Knowledge, attitude and practice toward COVID-19, 2020 in Kassala, Sudan

Hajhamed RM1*, Hajrhma I. Hajrhma2, Abdalmajed MA3, Aljack AG4, Wael M. Al-awad5, Motaz A. A. Nuggedalla5, Abdelrahman M. S. Ahmed6
1Department of Community Medicine, Faculty of Medicine and Health Sciences, University of Kassala, Sudan.
2Senior Public Health Specialist (KMFI).
3Senior Environmental Health Specialist (WHO- Kassala Office), Emergency Officer, Sudan.
4Health promotion director - Ministry of health – Kassala.
5Department of Anatomy, Faculty of Medicine and Health Sciences, University of Kassala, Sudan.
6Department of Clinical Chemistry, Faculty of Medicine and Health Sciences, University of Kassala, Sudan.

*Corresponding Author: Hajhamed RM, Department of Community Medicine, Faculty of Medicine and Health Sciences, University of Kassala, Sudan.

Received date: November 09, 2020; Accepted date: December 30, 2020; Published date: January 06, 2021

Citation: Hajhamed RM, Hajrhma I. Hajrhma, Abdalmajed MA, Aljack AG, Wael M. Al-awad et al. (2021) Knowledge, attitude and practice toward COVID-19, 2020 in Kassala, Sudan. International Journal of Clinical Case Reports and Reviews, 6(1); DOI: 10.31579/2690-4861/095

Copyright: © 2021 Hajhamed RM, This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Abstract:
Coronavirus disease (COVID-19) is an infectious disease caused by a newly discovered coronavirus [1]. Coronavirus is a type of virus. There are many different kinds, and some cause disease. A newly identified coronavirus, SARS-CoV-2, has caused a worldwide pandemic of respiratory illness, called COVID-19 [2]. The virus that causes COVID-19 is spreading very easily and sustainably between people. Information from the ongoing COVID-19 pandemic suggests that this virus is spreading more efficiently than influenza, but not as efficiently as measles, which is highly contagious. In general, the more closely a person interacts with others and the longer that interaction, the higher the risk of COVID-19 spread. Touching a surface or object that has the virus on it and then touching their own mouth, nose, or possibly their eyes. The risk of COVID-19 spreading from animals to people is considered to be low [3]. The behavior of the general public will probably have an important bearing on the course of the coronavirus disease 2019 (COVID-19) epidemic. Human behavior is influenced by people's knowledge and perceptions. Several important misconceptions on how to prevent acquisition of COVID-19, including beliefs in falsehoods that have circulated on social media. A substantial proportion of participants also expressed an intent to discriminate against individuals of East Asian ethnicity for fear of acquiring COVID-19 [4].

Whether this pandemic ultimately causes tens or hundreds of thousands of deaths remains to be seen. Even so, vigilance and knowledge are the order of the day. Knowledge is power, and our individual and collective ability to deliver information is one of our greatest tasks [5].

This study was done to assess the knowledge, attitude and practice of the people in the state of Kassala.

Materials and Methods:
**Study Design**

A cross-sectional descriptive survey of 210 Sudanese residents from the state of Kassala was conducted between March – May 2020.

**Study area.**

The study was carried out in Kassala Town (Latitude: 15° 27' 3.56” N Longitude: 36° 23' 59.93” E). Kassala state is bordered by Eritrea from the east, Red Sea and River Nile States from the north, Gezira State from the west and AlGaderef State from the south. Kassala state has a total population of 1.5 million (4.6% of total Sudan population) about 20% (300,000) of them live in Kassala town, the state capital. Kassala is about 650 kilometers from Khartoum. Temperatures do not vary greatly with the season. Throughout the year, it is generally hot with a brief mild winter period between December and February. The heat can reach 45-50 Celsius at times, especially between March and June. Rainy season starts in July and ends in September/October [6].

**Data collection**

This study was based on a questionnaire designed by the World Health Organization and UNICEF. 210 Questionnaires were distributed in tow locality in Kassala state, Garb Kassala and Rifie Kassala.

**Ethical approval**

The ethical approval has been obtained from research board at Kassala University.

**Statistical Analysis**

Data was entered into computer data base, R Language Version R i386 4.0.2 was used to obtain chi-square analysis.

**Results**

| Socio-demographic characteristics | Response | No. | %   |
|----------------------------------|----------|-----|-----|
| Sex                              | Male     | 55  | 26.2|
|                                  | Female   | 155 | 73.8|
| Total                            |          | 210 | 100.0|
| Age                              | ≤ 18     | 24  | 11.4|
|                                  | 19-30    | 133 | 63.3|
|                                  | 31-40    | 31  | 14.8|
|                                  | >40      | 22  | 10.5|
| Total                            |          | 210 | 100.0|
| Mean age (Mean± SE)              |          | 29.5± .5 |
| Occupation                       | Driver   | 17  | 8.1 |
|                                  | Housewife| 126 | 60.0|
|                                  | Employee | 20  | 9.5 |
|                                  | Daily labor | 35  | 16.7|
|                                  | Not work | 8   | 3.8 |
|                                  | Student  | 4   | 1.9 |
| Total                            |          | 210 | 100.0|
| Education level                  | Illiterate | 46  | 21.9|
|                                  | Khalwa   | 19  | 9.0 |
|                                  | Basic/primary | 115 | 54.8|
|                                  | Secondary | 26  | 12.4|
|                                  | University | 4   | 1.9 |
| Total                            |          | 210 | 100.0|

**Table1:** Socio-demographic characteristics of the respondents (n=210):

The total number of respondents is 210, 55 males and 155 females. The mean age of the respondents is 29.5. 60% of our female population are housewives. Most of the respondents were with basic or primary education. (Table 1).

**Knowledge**

96.2% of our respondents heard about corona (p-value < 2.2 e-16). The major source of information was through the radio 34.3% (p-value = 5.515e-15). (Figure 1)
30% of our respondents stated that corona virus causes fever and cough while 20% didn't know about it. (figure 2)

**Attitude**

| Question                                                                 | Frequency (N, %) |
|-------------------------------------------------------------------------|-----------------|
| Do you think you are exposed to the risk of infection by new Corona virus? | Yes 175 (83.3%)  | No 33 (15.7%)    | I don’t know 2 (1%)    |
Do you think it is important to take measures to prevent Corona virus in the community? | Yes | No | I don’t know |
--- | --- | --- |
205(97.6%) | 3(1.4%) | 2(1%) |

Do you think Corona virus disease causes stigma against certain people? | Yes | No | I don’t know |
--- | --- | --- |
198(94.3%) | 12(5.7%) | 0% |

How dangerous is the new Corona virus in your opinion? | Don’t know | Killer | Very dangerous | Dangerous | Not dangerous |
--- | --- | --- | --- | --- | --- |
3(1.4%) | 52(24.8%) | 130(61.9%) | 24(11.4%) | 1(0.5%) |

Table2: Attitude to COVID-19 of the respondents (n=210)

83.3 % of the respondents think they are at risk of exposure to COVID-19. 97.6% think that it’s important to take measures to prevent corona virus in the community. Most of our respondents (94.35 %) think that corona causes stigma to the affected people. 61.9% of our participants think the virus is very dangerous as table 2.

**Discussion**

In our study the source of information was through the radio 34.3 %( p-value = 5.515e-15) which is disagree a study done in Nigeria [7], Egypt [8] and Ghana [9]. Where the social media was the most common source of information, this may be due to better infrastructure. 61.9% of our participants think the virus is very dangerous disagree a study done in Jordan where the respondents think its moderately dangerous [10], and a study done in Ghana where 85% of the study population perceived COVID-19 as dangerous disease [9].

Most of our respondents (94.35%) think that corona causes stigma to the affected people. This agree with the study done in the United States and United Kingdom where the general public showed discrimination against East Asian communities [4]. 83.3 % of the respondents think they are at risk of exposure to COVID-19, this agree to study done in Ethiopia where 80 % say the level of risk of infection with COVID -19 is high [11].

97.6% think that it’s important to take measures to prevent corona virus in the community, this is consistent with a study conducted in China [12] and another study in Saudi Arabia [13]. 28.6% of our respondents stopped greeting people while 28% of them did not take any measures to stop the spread of the disease. The poor practice agrees to a study done in Ethiopia [11].

The level of practice is low compared to study done in Saudi Arabia [13] may be because of better awareness and Pakistan [14], this might be because the study done in Pakistan is among health care workers.

**Conclusion and recommendations**

The area chosen because it is close to the Ethiopian-Sudanese border and has a large number of refugees. There is poor knowledge, attitude and practice towards corona in the state of Kassala. This may be due to most of participates from rural area and there have no media to receive the awareness messages. The Ministry of Health needs to intensify efforts to provide knowledge through radio, as it was one of the most used media in this region.

Future studies should be conducted and circulated in all areas of Kassala state, especially that there is a high rate of stigma towards COVID-19 in Kassala.

**References**

1. World health organization. Heath topics, corona virus.
2. Johns Hopkins health, conditions and diseases.

**Practice**

In figure 3 demonstrate the effort to prevent the spread of the disease, 28.6% the respondents stopped greeting people while 28 % of them did not take any measures to stop it.

![Image of Practice to COVID-19 of the respondents](image.png)
3. Center for diseases control and prevention, How COVID-19 Spreads.
4. Geldsetzer P. (2020) Knowledge and perceptions of COVID-19 among the general public in the United States and the United Kingdom: A cross-sectional online survey. Annals of internal medicine.
5. COVID-19: The Importance of Staying Informed.
6. AHMED, R.M.H. and HASSAN, S.M. (2019) Seasonal indices of Aedes aegypti (Diptera: Culicidae) in an urban area of Kassala City, Sudan, 2014-2015.
7. Reuben RC, Danladi MM, Saleh DA, Ejembi PE. (2020) Knowledge, Attitudes and Practices towards COVID-19: An Epidemiological Survey in North-Central Nigeria. Journal of community health.
8. Abdelhafiz AS, Mohammed Z, Ibrahim ME, Ziady HH, Alorabi M, Ayyad M, Sultan EA. (2020) Knowledge, perceptions, and attitude of Egyptians towards the novel coronavirus disease (COVID-19). Journal of Community Health.
9. Serwaa D, Lamptey E, Appiah AB, Senkyire EK, Ameyaw JK. (2020) Knowledge, risk perception and preparedness towards coronavirus disease-2019 (COVID-19) outbreak among Ghanaians: a quick online cross-sectional survey. The Pan African Medical Journal. 35(44).
10. Sallam M, Dababseh D, Yaseen A, Al-Haidar A, Ababneh NA, Bakri FG, Mahafzah A. (2020) Conspiracy beliefs are associated with lower knowledge and higher anxiety levels regarding COVID-19 among students at the University of Jordan. International journal of environmental research and public health. 17(14):4915.
11. Akalu Y, Ayelign B, Molla MD. (2020) Knowledge, attitude and practice towards COVID-19 among chronic disease patients at Addis Zemen Hospital, Northwest Ethiopia. Infection and drug resistance. 13:1949.
12. Zhong B-L, Luo W, Li H-M, Zhang Q-Q, Liu X-G, Li W-T, et al. (2020) Knowledge, attitudes, and practices towards COVID-19 among Chinese residents during the rapid rise period of the COVID-19 outbreak: a quick online cross-sectional survey. Int J Biol Sci. 16:1745–1752.
13. Al-Hanawi MK, Angawi K, Alshareef N, Qattan AM, Helmy HZ, Abudawood Y, Alqurashi M, Kattan WM, Kadasah NA, Chirwa GC, Alsharqi O. (2020) Knowledge, Attitude and Practice Toward COVID-19 Among the Public in the Kingdom of Saudi Arabia: A Cross-Sectional Study. Frontiers in Public Health.
14. Saqlain M, Munir MM, Rehman SU, Gulzar A, Naz S, Ahmed Z, Tahir AH, Mashhood M. Knowledge, attitude, practice and perceived barriers among healthcare workers regarding COVID-19: a cross-sectional survey from Pakistan. Journal of Hospital Infection. 105(3):419-423.