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Research Article

COVID-19 Awareness; Community-based Study 2022 to 2023, Atbara, Sudan

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Abstract

Background: COVID-19 declared as a pandemic in Mar 2020 by WHO, transmitted via respiratory tract. Consequently, contact with respiratory secretions from infected individual will end up acquiring the infection Awareness about COVID-19 refer to practice that reduce possibility of transmission of COVID-19 like hands washing, surface sterilization, mask wearing, social distance, knowledge of virus route of transmission and acceptance of vaccination. Which is the main measures of pandemic prevention and control.

Objective: To assess COVID-19 awareness among Atbara city population.

Methods: A cross-sectional descriptive community-based study conducted in Atbara city from October 2022 to October 2023.The data was collected by interviewing the respondent through close ended questionnaire and analysed by using statistical package of social sciences.

Results: most of the participants were female 63.7%. The predominant age group was 20 to 50 years in 83.7% of the participants. The respondents showed equal utilization of hand, handkerchief and elbow when sneezing. While 75.3% of them disclosed that COVID-19 transmission occurs through respiratory system and air droplets. The majority of the respondents showed acceptable level of knowledge in regard to sign and symptoms. Fever was the most mentioned symptoms by the participants. Compliance toward wearing face mask was suboptimal with only 47.3% regularly wearing it. 57.3% of the participants keep safe distance with other people in crowd spaces, while 42.7% of them contact with others without restrictions. 52.7% of the respondents did not receive COVID-19 vaccine

Conclusion: The study concluded that people of Atbara city had a good awareness about COVID-19.however the practice of preventive measures still suboptimal. Moreover, the overall vaccination acceptance was weak.

Keywords: COVID-19; Atbara; Sudan

Background

Introduction

The World Health Organization (WHO) declared COVID-19 as a pandemic in Mar 2020 [1]. COVID-19 is transmitted via respiratory tract. Consequently, contact with respiratory secretions from infected individual will end up acquiring the infection [2]. Droplet transmission occurs when a person is in in close contact (within 1 meter) with someone who has respiratory symptoms (e.g., coughing or sneezing) and is therefore at risk of having his/her mucosa (mouth and nose) or conjunctiva (eyes) exposed to potentially infective respiratory droplets [3]. Transmission may also occur through fomites in the immediate environment around the infected person. Therefore, transmission of the COVID-19 virus can occur by direct contact with infected people and indirect contact with surfaces in the immediate environment or with objects used on the infected person (e.g., stethoscope or thermometer) [4]. This in turn influenced the spread of the virus resulted in 81.2 million reported cases by Dec 2020. By the same time 1.77 million of the above reported cases were died [5]. Early small cohort studies at the beginning of the pandemic demonstrate high case fatality rate reaching till 15%. Later on, it diminished to 4% [6]. Cough, disturbed breath-

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ing, tiredness, and fever were the most presenting complains [7]. Decline in tasting& smelling sensations and gastrointestinal tract symptoms also reported [8, 9]. Respiratory distress also reported in severe cases. [10]

Several preventive measures were recommended by the WHO aiming to decrease the transmission rate of the virus and controlling the pandemic, these measures include; vaccination, regularly and thoroughly clean hands with an alcohol-based hand rub or wash them with soap and water, maintaining social/physical distancing, avoid touching eyes, nose and mouth, wearing a mask that covers your mouth and nose can prevent those who have COVID-19 from spreading the virus to others. Recent evidence suggests that masks may even benefit the wearer, offering some level of protection against infections. and different protection measures based on the situations [11].

It's very well known that the COVID-19 outbreak has placed unprecedented demands on the health systems of many countries around the globe [12]. This is expected to get even worse in the middle- and low-income countries where the health system is weak and fragile. In countries that are hardest hit, health facilities and workforce are currently swamped by activities related to controlling the pandemic.

Decreased awareness about COVID-19 increased morbidity and mortality rate during outbreak of the disease. Poor compliance to health provider instructions and home quarantine lead to increase number of new cases globally. Awareness about COVID-19, protective measures and compliance to vaccination plays major role in reducing the infectivity of the disease which in turn decline the global burden of the pandemic. This study aims to evaluate community awareness in regard to COVID-19. In addition, determining population knowledge about main symptoms of COVID-19 and assess individual response in case of getting the infection. This study will provide the health system with significant information that can be utilized as a guidance for educational programs that play a crucial role in rising community awareness.

Objectives

General Objectives: To assess COVID-19 awareness among Atbara city population.

Specific Objectives

To assess awareness among people about risk of virus.

To determine the knowledge of Sudanese about COVID 19 preventive measures.

To determine awareness about routes of transmission of COVID-19

To assess awareness of people to vaccination.

Methodology

Study Design

A cross-sectional descriptive community base study.

Study Area

Atbara is a city located in the River Nile State in Sudan. About 310 km (193.5 mi) from the capital Khartoum, Atbara is considered an important industrial center and a prominent connection point connecting North Sudan with its east. It is one of its large cities and is known as the City of Iron and Fire, where the Presidency of Sudan Railways and the most important and largest industrial and administrative facilities are located there. It is also linked to a historical tragic struggle against colonialism and was the cradle of the trade union movement in Sudan. Atbara is a city of confluence, just like Khartoum, where Atbara River meets the Nile, before the Nile then heads to Egypt to flow into the Mediterranean Sea.

Study Population

Individuals who lived in Atbara city.

Sample Size

The estimated sample was 384 calculated using epi info with 95% confidence level. However, as a consequence of many individuals refuse to fill the questionnaire the actual calculated sample was 300 responses selected through simple random sampling technique.

Inclusion Criteria

People that only lives in Atbara city.

Exclusion Criteria

Individuals who refuse to participate in the study

Data Collection Method

Data was obtained by direct interview of the peoples through closed ended questionnaire and also through sending the questionnaire in social media groups (WhatsApp, Facebook) using smartphones.

Data Analysis

The data was analysed by using statistical computerized program SPSS (statistical package of social sciences) version 21.

Ethical Consideration

Formal letter from department of community medicine to the ministry of health from whom we received the expectant written consent and also, we received consent from the respondents after we explain for them our research objectives.

Result

After completion of the data analysis, the result of the study showed that most of the participants were female 63.7%, while 36.3% were male. The predominant age group was 20 to 50 years in 83.7% of the participants, while those who aged more than 50 represent 4.8% of the respondents. Education wise, university students reported the highest prevalence among the participants 78.3%, while primary school, secondary school and post university participants represent 0.7%, 9.7% and 11.3% respectively.

in dealing with sneezing, the respondents almost showed equal utilization of hand, handkerchief and elbow represent 35.7%, 30.7% and 30.7% respectively, while only 2.9% did not cover their nose. The data analysis highlighted that 75.3% of the respondents disclosed that COVID-19 transmission occurs through respiratory system and air droplets. While 40.7% reported that COVID-19 could be transmitted by touching of virus contaminated surfaces, those thought COVID-19 could be transmitted through food that have been contaminated with virus were 4.7 while those who did not know represent 5% of the participants. The majority of the respondents showed acceptable level of knowledge in regard to sign and symptoms. Fever

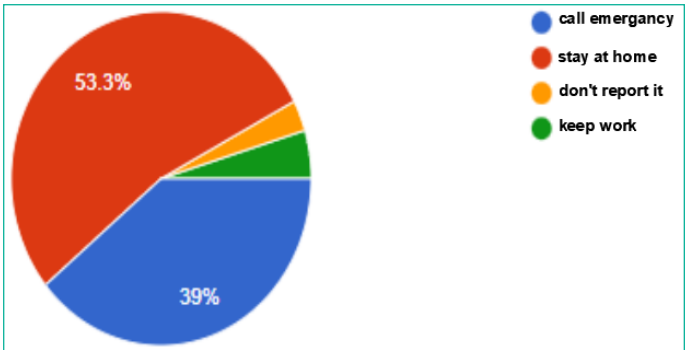

Figure 1: Actions when you feel COVID-19 symptoms.

Table 1: Vaccinations among Atbara population.

Variable	Frequency	Percent %
Have you taken COVID-19 vaccine		
Yes	142	47.3%
No	158	52.7%
Why you did not take COVID-19 vaccine		
Unavailability	29	9.1%
Lack of information regarding vaccine	67	22.6%
Distrust of vaccine effectivity	188	62.7%
Afraid of needle stick	16	5.6%
Type of vaccine		
AstraZeneca	95	31.7%
Moderna	11	3.7%
Pfizer	79	26.3%
Janssen	137	45.7%
Did not know	109	36.3%
Number of doses		
1 dose	36	12%
2 doses	96	32%
3 doses	63	21%
I don't know	105	35%

was the most mentioned symptoms by the participants 42%, followed by headache and fatigue 40.3% and 39.3% respectively. While only 17% of them reported shortness of breath as a symptom of COVID-19 infection.

Assessing participants action in case of acquiring the pandemic showed that more than half of them will stay at home Figure 1. Compliance toward wearing face mask was suboptimal with only 47.3% regularly wearing it. Around half of them clean their house surfaces periodically, while 45.7% did not clean it regularly. 57.3% of the participants keep safe with other people in crowd spaces, while 42.7% of them contact with others without restrictions. 52.7% of the respondents did not receive COVID-19 vaccine Table 1.

Discussion

A descriptive cross-sectional community-based study carried out at Atbara city among 300 individuals during the period from October 2022 to October 2023.

The study was performed among the Sudanese population using smartphones and social media that explain why the majority of the population 82.7% were between 20-50 years old with high level of knowledge regarding COVID-19 which goes in line with Salman M study's [13]. However other study reported negative attitude in dealing with COVID-19[14]. This good level of knowledge could be attributed to the explosive flow of information on all platforms especially after the appearance of the first case of the disease in the country similar to what happened in China, in addition more than two third of the participants were university students, which is considered a faciliatory factors for acceptable level of knowledge and attitude as reported in Pakistani study [15,16]. The sources of knowledge were mainly official websites (internet) and social media. The Sudanese Federal Ministry of Health has a well-established with thousands of followers, continuously updated social media page and an official website. Several other studies also highlighted the significant role of social media in enhancing general population awareness and educate individuals regarding COVID-19 [17]. while other study conducted in Uganda's population highlighted the important role of governmental educational [14].

More than two third of study population aware about the rout of transmission of COVID-19 which is similar to the reported finding of Peng Y study's carried out in Chinese population [18].

It's worth noting that the majority of the population had knowledge about the main preventive measures of the disease spread (handwashing, social distancing, and masks) which is the universal controlling measures of the pandemic [19]. However, the good knowledge, wearing face mask still suboptimal which is need further studies to investigate the main reasons and the possible solutions. Meanwhile, educational programs still strongly needed to bring the light regarding wearing face mask. Furthermore, if this knowledge has been transferred into practice it would make significant difference in the prevention and control of the disease.

Around half of the population did not keep safe distant in the social gatherings because the Sudanese community is a sociable active community and because of the old habits and cultures being forwarded through generations. This The mean practices score was relatively low compared to high knowledge and good attitude of the participants. This finding brings the importance of improving the accessibility to preventive measures such as availability of handwashing facilities, facemasks, and enforcing social distancing in different facilities.

The authorities implied restrictive measures and punishments during outbreak of the COVID-19, that's why 85.7% of the population stays home during home quarantine.

Vaccine considered one of the main preventive measures as reported in the literatures [20]. The overall vaccine acceptance rate was 47.3% which is higher than a meta-analysis that reported 39.9% acceptance rete [21]. On the other hand, another meta-analysis in Ethiopia reported higher acceptance rate than our study. This can be explained by the nature of the population studied, as Ethiopian study was carried out among health care professionals who expected to have better acceptance to vaccination than other population [22]. Lack of confidence in the efficiency of the vaccine was the most reported barrier to vaccination which goes in line with Oka P et al study's [23]. Widely spread rumours about side effects of the vaccine could be the reason of this high number. More awareness and education about the vaccine and its importance in decreasing the rate of the disease infectivity and spread may be helpful in reducing this percentage.

Conclusion

The study concluded that people of Atbara city had a good awareness about COVID-19.however the practice of preventive measures still suboptimal. Moreover, the overall vaccination acceptance was weak.

Recommendations

- Its important for the people of Atbara to be educated and aware about COVID-19 because it's very communicable disease. Its fatal if not managed properly.

- Washing hands, sterilization of the surfaces ,wearing masks , maintaining social distancing and vaccination is very important to minimise the infectivity and transmission of COVID-19 among Atbara people and save their lives.

- More health campaign must take place in Atbara city to spread the awareness about COVID-19 mode of transmission and protective measures against it should take place.

- Health organizations and ministry of health should participate in providing more vaccines and motivate peoples of Atbara to get vaccinated through social media and awareness campaigns.

Author Contributions

Funding

This research received no external funding.

Conflicts of Interest

There is no conflict of interest.

Data Availability

The data used in this study are available from the corresponding author on reasonable request.

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