

Knowledge, Attitude and Practice of People Towards COVID-19 in Benadir Region of Somalia: A Cross-Sectional Study

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Abstract

Background: Coronavirus disease 2019 (COVID-19) become the worst emergency respiratory disease in 2020 after the outbreak in Wuhan city of China in December 2019. Hence, this study was designed to assess knowledge, attitude, and practice (KAP) towards COVID-19 among the population in Benadir region of Somalia.

Materials and Methods: This is a cross-sectional study, using stratified random sampling from August to November 2020 with 420 participants to investigate the knowledge, attitudes, and practices (KAP) towards COVID-19, among the population in Benadir region of Somalia.

Results: The Knowledge of study participants are good and have a clear concept of COVID-19 pandemic (when, where, and how it occurs and transmit), In terms of transmission 85% of participants were knowledgeable about COVID 19 can be transmitted via close contact. The attitude of participants (61.2%) of study participants believe that gathering or overcrowding in public places can easily spread COVID-19 and will be the serious threat to public health. In terms of preventing COVID-19 spread, maximum number of participants were agreed with closing of school will be an effective way while they were disagreed with the night curfew. In terms of overcome from this pandemic, surprisingly only 14% of participants agree that Somali government could win the battle. Practices of the study participants were high, 86.4% wore mask before leaving home and 67.7% cover their nose and mouth while coughing or sneezing with the elbow or a tissue but social distances were seen very poor. And also, only 43.1% of respondents follow the direction of local authorities.

Conclusion: The overall knowledge, practice of participants concerning about COVID-19 were very good. To reduce the risk of the infection and to prevent, we need to follow the instruction of local health authorities and World Health Organization guidelines, wear masks, and keeping social distancing.

Key Words: Covid-19, Pandemic, KAP, Benadir region, Somalia, Public health

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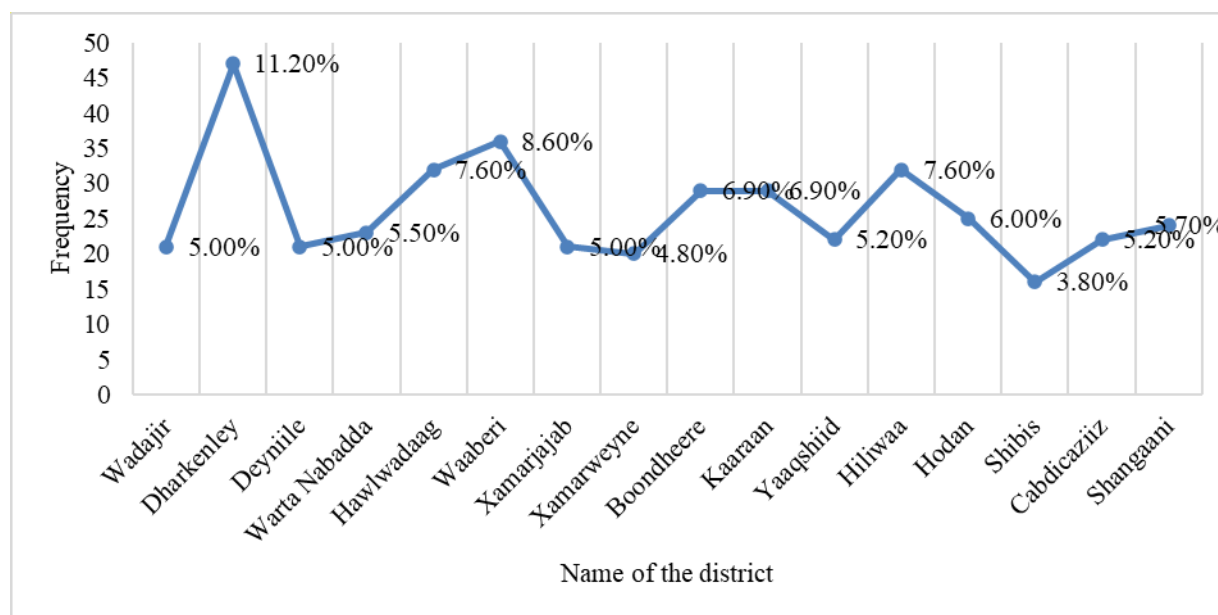
I. Introduction

Coronavirus disease 2019 (COVID-19) pandemic has become an excessive threat to public health, which has seriously impacted the study and life of the globe, which is caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) ¹. According to World Health Organization (WHO), COVID-19 spread more than 200 countries in the world and declared as pandemic on 30 January, 2020 ². As the December 07, 2020, there were totally 66,243,918 confirmed cases and 1,528,984 deaths in the world ³. In Somalia the first confirm case of COVID-19 was reported in March, since the first confirmed case, the country has reported 4,579 cases and 121 deaths (December 7, 2020) ⁴, the highest confirmed cases were observed in Benadir region 1,619 cases and 58 death were reported. COVID-19 prompted fulfillment of public health protocols to control the spread of the virus, many of them involving social distancing, hand washing, and lockdown ⁵. On April 02, 2020 the Prime Minister of Somalia announced, domestic and international flights, Quranic schools, schools, universities, public gatherings and group celebrations to be closed, and people were only allowed to leave their houses for basic activities such as buying foodstuffs and seeking medical treatment as a moderation struggle to decrease public spread and the overloading of the country's health system ⁶. Somalia has not experienced

epidemics earlier such as Middle East respiratory syndrome coronavirus (MERS-CoV) or SARS-CoV2, and it is obvious that the public healthcare systems are not willingly prepared for COVID-19. Lockdown procedures were supposed as essential to control the spread of the virus as fast occurred transmission of human-to-human ⁷. Though, for such procedures to be effective, public observance is important, which is pretentious by their knowledge, attitudes, and practices regarding COVID-19 ⁸. The knowledge, attitudes and practices (KAP) toward COVID-19 shows a vital role in determining a Community’s willingness to admit behavioral change actions from health authorities ⁹. KAP is a significant key in public health towards disease control and health promotion. It involves an assortment of views regarding the causes of the disease and worsening factors, identification of signs, and obtainable procedures of treatments and results ¹⁰. The study aimed to assess the knowledge, attitude and practices towards COVID-19 diseases as it is one of the most threatened disease of 2020 after the outbreak from Wuhan city of China in December 2019 and linked to huge economic losses globally ¹¹. Numerous studies have been reported from several countries regarding KAP about COVID-19 ^{12, 13}. However, data on the knowledge, attitude and practices toward COVID-19 among Somali people are still not clear, hence there is a serious need to gather such crucial data for effective control and preventive plans. The results of our study are essential to notify future efforts concentrating on community willingness to obey with pandemic control actions.

II. Methods

Study area and study Design: A Cross-sectional study was conducted in 16 districts of Benadir region, Somalia, which lies among latitude 2.046934 and longitude 45.318161. The normal yearly temperature ranges between 28.7°C - 37°C. Benadir (Mogadishu) is the capital city of Somalia and has the largest population across Somalia and it is probable to have about 2.3 million people and covers an area of around 96,878 km ^{14, 15}.



Sample type and Study Duration: Stratified random sampling has been conducted for a period of 4 months from August to November 2020, to determine the knowledge, attitude and practices of the population towards Covid-19 pandemic in Benadir region of Somalia.

Sample size and calculation: The sample size of this study has been calculated by the following formula $n = Z^2 pq / d^2 = Z^2 P (1 - P) / d^2$

(Where, n=Sample size, Z=Standard deviate, P=Prevalence, Q=1-p, d=Error accepted)

The prevalence (P) was calculated as 10%. With reference to the above-mentioned formula and other studies done previously, we decided that the size of the study sample should be around 420 samples.

Data collection: A pretested and well-designed preformed questionnaire has been used to collect data for assessing knowledge, attitudes, practices, and misconception of the population towards Covid-19 in Mogadishu, Somalia.

Statistical analysis: All the data have been entered and analyzed using the SPSS software version 19. The analyzed data were presented in frequency and percentages

III. Result and discussion

Demographic: A total of 420 respondent were participated in the study from 16 different districts of Benadir region. Where maximum number of participants was from Dharkenley (n=47) and least from Shibis (n=16) (Figure 1). The age of the participants varies from 15 to above 50 and maximum participants were the age of 31 to 50 and most of them were single. In case of gender male respondent was seen slightly higher than the females. Most of the respondent in the study was studying or graduated from the university and are employed. (Table 1).

Table no 1: Demographic characteristics of participants

| Variables | Frequency | Percentage (%) |
|---------------------------|-----------|----------------|
| Gender | | |
| Male | 227 | 54.0 |
| Female | 193 | 46.0 |
| Age | | |
| 15-30 | 154 | 36.6 |
| 31-50 | 187 | 44.6 |
| Above 50 | 79 | 18.8 |
| Education level | | |
| Illiterate | 124 | 29.5 |
| Primary | 57 | 13.6 |
| Secondary | 93 | 22.1 |
| University | 146 | 34.8 |
| Marital status | | |
| Single | 243 | 57.9 |
| Married | 159 | 37.9 |
| Divorcee | 18 | 4.3 |
| Occupational level | | |
| Employed | 164 | 39.1 |
| Unemployed | 135 | 32.1 |
| Student | 121 | 28.8 |

Knowledge: Knowledges among the participants on different variable are presented in Table 2. The results of our study indicate that most participants are well aware and have clear concept of COVID-19 pandemic (when, where and how it occurs and transmit), where social media play a vital role and only 12.6% (n=56) participants were in contact with COVID-19 positive patients. In terms of transmission 85% (n=359) people believe COVID 19 can be transmitted via close contact while 11.2% (n=47) by food contamination and 3.3 % (n=14) by insect bite. The results of our study were similar to the earlier study of Zhong et al ¹⁶ which was conducted in China and Paudel et al ¹⁷ in Nepal. While knowledge of our participants is higher than the study of Hayat et al ¹⁸ which was conducted in Pakistan.

Table no 2: Knowledge regarding COVID-19

| Statement | Frequency (%) | |
|---|---------------|------------|
| | Yes | No |
| Did you hear COVID-19? | 416 (99.0) | 4 (1) |
| How did you hear the COVID-19 pandemic at the first time? | | |
| 1. Social Media | 209 (49.8) | 211 (50.2) |
| 2. Local Authorities | 12 (3.1) | 408 (96.9) |
| 3. Journals | 27 (6.4) | 393 (93.6) |
| 4. TV and Radio | 171 (40.7) | 247 (59.3) |
| Did COVID-19 have direct impact on your job? | 301 (71.7) | 119 (28.3) |
| Have you ever experienced these symptoms? | | |
| 1. Fever | 219 (52.1) | 201 (47.9) |
| 2. Cough | 50 (11.9) | 370 (88.1) |
| 3. Difficulty breathing | 36 (8.6) | 384 (91.4) |
| 4. Loss of taste and smell | 84 (20) | 336 (80) |
| 5. Vomiting and diarrhea | 31 (7.4) | 389 (92.6) |
| Have you ever contacted a person who is tested positive? | 53 (12.6) | 367 (87.4) |

| | | |
|---|------------|------------|
| Ways of transmission of COVID-19 includes? | | |
| 1. Close contact | 359 (85.5) | 61 (14.5) |
| 2. Insect biting | 14 (3.3) | 406 (96.7) |
| 3. Food contamination | 47 (11.2) | 373 (88.8) |
| Do you know someone of died COVID-19? | 102 (24.3) | 318 (75.7) |
| The incubation period of COVID-19 ranges between 2-14 days? | 233 (55.5) | 187 (44.5) |
| COVID-19 infection causes same symptoms in all patients? | 202 (48.1) | 218 (51.9) |
| older ages are susceptible COVID-19 infection? | 318 (75.7) | 102 (24.3) |
| Anti-malarial drugs can be treated COVID-19 infection? | 135 (32.1) | 285 (67.9) |

Attitude: Table 3 shows the attitude of participants on different variables considered in the study. Regarding attitudes of participants in our study, they were unconfident attitude toward COVID-19 but they believe that gathering or overcrowding in public places can easily spread COVID-19 and will be the serious threat to public health. In terms of preventing COVID-19 spread, maximum number of participants were agreed with closing of school will be an effective way while they were disagreed with night curfew. Study also shows that 66.9% (n=281) of participants think healthy and nutritious food along with sufficient rest can reduce the risk of COVID-19. In terms of overcome from this pandemic, only 14% of participants agree that Somali government could win the battle, while the other studies showed positive attitude regarding this. The study of Al-Hanawi et al¹⁹ showed 97% of the participants have a confident that Saudi could win the battle against covid-19, similarly the study of Paudel et al¹⁷ also showed 80% of participants believed Nepal could win the battle against this pandemic. The low attitude of participants is related to the health system of the country who are not prepared for the battle against any pandemic diseases, and government health system needs to reform and to control citizens safeguard and their well-being.

Table no 3: Attitude regarding COVID-19

| Statement | Frequency (%) | | |
|---|---------------|------------|------------|
| | Yes | No | Not sure |
| Do you think school closure is an effective way of preventing the spread COVID-19? | 183 (43.6) | 156 (37.1) | 81 (19.3) |
| Do you think night curfew is effective way of preventing the spread of COVID-19? | 86 (20.5) | 217 (51.7) | 117 (27.9) |
| Do you believe that COVID-19 exists in Somalia? | 229 (54.5) | 82 (19.5) | 109 (26) |
| Do you agree that of COVID-19 could spread easily in overcrowded places and markets? | 257 (61.2) | 90 (21.4) | 73 (17.4) |
| Do you have the confidence that Somali health system could win the battle against the COVID-19 virus? | 59 (14) | 290 (69) | 71 (16.9) |
| In case there is an effective vaccine against COVID-19 would you take it and recommend it to others: | 219 (52.1) | 150 (35.7) | 51 (12.1) |
| Do you agree that COVID-19 is a serious threat to public health? | 210 (50) | 158 (37.6) | 52 (12.4) |
| Do you think following healthy diet, exercise regimen, adequate sleep reduces the risk of COVID-19? | 281 (66.9) | 76 (18.1) | 63 (15) |

Practice: Practice related to COVID-19 in selected study area is presented in Table 4. Among 420 respondent, 86.4% (n=363) respondent wore mask before leaving home and 67.6% (n=284) covered their nose and mouth while coughing or sneezing with the elbow or a tissue which is similar to the study conducted in Nepal (98%) by Garima et al.²⁰ but only 56.7% (n=238) respondent uses hand sanitizer. Practices regarding social distances as well as home quarantine were seen very poor. And also, only 43.1% (n=181) respondent follows the direction of local authorities.

Table no 4: Practices regarding COVID-19

| Statement | Frequency (%) | |
|--|---------------|------------|
| | Yes | No |
| Do you wear face masks before leaving your home? | 363 (86.4) | 57 (13.6) |
| Do you practice social distance? | 90 (21.4) | 330 (78.6) |
| Did you travel outside Benadir during COVID-19 pandemic? | 187 (44.5) | 233 (55.5) |

| | | |
|---|------------|------------|
| Do you wash your hands with sanitizing regularly? | 238 (56.7) | 182 (43.3) |
| Do you cover your nose and mouth during coughing or sneezing with the elbow or a tissue? | 284 (67.6) | 136 (32.4) |
| Do you practice staying home or self-quarantine? | 70 (16.7) | 350 (83.3) |
| Do you abide or follow the directions of your state or local authorities, if there is another wave of COVID-19? | 181 (43.1) | 239 (56.9) |

IV. Conclusion

To the best of our knowledge, this is the first study conducted in Somalia related the investigating of the knowledge, attitude and practice (KAP) toward COVID-19 among the population of Somalia. The overall knowledge, practice of participants concerning about COVID-19 was very good. To reduce the risk of the infection and to prevent, we need to follow the instruction local health authorities and WHO guidelines, wear masks and keeping social distancing.

Limitation

To the researchers' knowledge, this is the first study in Somalia assessing knowledge, attitude and practice (KAP) toward COVID-19, in people of Somalia, therefore it provides essential to notify future efforts concentrating on community willingness to obey with pandemic control actions. Further research can address some of its methodological limitations, the sample size was small and it's not enough to assess the knowledge of the population of Benadir region, we prepared an English version of the questionnaire and some of the participants did not understand and it took time to translate every participant.

Ethics Statement

The ethical review committee of Somali National University, Mogadishu, Somalia, approved our study protocol and procedures of informed consent before the formal survey.

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Author Contribution

SHAM and AIM design the study, prepare the questionnaire and supervise the study. SHAM, AAA and KAJ collect and analyze the data. SHAM, AIM, and VKY analyze the data, prepare the original draft, finalize the manuscript and provide critical comments. All authors read the manuscript and agree to be responsible for any aspect of the manuscript.

Conflict of Interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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