Knowledge, Attitude, and Practice Towards COVID-19 Among Abudwak Population, Galmudug, Somalia

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Abstract

The objective of this study is to assess the knowledge, attitude and practice towards COVID-19 among Abudwak Population in Somalia. Cross-sectional study was conducted in this study. Total of 420 participants (214 male and 206 female) were enrolled and analyzed using SPSS version 20. The knowledge of study participants were good and have clear concept of COVID-19 pandemic. Most of the respondent 184 (45%) have heard COVID-19 from social media as the main source of the knowledge. The majority of participant 342(81.4%) has good knowledge the way of transmit of COVID-19. In term of attitude mean score of the respondent their age group >40 years (3.41±1.24) were higher than the respondent age group < 25 years (2.98±1.14). In the case of month income, income group >\$800 per month have practice scores (4.45±1.25) which is higher than to the income group <\$200 per month (3.91±1.16). It is suggested that community should continue to strengthen the knowledge, attitude, and practice towards against the COVID-19 or any new emerging infectious disease, so that Somalia can win the battle against the disease.

Keynote: COVID-19, Knowledge, Attitude, Practice, Abudwak Population.

1.   Introduction

Starting from December 2019, coronavirus disease 2019 (COVID-19), was recognized and has caused serious illness and numerous deaths[1]. World Health Organization (WHO) declared that COVID-19 is a pandemic disease[2]. The disease is considered by high morbidity and mortality rates[3]. the world appeared flustered and unprepared to face a global crisis collectively[4]. In this case, many countries like Somalia have decided to control the pandemic by applying social distancing in public places such as malls, shops, masjids, schools, colleges, and jointly teaching medical care through TV, Radios, and social medial. In Somalia the first confirm case of COVID-19 was reported in March, since the first confirmed case, the country has reported 16,103 cases and 864 deaths (August 12, 2021) [5].

Most of the cases and severe illnesses like acute respiratory distress syndrome (ARDS) occurred in older adult people who have underlying medical comorbidities like diabetes, hypertension, heart, lung, and kidney diseases[6]. Controlling and minimization of morbidity and mortality due to COVID-19 require changing the behavior, which is influenced by people's knowledge and perceptions[7], therefore, understanding the high-risk groups' especially those chronic disease patients' KAP and possible risk factors is compulsory and helps to predict the outcomes of planned behavior on COVID-19. This study was done to assess the knowledge, attitude and practice of the people in Abudwak district, Galmudug state, Somalia.

2.   Material and methods

Study area and study design: cross-sectional study was conducted in Abudwak district, Galmudug state, Somalia; it locates the northern part of the state near the border of Ethiopia. Its coordinates (6.148109 N 46.397270 E)[8].

Participants and data collection: Cross-sectional survey was conducted in this study. Social distance is the best way of prevention for the COVID-19, therefore there was a distance between the respondents and the interviewer, among these 426 responses, 6 were incomplete, therefore, our final sample was 420. The questionnaire was formed based on previous papers addressing the same topic in like Benadir region with some modifications to ensure reasonable length and informatively[9]

Statistical analysis: the results were analyzed using SPSS version 20, categorical data as expressed as frequencies (percentage). T-test and analyze of variance ANOVA test was used to compare means all result were considered statistical significance when p-value was <0.05 with confidence inter (CI) of 95 % [10].

3.   Results

Table-1 shows demographic characteristics of the study, total 420 respondents were participated in the study from Abudwak district, Galmudug, Somalia. 241 (51%) were male while 206 (49%) were female, maximum age of the respondents were between 15-25 which was 253 (60%). Only currency which uses in Abudwak distract is a US Dollar, Most participants 183 (43.6%) in the study were earn less than $200. Most of the participant 205 (48.8%) were students. The percentage of the divorced women is (5.2%).

Table 1. Demographic characteristics of participants (N=420)

Variables	n	(%)
Gender		
Male	214	(51)
Female	206	(49)
Age		
15-25	253	(60.2)
26-40	140	(33.3)
Above 40	27	(6.4)
Education level		
Illiterate	47	(11.2)
Primary	25	(6)
Secondary	61	(14.5)
University	287	(68.3)
Marital Status		
Single	116	(27.6)
Married	282	(67.1)
Divorce	22	(5.2)
Occupational level		
Employed	171	(40.7)
Unemployed	44	(10.5)
Student	205	(48.8)
Monthly family income		
Less than $200	183	(43.6)
$200-$400	46	(11)
$400 to 800	95	(22.6)
Above $800	96	(2.9)

Source of knowledge

Most of the respondent 189(45%) hear the COVID-19 from the social media as the main sources of knowledge followed by TV & Radio 147(35%), the least source were journals 21(0.05%).

Table 2. Source of knowledge (N=420)

Source of knowledge	n	(%)
1. Social Media	189	45
2. TV and Radio	147	35
3. Local Authorities	63	15
4. Journals	21	0.05

Knowledge: The results of the knowledge survey are presented in Table 3. The majority of the participant 342 (81.4%) has good knowledge the way of transmit of COVID-19, more than half of the respondent 272 (64.8) believes that insect biting can't transmit COVID-19, while 191 (45.5%) believe that food contamination can't transmit COVID-19. Largest number of the participant 359 (85.5%) have correct answer that the anti-malarial drug cannot be treated COVID-19 infection.

Table 3. Knowledge regarding COVID-19 (N=420)

Item no.	Statement	Correct Answer n (%)	Wrong Answer n (%)
K1	Close contact can transmit COVID-19	342 (81.4)	78 (18.6)
K2	Insect biting can transmit COVID-19	272 (64.8)	148 (35.2)
K3	Food contamination can transmit COVID-19	191 (45.5)	229 (54.5)
K4	The incubation period of COVID-19 ranges between 2-14 days	307 (73.1)	113 (26.9)
K5	COVID-19 infection causes same symptoms in all patients	251 (59.8)	169 (40.2)
K6	Older ages are susceptible COVID-19 infection	266 (63.3)	154 (36.7)
K7	Anti-malarial drugs can be treated COVID-19 infection	359 (85.5)	61 (14.5)

Attitude: table 4 shows the attitude of the respondent on different variables considered in the study, regarding the prevention of COVID-19 spread less than half of the Participant 181 (43.1%) believe that school closure is an effective way of preventing the spread COVID-19, but only 141(33.6%) believe that night curfew is effective way of preventing the spread of COVID-19. In term of health system, maximum number of the participant 346 (82.4%) think that Somalia health system could win the battle against the COVID-19 virus. In addition 324 (77.1%) of the participant believe that COVID-19 is a serious threat to public health.

Table 4. Attitude regarding COVID-19 (N=420)

Item no.	Statement	Correct Answer n (%)	Correct Answer n (%)
A1	School closure is an effective way of preventing the spread COVID-19	181 (43.1)	239 (56.9)
A2	Night curfew is effective way of preventing the spread of COVID-19.	141 (33.6)	279 (66.4)
A3	Somali health system could win the battle against the COVID-19 virus.	346 (82.4)	74 (17.6)
A4	In case there is an effective vaccine against COVID-19 would you take it and recommend it to others.	189 (45)	231 (55)
A5	COVID-19 is a serious threat to public health	324 (77.1)	96 (22.9)
A6	Healthy diet, exercise regimen, adequate sleep reduces the risk of COVID-19	129 (30.7)	291 (69.3)

Practice: Table 5 below shows questions of practice regarding COVID-19, 213 (50.7) of the participant were face masks before leaving the home, maximum number of the participant 291 (69.3%) practice social distance, meanwhile 219(52.1%) of the respondent covers their nose and mouth during coughing or sneezing with their elbow or a tissue. In addition 333(79.3%) of the participant follows the directions of the state local authorities.

Table 5. Practices regarding COVID-19 (N=420)

Item no.	Statement	n (%) Yes	No
P1	Do you wear face masks before leaving your home?	213 (50.7)	207 (49.3)
P2	Do you practice social distance?	291 (69.3)	129 (30.7)
P3	Did you travel outside Abudwak during COVID-19 pandemic?	169 (40.2)	251 (59.8)
P4	Do you wash your hands with sanitizing regularly?	263 (62.6)	157 (37.4)
P5	Do you cover your nose and mouth during coughing or sneezing with the elbow or a tissue?	219 (52.1)	201 (47.9)
P6	Do you practice staying home or self-quarantine?	116 (27.6)	304 (72.4)
P7	Do you abide or follow the directions of your state or local authorities, if there is another wave of COVID-19?	333 (79.3)	87 (20.7)

Analysis of KAP scores with respect to demographic variables: Table 8 shows the relationship between demographic variables and KAP scores of COVID-19. The mean knowledge scores of male (4.86±1.61) was significantly slight higher than the mean knowledge scores of female (4.6±1.14) (p=0.003). In term of mean knowledge age scores, the respondent their age above 40 (5.44±1.05) was higher than, young age (15-25) respondent (4.41±1.31) (p=0.000). On the other hand, there were found statistically significant differences between practices mean scores of marital status. Mean practice scores of single (4.58±1.30) was higher than married (3.50±1.30) and divorce (3.86±1.69) (p=0.000), but in the case of attitude scores married women (3.25±1.13) were the highest compared to single and divorced women (2.58±1.27) and (2.82±0.39) respectively (p=0.003). In term of occupational level, mean knowledge scores of employee (5.52±0.85) was significantly higher than both unemployed (5.23±1.56) and students (3.97±1.33) (p=0.000), meanwhile practice respondent mean scores of employee (4.43±1.23) was slightly higher than unemployed (4.39±1.74) (p=0.000). In addition knowledge mean scores of the respondent their income above $800 (5.29±1.23) was higher than others (p=0.000). It is also found that there are significant positive low correlation between knowledge and both attitude (r=0.33, p=0.000) and practice (r=0.21, p=0.000) scores, which means that Abudwak knowledge regarding COVID-19 was low influence their attitude and practice.

Table 6. Relation between demographic variables and KAP scores of COVID-19 (N=420).

Variables	Knowledge scores		Attitude Scores		Practice scores	
	Mean∓ SD	P-value	Mean∓ SD	P-value	Mean∓ SD	P-value
Gender						
Male [a]	4.86⊥1.61	0.003***	3.06⊥1.14	0.069	4.36⊥1.22	0.287
Female [a]	4.6±1.14		3.18±1.17		3.25±1.35	
Age						
15-25 [b]	4.41±1.31		2.98±1.14		3.58±1.32	0.000***
26-40 [b]	5.18±1.47	0.000***	3.32±1.13	0.007***	4.36±1.42	
Above 40 [b]	5.44±1.05		3.41±1.24		3.30±1.29	
Marital Status						
Single [b]	4.77±2.00		2.58±1.27		4.58±1.30	
Married [b]	4.76±1.04	0.289	3.25±1.13	0.003***	3.50±1.30	0.000***
Divorce [b]	4.27±1.63		2.82±0.39		3.86±1.69	
Occupational level						
Employed [b]	5.52±0.85		3.23±0.93		4.43±1.23	
Unemployed [b]	5.23±1.56	0.000***	3.48±1.60	0.005***	4.39±1.74	0.000***
Student [b]	3.97±1.33		2.95±1.19		3.19±1.16	
Monthly family income						
Less than $200 [b]	4.64±1.71		3.27±1.20		3.91±1.16	
$200-$400 [b]	5.20±1.28	0.000***	3.98±1.20	0.000***	5.24±1.13	0.000***
$400 to 800 [b]	4.12±0.43		2.78±1.28		2.33±0.55	
Above $800 [b]	5.29±1.23		2.75±0.45		4.45±1.25	
Knowledge scores [r]	1		0.33	0.000***	0.21	0.000***
Attitude scores [r]	0.33	0.000***	1		0.29	0.000***
Practice scores [r]	0.21	0.000***	0.29	0.000***	1	

a: Independent sample t-test
b: One-way ANOVA test
r: Pearson correlation coefficient
***: Significance at 0.01

4. Discussion

To the best of our knowledge this is the first study towards COVID-19 which examined in Abudwak district Galmudug state, Somalia. Social media play vital role since most of the respondent 189(45%) hear the COVID-19 from the social media as the main sources of knowledge. Demographic variables, especially the association between gender and knowledge towards COVID-19 has similar result to the previous study in Sudan[11]. In term of attitude mean score of respondent their age group > 40 years (3.41±1.24) were higher than the respondent age group < 25 years (2.98±1.14) this result is equal to the previous study in Iraq [12] and India [13]. Knowledge score of married women (4.76⊥1.04) were higher than the divorced women (4.27⊥1.63) has similar result to the Lebanese [10]. Furthermore employee respondent have more knowledge mean score (5.52±0.85) compared to unemployed respondents (5.23±1.56) same result in Syria[14]. In addition in the case of monthly income, income group >$800 per month have practice scores (4.45±1.25) which is higher than to the income group <$200 per month (3.91±1.16) this result is similar to the previous study in Turkey[15].

5. Conclusion

The area chosen because it is close to the Ethiopian-Somali border. There is good knowledge, attitude and practice (KAP) towards COVID-19 in Abudwak district. Awareness about COVID-19 should be raised through the use of mass media and activities of the school and university health programs. 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.

Reference

[1]   J. M. Abramo *et al.*, "Individuality in music performance," *Assess. Eval. High. Educ.*, vol. 37, no. October, p. 435, 2012, doi: 10.1007/82.

[2]   J. Bedford *et al.*, "COVID-19: towards controlling of a pandemic," *Lancet*, vol. 395, no. 10229, pp. 1015–1018, 2020, doi: 10.1016/S0140-6736(20)30673-5.

[3]   D. Roy, S. Tripathy, S. K. Kar, N. Sharma, S. K. Verma, and V. Kaushal, "Study of knowledge, attitude,

anxiety & perceived mental healthcare need in Indian population during COVID-19 pandemic," *Asian J. Psychiatr.*, vol. 51, no. April, p. 102083, 2020, doi: 10.1016/j.ajp.2020.102083.

[4]   S. A. Ali Jadoo, "Was the world ready to face a crisis like COVID-19?," *J. Ideas Heal.*, vol. 3, no. 1, pp. 123–124, 2020, doi: 10.47108/jidhealth.vol3.iss1.45.

[5]   M. of health Somalia, "https://moh.gov.so/en/," p. website, 2021, doi: https://moh.gov.so/en/.

[6]   C. Wu *et al.*, "Risk Factors Associated with Acute Respiratory Distress Syndrome and Death in Patients with Coronavirus Disease 2019 Pneumonia in Wuhan, China," *JAMA Intern. Med.*, vol. 180, no. 7, pp. 934–943, 2020, doi: 10.1001/jamainternmed.2020.0994.

[7]   V. Long, B. Y. S. Tan, and L. F. Tan, "Knowledge and Perceptions of COVID-19 among the General Public in Singapore: A Cross-sectional Online Survey," *Ann. Acad. Med. Singapore*, vol. 49, no. 12, pp. 1048–1051, 2020, doi: 10.47102/annals-acadmedsg.2020361.

[8]   A. District, I. Y. Khalif, A. A. Mahamud, F. F. Ahmed, and F. A. Isse, "Factors Affecting Household Electricity Consumption And Consumption Characteristics : Case Study of," vol. 9, no. 1, pp. 726–730, 2021.

[9]   S. Abdullahi Mohamed *et al.*, "Knowledge, Attitude and Practice of People Towards COVID-19 in Benadir Region of Somalia: A Cross-Sectional Study," *IOSR J. Dent. Med. Sci. e-ISSN*, vol. 19, no. 12, pp. 21–26, 2020, doi: 10.9790/0853-1912132126.

[10]   S. Domiati, M. Itani, and G. Itani, "Knowledge, Attitude, and Practice of the Lebanese Community Toward COVID-19," *Front. Med.*, vol. 7, no. August, pp. 1–8, 2020, doi: 10.3389/fmed.2020.00542.

[11]   M. Mabyoue, "CPQ Medicine (2021) 12 : 1 Knowledge , Attitudes and Practices toward COVID-19 Pandemic among Public in Sudan," no. June, 2021.

[12]   S. A. A. Jadoo *et al.*, "Knowledge, attitude, and practice toward COVID-19 among Iraqi people: a web-based cross-sectional study," *J. Ideas Heal.*, vol. 3, no. 2, pp. 258–265, 2020, [Online]. Available: https://doi.org/10.47108/.

[13]   S. Maheshwari, P. Gupta, R. Sinha, and P. Rawat, "Knowledge, attitude, and practice towards coronavirus disease 2019 (COVID-19) among medical students: A cross-sectional study," *J. Acute Dis.*, vol. 9, no. 3, p. 100, 2020, doi: 10.4103/2221-6189.283886.

[14]   S. Al ahdab, "A cross-sectional survey of knowledge, attitude and practice (KAP) towards COVID-19 pandemic among the Syrian residents," *BMC Public Health*, vol. 21, no. 1, pp. 1–7, 2021, doi: 10.1186/s12889-021-10353-3.

[15]   S. A. Ali Jadoo *et al.*, "Knowledge, attitude, and practice towards COVID-19 among Syrian people resident in Turkey," *J. Ideas Heal.*, vol. 3, no. Special2, pp. 278–285, 2020, doi: 10.47108/jidhealth.vol3.issspecial2.61.