Awareness on COVID -19 outbreak and its preventive strategies among a group of Sri Lankan social media users: A Descriptive Cross-Sectional Study

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ABSTRACT

Introduction: Corona Virus Disease-19 (COVID-19) discovered in December-2019 soon became a pandemic and was declared a global public health emergency.

Objectives: The study assessed the public awareness on COVID-19 outbreak among a group of Sri Lankan social media users.

Methods: This cross-sectional survey was conducted in late March-2020, using a self-administered online-questionnaire shared in social media.

Results : Out of 174 respondents, 97 (55.7%) were male and the mean age was 36.1 years. Most were from western province (n=109, 62.7%) and with higher education (64.5%). All of the common transmitting modes were identified by only 141 (81%). Respondents identified fever (97.7%) and Cough-93.7% as features of COVID while 131, (75.3%) knew about asymptomatic patients. Even though 170 (97.7%) knew the duration of quarantine period 24.6% had a misconception on indications for quarantine. Majority (158, 90.8%) thought the herbal drinks are beneficial. Majority (n=153, 87.9%) knew the indications for using masks and 165 (94.8%) were aware about social distancing. Majority (n=162, 93.1%) were satisfied about the initial COVID-19 control-measures by the government.

Discussion: The level of overall knowledge on the COVID-19 was satisfactory among the participants with some deficiencies including all the modes of transmission. This shows the space for further awareness for controlling the virus better.

Key words: COVID-19, Modes of transmission, Public awareness, Social media use

Introduction

According to World Health Organization (WHO), emerging infectious disease is defined as newly identified and previously unknown infections which cause public health problems either locally or internationally. These include HIV infections, Severe Acute Respiratory Syndrome (SARS), Lyme disease, hantavirus, dengue fever, West Nile virus and the Zika Virus etc.¹

Corona Virus Disease- 19 (COVID -19) is a newly discovered emerging infectious disease caused by the most recently discovered coronavirus, SARS CoV2.

This new virus and disease were unknown before the outbreak reported as cluster of cases of pneumonia in Wuhan, China, in December 2019. In late January with the spread of the disease, the WHO Director- General declared the novel coronavirus outbreak (2019-nCoV) a Public Health Emergency of International Concern (PHEIC).²

The disease spreads primarily from person to person through small droplets from the nose or mouth, expelled when a person with COVID- 19 coughs, sneezes or speaks. These droplets are relatively heavy, do not travel far and quickly sink to the ground. People can become infected- by touching the objects or surfaces where these droplets land, then touching their eyes, nose or mouth.³

Once infected, the most common symptoms of COVID -19 are fever, dry cough and tiredness. Other symptoms that are less common and may affect some patients include aches and pains, nasal congestion, headache, conjunctivitis, sore throat, diarrhea, loss of taste or smell. These symptoms are usually mild and begin gradually. Some people become infected but only have very mild symptoms.

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Most people (about 80%) recover from the disease without needing hospital treatment. Around 1 out of every 5 people who gets COVID-19 becomes seriously ill and develops difficulty breathing. Older people and those with underlying medical problems like high blood pressure, heart and lung problems, diabetes or cancer, are at higher risk of developing serious illness.⁴⁻⁶

Practicing 'hand and respiratory hygiene' and maintaining the social distance at least a 1-meter distance between two persons are the best ways to protect from the disease. Hence, primordial prevention with health education to promote safe and hygienic health practices in day to day life activities is the most suitable mode of prevention considering the socio-economic impact the disease can cause.⁷

By end October 2020, most (216) countries, areas or territories are affected with the COVID-19, with 46 million confirmed cases and just under 1.2 million confirmed deaths globally with a disease specific fatality rate is 3.16%.⁸

After 1st reported local case of COVID-19 during early March 2020, multidisciplinary approach of COVID-19 prevention task force. Those activities raised the awareness about COVID-19 among the Sri Lankan population. Health educational and promotional activities were taken place early. Despite these measures, By the beginning of November 2020, after nine months of emergence of the infection in the country, Sri Lanka had 11,774 total confirmed cases, with 23 deaths giving rise to a disease specific fatality rate of 0.20%.⁹ Community transmission of the disease was not declared by the health authorities because the new cases could be linked to previous patients. Few studies exploring the awareness on COVID-19 infection among general public emerged by mid-2020. Many of the studies dem-

onstrated a satisfactory awareness.¹⁰⁻¹²

As far as we know no study has been published on the topic from Sri Lanka.

Objective

The objective of this study was to assess the public awareness on COVID-19 outbreak and its preventive strategies among the Sri Lankan population.

Materials and Methods

This cross-sectional survey was conducted from March 25th to April 1st, the week immediately after the initiation of lockdown in Sri Lanka. Because it was not feasible to do a community-based national sampling survey during this special period, the data collection was carried out using an online questionnaire. Relying on the authors' networks with people living in the country, one-page recruitment poster was posted/reposted on groups of their WhatsApp, Viber and Facebook accounts. This poster contained a brief introduction on the background, objective, procedures, voluntary nature of participation, declara-

tions of anonymity and confidentiality, and notes for filling in the questionnaire, as well as the link and quick response (QR) code of the online questionnaire. Persons who were of Sri Lankan nationality, aged 18 years or more, understood the content of the poster, and agreed to participate in the study were instructed to complete the questionnaire via clicking the link or scanning the QR code. Participants had to answer a yes-no question to confirm their willingness to participate voluntarily. After confirmation of the question, the participant was directed to complete the self-administered questionnaire.

Results

Socio-demographic characteristics- One hundred and

Table 1- Socio demographics of the sample

	Number	%
Gender		
Male	97	55.7%
Female	76	43.7%
	173	100%
Age group		
<20 years	2	1.1%
20-29 years	23	13.2%
30-39 years	110	63.2%
40-49 years	29	16.7%
50-59 years	6	3.4%
60 years and above	4	2.3%
District of Residence		
Colombo	76	43.7%
Gampaha	33	19.0%
Matara	21	12.1%
No Response	12	6.9%
Anuradhapura	5	2.9%
Kalutara	5	2.9%
Other	22	12.5%
Educational Qualifications		
Grade 11 or less	1	0.6%
GCE O / L	8	4.6%
GCE Advanced Level	20	11.5%
Diploma or other professional qualification	31	17.8%
University degree	57	32.8%
Postgraduate or higher	52	29.9%
Total	174	100.0%

seventy four (174) participants responded to the self-administered questionnaire. Mean Age of the respondents was 36.1 years (range- 10-69). Majority were Male- (n=97, 55.7%) with one respondent not disclosing the gender. Majority of participants were from Colombo (n=76, 46.9%), followed by Gampaha (n=33, 20.4%) and Matara (n=21, 13%). Out of the respondents, 57 (33.7%) were degree holders while 52 (30.8%) had Postgraduate diploma or other higher education qualifications (n= 31, 18.3%). Twenty (11.8%) participants were educated up to GCE Advanced Level. Socio demographic details are shown in table 1.

Table 1- Socio-demographic Characteristics of the participants

Knowledge on COVID-19

The respondents' knowledge on COVID 19 infection and related factors is shown in table 2. All 174 participants correctly identified Corona as a Virus and that the current situation is being called a pandemic. However, 163 (94.8%) knew that a global public health emergency had been declared. The most common Transmitting modes were identified by only 141 (81%). Some (n=32, 19%) didn't think that close proximity and common use of personal belongings can cause virus to spread. Others (n=31) thought the virus can only transmit through respiratory

droplets by air.

The majority of the respondents were able to identify the symptoms of the disease except for diarrhoea. Eighty-six (49.4%) participants thought diarrhoea can be a symptom. The participants identified breathing difficulties as the commonest symptom (98.9%) followed by fever (97.7%), throat pain (96%), dry cough (93.7%) and nasal congestions (58.6%)

Table 2- Knowledge about the Corona virus infection and related factors.

	Number	%
Incubation period		
2-14 days	155	89.1%
2-4 weeks	17	9.8%
1-2 days	2	1.1%
Quarantine period		
14 days	170	97.7%
21 days	3	1.7%
7 days	1	0.6%
Symptoms of COVID*		
Dry Cough	163	93.7%
Nasal Congestions	102	58.6%
Throat pain	167	96%
Diarrhea	86	49.4%
Fever	170	97.7%
Breathing difficulties	172	98.9%
Can COVID patients be asymptomatic?		
Yes	131	75.7%
No	18	10.4%
Don't know	24	13.9%
At risk communities*		
Family members of patients	162	93.6%
Health care workers	134	77.5%
No change	158	91.3%
General public	3	1.7%
Elderly population	171	98.3%
Persons with chronic diseases ie Diabetes	162	93.1%
Children	73	42.0%
Youth population	14	8.0%

* Multiple responses were possible from one participant

Incubation period was correctly identified by 155 (89.1%) as 2 to 14 days. Seventeen (9.8%) thought that it is two weeks to four weeks.

Almost all (n=173) thought that travelling history is important in managing COVID patients.

Majority (n=131, 75.3%) knew that COVID infected patients can be asymptomatic. However, it is noteworthy that around a quarter of the participants did not know this important fact.

Table 3-Knowledge on preventive aspects of COVID 19

	Number	%
Preventive measures*		
Wearing face masks	172	99.0%
Avoid touching face frequently	169	97.7%
Frequent handwashing with soap and water	171	98.8%
Cleaning frequently touched surfaces	145	83.8%
Food safety	72	41.6%
Avoiding large crowds	172	99.4%
When should a person wear a facemask*		
Taking care of COVID patients	166	96%
When someone shows symptoms of COVID	171	98.8%
People who stay at home	14	8.1%
Who are indicated for quarantine*		
Close contacts of patients	164	94.2%
Family members of patients	168	96.5%
Returnees from a COVID prevalent country	149	84.8%
People living near quarantine center	45	24.6%

Quarantine process

When it comes to knowledge on the quarantine period, the majority (n=170, 97.7%) correctly identified it as 14 days and three respondents thought its 21 days while one thought its 7 days.

The vast majority of the participants correctly identified that the family members

(n=168, 96.5%) and close contacts of COVID patients (n=164, 94.2%) should be quarantined. Despite repeated media educating the public, 26 (15.2%) thought persons coming from a COVID19 prevalent country need not be quarantined. Forty-five (24.6%) thought that residents around the infectious disease hospital treating COVID19 patients should be quarantined.

Treatment for COVID 19

The majority (n=144, 82.8%) knew that there are no particular drugs for COVID and 20 (11.5%) didn't know about drugs and 10 thought there is a particular drug. Majority (n=158, 90.8%) thought the herbal drinks are beneficial for recovery from COVID 19 and only 14 thought that those will make no difference. However, smoking was identified by 173(99%) as harmful.

Preventive measures for COVID

Majority (n=153, 87.9%) correctly identified the indications for using masks as advised by the health authorities at the time of data collection. Fifteen (18.9 %) thought it is best to use masks at all times irrespective of other conditions. When it comes to the minimal distance that should be maintained between two individuals to prevent transmission of COVID, 165 (94.8%) identified the minimal distance as one meter while nine thought it is two meters.

Majority (n=154, 88.5%)) selected 20 seconds as recommended duration that should be spent for hand-washing while some thought the minimal time should be 2 minutes (n=11) and 20 minus (n=8) respectively.

On inquiry about factors that may have a beneficial or harmful effect on prevention / development of the disease, 117 (67.2%) identified alcohol as harmful while 5 (2.9%) thought its beneficial and 9 thought there is no difference. Herbal drinks were thought to be beneficial by the majority with 90.8% selecting it as beneficial.

Perceptions on governments response on managing COVID pandemic in Sri Lanka With regards to the initial measures taken by the govern-

ment to control COVID, 162 (93.1%) were satisfied about the level of commitment from the government with most (n= 86) among them feeling very satisfied. Nine (5.2%) thought the response from the government was average and 3 believed that the measures taken by government is unsatisfactory.

Table 4- Factors that may affect prevention and the prognosis of COVID 19

	Number	%
Alcohol		
Beneficial	5	2.9%
Harmful	117	67.2%
No change	9	5.2%
Smoking		
Beneficial	1	0.6%
Harmful	173	99.4%
No Change	0	
Plenty of Water		
Beneficial	168	96.6%
Harmful	3	1.7%
No Change	0	
Herbal Drinks		
eg- Corianrum sativum/Kottamalli		
Beneficial	158	90.8%
Harmful	1	0.6%
No change	14	8.0%

Discussion

Social media plays a big role in disseminating public health related information throughout the communities worldwide. It was evident that online sources played a major role in informing the general public in the prevailing COVID 19 epidemic as well. However, there was no understanding of the level of awareness on COVID 19 epidemic related information among the social media users.

This study revealed that level of knowledge on the COVID 19 was found to be relatively high among the social media users who responded to the questionnaire.

All the participants were aware of the pandemic and the fact COVID is caused by a virus. The majority were able to identify the incubation period and the transmission dynamics of the virus. However, only 81% of the participants were able to identify all the modes of transmission. Inability to identify all the modes of transmissions was a common deficiency of the general public as found in international studies as well.¹⁰⁻¹² This shows that further awareness should be carried out on the modes of transmission of the disease. This is vital in battling the pandemic since the knowledge on transmission dynamics plays a major role in preventing spread of the disease. Satisfactory level of awareness was also demonstrated on treatments, preventive measures and quarantine process of COVID 19. This may be due to the fact that there were lengthy discussions and debates going on regarding treatment options and the quarantine process.

There was a strong debate going on online platforms regarding herbal drinks that may play a major role in preventing as well as giving a good prognosis for the patients with COVID 19. The patients were encouraged to drink herbal drinks like Kottamalli/ Coriander (*Coriandrum sativum*) by various institutions.

It seems that these inputs have had an impact on the participants, which is seen by 90.8% of the participants believing that herbal drinks are beneficial. The fact that alcohol is used to deactivate the virus may have been the reason for 5 participants to comment that alcohol may be beneficial. This is a clear indicator that the online sources and mainly the social media can influence the thinking process of its users.

It was obvious that the participants thought that the initial government response towards the COVID 19 was very satisfactory. Only a few had thought otherwise. This may be explained by the fact that the number of COVID 19 cases in the county was relatively low with only 3000 cases being identified within the first 6 months.⁹

Since this study was carried out in the early days of the pandemic, the general public would not have received inputs on the disease as at the time of writing in November 2020. One of the major limitations in this study was that the participants were restricted to persons with online access. The same fact must have resulted in selection of a sample with a higher than average level of education and access to public health information.

Even though this study demonstrated satisfactory level of awareness on the COVID 19, the results indicate that there is room for improvement. Hence, it is recommended to strengthen the public awareness programmes. Further, it is recommended to carry out more representative studies among general public to understand the status better.

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