Coronavirus infection and according to the opinion of the respondents 71.3% thought quarantine is needed, but only 22.6% knew the duration of the quarantine period.

Conclusion:

Our study revealed that the general people of our country are still behind in the field of improving knowledge, attitude, and preparation skills. Most of the respondents (92.9%) heard the name of

2019-nCov but their response to the type of infection was not satisfactory (47.6%). Though people responded as they knew sign symptoms (57.5%), all of them couldn't mention them. The survey also shows that 35.2% of respondents had no knowledge about transmission where preventive measures are based upon knowledge of transmission. Their knowledge of hand washing (84.8%), and using masks (85.4%) as preventive measures were satisfactory. But about 21% of respondents weren't aware of touching objects and about 28% of respondents weren't about touching poultry. To prevent the spread of infection, quarantine has so much importance but only 22.6% knew the quarantine period. So people do not have enough information about COVID-19 which is urgently required. As COVID-19 is declared a pandemic, everyone should give more emphasis on personal hygiene rather than becoming panicked. In an overpopulated country like ours, most of the people are rural and unaware of the fact. Overpopulation, realism, and unawareness can lead to an explosion of this disease. So health ministry should take initiative to arrange seminars and meetings to increase awareness. The government should arrange for 14 days of isolation from the airport, and seaport for those who are coming from abroad.

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