Knowledge, Attitudes, And Practices Towards COVID-19 Among Mizan-Aman Town Residents In SNNPR, Bench Shako Zone, Southwest Ethiopia, 2020

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Research

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Abstract

Back ground: The first case of COVID 19 in Ethiopia was confirmed on March 13, 2020. Currently the disease is highly spreading into almost all administrative regions of Ethiopia. COVID -19 is not only a health problem but also causes to the socio-economic crisis.

Methods ; community based descriptive study design was conducted in Mizan aman town. Three kebeles were randomly selected from the five kebeles, by proportionally allocating the samples, to each kebeles, from shesheka 134, from Adiss ketema 166, from Kometa ketema, 122 samples taken. Households from each kebele were selected by systematic random sampling. First house was selected randomly and every 12th house was selected for the study and one participant from each house was taken for interview by lottery method. Data were collected by using a structured questionnaire adapted from different literatures. Data collectors used interview methods by strictly using masks and keeping physical distances. Questionnaire administered data collection was avoided during data collection time to reduce cross contamination. Data was entered in EpiData version 3.1 and exported to SPSS version 21 for analysis. Descriptive analysis was done to summarize the frequencies of correct and percentages. Variables whose p -value <0.05 were considered as statistically significant

Result The percentage of the respondents who correctly answered fever, fatigue, dry cough and muscle ache can be one of the symptoms of COVID 19 was 94.9% and 74.8% of the respondents correctly answered that, stuffy nose, runny nose, and sneezing are additional symptoms of corona virus. According to the finding, 64.3% had confidence that Ethiopia can win the battle and the study participants who had optimistic attitude whether they go quarantine if infected was 70.6%. The study result showed that 64.3% visited the crowded place during the interview and 61.1% didn't wear masks when leaving home, 50.8% of the respondents did not avoid cultural behaviors, such as shaking hands, only 48.4% have been practiced social distancing.

Background

COVID-19 is a pandemic, emergency respiratory disease which is caused by a novel coronavirus and was first detected in December 2019 in Wuhan, China. The disease is highly contagious, and its main clinical symptoms include fever, dry cough, fatigue, myalgia, and dyspnea. In China, patients with COVID-19, developed acute respiratory distress syndrome, septic shock, difficulty in metabolic acidosis, bleeding and coagulation dysfunction[1].

In January 2020, the first US case was reported in Washington State and by the end of March and US became the center of the pandemic accounting for the most reported cases worldwide. While New York city was attacked by COVID-19 with highest number of cases, that obligated to enforce the social distancing guidelines with news reports outlining the rapid spread to most US cities[2]. The COVID-19 pandemic occurred as a massive global health crisis. Until this research was conducted the top affected

countries in the world were US America, Brazil and Spain Similarly in Africa ,S. Africa and Egypt taking the first line in number of total cases [3].

World Health Organization (WHO) had predicted that the pandemic may kill between 83,000 and 190,000 people in African countries in the first year, depending on governments' responses. Normally COVID-19 pandemic mitigation strategies for developing countries are similar with developed countries ,but the health facilities arrangement are absolutely different than developed nations [4]. But some African countries also have a wealth of relevant lessons from dealing with previous HIV/AIDS and Ebola epidemics by involving communities[5].

The pandemic impact is multi-dimensional and varied in its severity and peoples vulnerabilities. The Africa Centre for Disease Control and Prevention (African CDC) is planning the region's capacities by affording testing technologies, promoting community involvement on COVID 19 pandemic management, and social supporting [4].

The immediate health impact is directly observed, but the indirect consequences beyond health not easily understood. These include food insecurity, other chronic health follow-ups, unemployment, lack of regular social interactions, and shortage of personal protective equipment[6].

The first case of COVID – 19 in Ethiopia was confirmed on March 13, 2020. The case was a Japanese man reported to have traveled from Japan to Burkina Faso and who then arrived in Ethiopia. Latter on July 2020, the number of new cases and deaths were insignificant but from July to August this number dramatically increased and reached above 1000 cases and above 10 deaths per day [7]. By the state of emergency, even though strict measures are being implemented to control the rapid spread of the ongoing COVID-19 by Ethiopian government, these measures will be effective if People's knowledge, attitudes, and practices is measured and correction methods are implemented. Because the only method to control COVID-19 is applying WHO prevention measure [8],assessing and understanding knowledge, attitude and practice of the communities is very significant.

In order to strengthen COVID-19 outbreak management, screening and testing shall be an urgent besides KAP assessment. Since Corona virus is newly arisen and promptly spreading, researches are not done in the communities' awareness, attitude and practice Mizan –Aman town,[9].

As a base line data, findings about Knowledge, Attitude and Practice of peoples towards COVID-19 helps to preventive activities and improve misconceptions and avoiding unnecessary fears [10].

Therefore this study was aimed to assess the knowledge, attitude and practice of Mizan Aman town communities.

The study will be a base line data for the government for controlling the pandemic by pinpointing the gaps in the community. In addition it will be strengthening instrument for government's effort to control COVID 19 dissemination.

Methods

Study area and design

The community based cross-sectional survey was carried out with in the state of emergency for COVID -19 prevention in Ethiopia at Mizan Aman town in SNNPR Bench Shako zone from June 30/2020 to July 20/2020, The town was located at 561 km far from the capital city of Ethiopia, Addis Ababa towards southwest with a total population of 57,537 of those 30,379 were males and 27, 158 females (CSA, 2007). There are five kebeles in the town these kebeles are Hibret, Adis ketema, Edget ,Kometa and Shashaka.

Sample size and sampling technique

Sample size was determined by using single population proportion formula by assuming 95% confidence interval, 5% margin of error with P=50%.

$$n = \frac{(Z_{\alpha/2})^2 * p(1 - p)}{d^2}$$

$$n = [(1.96)^2(0.5) (1-0.5)] / (0.05)^2 \rightarrow n = 384$$

BY adding 10% non-response rate $\rightarrow 422 \text{ HHs}$. $7696 / 0.055$

SAMPLING TECHNIQUE

Three kebeles were randomly selected from the five kebeles, which were shesheka , Addis ketema and Kometa. Shesheka has 2454 households and Addis ketema has 3021 households Kometa kebele has 2221 households , by proportionally allocating the samples, to each kebeles,

$$\text{For shesheka} = 422 / 7696 * 2454 = 134$$

$$\text{For adiss ketema} = 0.055 * 3021 = 166$$

$$\text{For Kometa ketema} = 0.055 * 2221 = 122$$

Households from each kebele were selected by systematic random sampling,

K was calculated as $7696 / 422 = 12$ the first house was selected randomly and every 12th HH was selected for the study and one participant from each HH was taken for interview by lottery method.

Data collection tools and methods

Data were collected by using a structured questionnaire adapted from different literatures (1, 12,13). The questionnaire had two sections; the first section was Sociodemographic dimension and the second section covered assessment of knowledge, attitude and practice towards COVID 19. The knowledge assessment had 12 questions: 4 regarding clinical sign and symptoms (K1-K4), 3 regarding transmission routes (K5-K7), and 5 regarding prevention and control (K8-K12) of COVID-19. These questions were assessed by using “yes”, “no” “I am not sure” option. The total knowledge score ranged from 0 to 12, with above the mean score denoting as good knowledge of COVID-19. Similarly there were 6 attitude questions answered as “agree”, “not agree” and “I am not sure”. The attitude status measuring questions also stated as optimistic and not pessimistic. The last 6 questions were practice questions answered by “yes” and “no”. Data collectors used interview methods by strictly using masks and keeping physical distances. Questionnaire administered data collection was avoided during data collection time to reduce cross contamination.

Statistical data analysis

Data was entered in EpiData version 3.1 and exported to SPSS version 21 for analysis. Descriptive analysis was done to summarize the frequencies of correct and percentages. Variables whose p -value <0.05 were considered as statistically significant.

Results

Background characteristics of respondents

Out of 420 respondents, 409 agreed to give their interview which was 97.4% response rate. Two hundred fifty one; 251 (61.4%) participants were males. The mean age of the respondents was 30 ($\pm$ 12) years. Majority of the respondents; 190(46.5%) were Christian orthodox followed by protestant 136 (33.3%). Almost half 214 (52.3%) of respondents were married and many 121 (29.6%) of them had collage level educational experiences. About 133 (32.5%) were merchants. (Table 1)

Table 1
Sociodemographic characteristics of the respondent in Mizan Aman
town south west Ethiopia July 2020 (n = 409)

Characteristics		Frequency	Percent (%)
Sex	Male	251	61.4
	Female	158	38.6
Age	<=19	55	13.4
	20–29	209	51.1
	30–39	89	21.8
	40–49	27	6.6
	>=50	29	7.1
Marital status	Never married	159	38.9
	Married	214	52.3
	Divorced	24	5.9
	Widowed	4	1.0
	Cohabitation	8	2.0
Religion	Orthodox	190	46.5
	Muslim	47	11.5
	Protestant	136	33.3
	Catholic	5	1.2
	Other	31	7.6
Educational status	Never read	23	5.6
	Primary	70	17.1
	Secondary	117	28.6
	College	121	29.6
	University	78	19.1
Occupational status	Merchant	133	32.5
	Government	109	26.7
	NGO	7	1.7
	Student	101	24.7

Characteristics	Frequency	Percent (%)
Unemployed	59	14.4

Respondents' knowledge Status about COVID 19

Towards symptoms of the disease

The majority of respondents showed high level of knowledge about the respiratory symptoms of the disease and 388 (94.9%) reported that fever, fatigue, Dry cough and muscle ache can be one of the symptoms, 306 (74.8%) of the respondents were also reported that, stuffy nose, runny nose, and sneezing are additional symptoms of corona virus 2019, (Table 2).

Towards disease transmission

Of all the interviewees 307 (75.1%) knew that the disease is transmitted through contacting or eating wild animals. In contrary to this 63(15.4%) responded that contacting or eating wild animals do not transmits COVID 19 and 39 (9.5%) are neutral . on the other hand 338 (82.6%) believed that the disease transmission can occur through respiratory droplets, (Table 2).

Towards disease prevention measures

The majority of interviewees had good knowledge about most of the preventive measures that can help in limiting the disease transmission, 365 (89.2%) of respondents believe wearing general medical mask for ordinary people for preventing disease and 277(67.7%) also reported not going in crowded environment is preventive measures too, table 2.

Towards disease treatment

The majority 390 (95.4%) of respondents believed that isolation and supportive treatment of people who are infected with the COVID-19 virus is the best way of mitigating the pandemics, (Table 2).

Table 2
knowledge status towards COVID 19 among Mizan Aman town residents in south west Ethiopia, July 2020 (n = 409)

Variables	Responses	Frequency	Percent (%)
The main sign and symptom of COVID 19 are fever, fatigue, dry cough and muscle ache.	Yes	388	94.9
	No	15	3.7
	I don't know	6	1.5
Unlike the common cold, stuffy nose, runny nose, and sneezing are less common in COVID 19.	Yes	84	20.5
	No	306	74.8
	I don't know	19	4.6
Eating raw meat or contacting wild animals will exposed to COVID 19	Yes	307	75.1
	No	63	15.4
	I don't know	39	9.5
All infected persons with COVID 19 may not develop to severe condition	Yes	365	89.2
	No	29	7.1
	I don't know	15	3.7
Persons with COVID-19 cannot transmit the virus to others when a fever is not present	Yes	132	32.3
	No	258	63.1
	I don't know	19	4.6
The COVID 19 virus can spreads via respiratory droplets from infected individuals	Yes	338	82.6
	No	62	15.2
	I don't know	9	2.2
It is not necessary to aware children and young to take measures to prevent disease	Yes	108	26.4
	No	290	70.9
	I don't know	11	2.7
Currently there is no effective cure for COVID 19, but early symptomatic may get supportive treatment	Yes	367	89.7

Variables	Responses	Frequency	Percent (%)
	No	29	7.1
	I don't know	13	3.2
All persons should wear general medical masks to prevent the infection by Corona virus	Yes	365	89.2
	No	39	9.5
	I don't know	5	1.2
To prevent the infection by COVID-19, individuals should avoid going to crowded areas	Yes	277	67.7
	No	126	30.8
	I don't know	6	1.5
To mitigating the spread of the virus ,isolation and supportive treatment for people who are infected with COVID-19 is important	Yes	390	95.4
	No	14	3.4
	I don't know	5	1.2
People who have contact with someone infected with COVID-19 should be quarantined for 14 days	Yes	393	96.1
	No	9	2.2
	I don't know	7	1.7

Attitude toward corona virus – 19 among residents in Mizan Aman town in July 2020

More than half of the respondent 262 (64.1%) agreed that COVID- 19 will be finally be successfully controlled. But, still high percentages of the respondents (28.4%) did not agree COVID- 19 will be finally be successfully controlled. and 7.6 % of the respondents are not sure if COVID- 19 will be finally be successfully controlled. And also more than half of respondents 263 (64.3%) had confidence that Ethiopia can win the battle and 143 (35.0%) had no such confidence and 3(0.7%) felt difficulty of deciding, seventy eight percent of the study participants agreed that it is important to keep their distance from others to avoid covid – 19 spreading, whereas 4.6% confused the importance of keeping distance from others to prevent COVID-19 spreading. The study participant agreed to go quarantine if infected was 70.6% but above a quarter did not agree to do so. Above 80% agreed travelers from abroad should be quarantined. Only 5.6% of the participants are not sure if whether travellers from abroad should be quarantined. (Table 3).

Table 3
Attitude toward corona virus 19 among residents in Mizan Aman town in July 2020 (n = 409)

Variables	Responses	Frequency	Percent (%)
Do you agree that COVID-19 will finally be successfully controlled?	Agree	262	64.1
	Disagree	116	28.4
	Not sure	31	7.6
Do you have confidence that Ethiopia can win the battle against the COVID?	Yes	263	64.3
	No	143	35.0
	Not sure	3	0.7
It is important to keep my distance from others, to avoid spreading CoV-19	Agree	319	78
	Dis agree	71	17.3
	Not sure	19	4.6
To protect myself from COVID-19 exposure, I should stay home if I am sick, unless I am receiving medical care.	Agree	309	75.5
	Dis agree	72	17.6
	Not sure	28	6.8
Would you like to go under quarantine if infected	Agree	289	70.6
	Dis agree	106	25.9
	Not sure	14	3.4
Should travellers coming from abroad be quarantined	Agree	334	81.7
	Dis agree	51	12.5
	Not sure	24	5.9

Behavior toward corona virus 19 among residents in Mizan Aman town in July 2020

More than half of the respondents 263 (64.3%) were visited the crowded place during the interview and those didn't wear masks when leaving home were 250 (61.1%), more than half (50.8%) of the respondents did not avoid cultural behaviours, such as shaking hands, only 48.4% have been practiced social distancing and nearly half (46.2%) of them did not wash their hands frequently with soap and water for at least 20 seconds. Almost all (96%) did not meet international travellers.(Table 4).

Table 4
Behavior toward corona virus 19 among residents in Mizan Aman town in July 2020 (n = 409)

Variables	Responses	Frequency	Percent (%)
Does the respondent found at public crowded place during conducting this interview	Yes	146	35.7
	No	263	64.3
Does the respondent worn a mask while leaving his/her home	Yes	159	38.9
	No	250	61.1
Have you recently avoided cultural behaviours, such as shaking hands?	Yes	201	49.14
	No	208	50.86
Have you been practicing social distancing?	Yes	198	48.4
	No	211	51.6
Recently, have you frequently washed your hands with soap and water, for at least 20 seconds, especially after going to a public place, or after nose-blowing, coughing, or sneezing?	Yes	220	53.8
	No	189	46.2
Met people with recent international travel history	Yes	393	96%
	No	16	4%

Discussion

The knowledge level of the respondent about symptoms of COVID-19 is high that is, 94.9% of the respondents correctly answered that fever, fatigue, Dry cough and muscle ache can be one of the symptoms, 74.8% of the respondents correctly answered that, stuffy nose, runny nose, and sneezing are additional symptoms of corona virus. This finding was similar with study done in china where the knowledge level of the respondents was from 70.2–98.6%.

Higher knowledge was also reported according to research conducted from Cameroon (14) the higher level of knowledge developed most probably due to government concern and awareness creation activities during the outbreak periods. We found that 75.1% of respondents correctly know that the disease is transmitted through contacting or eating wild animals and 82.6% believed that the disease transmission can occur through respiratory droplets. This knowledge level of our study participants was slightly lower than study reports from Cameroon where 94.3% knew that the disease could be transmitted by droplets when an infected person coughs, sneezes or speaks, 75.6% said through kissing infected person, 74.7% through a handshake, 88.3% through touching a contaminated surface and then touching your eyes, nose or mouth. This result showed that efforts should still be geared by concerning bodies to increase awareness about the ways of the disease transmissions.

According to the finding, 64.3% had confidence that Ethiopia can win the battle. This was in contrast with research report from China, where the confidence level was 97.1% (1). The difference in confidence level may be as a result of differences in applying preventive measures of the disease. The study participants who had an optimistic attitude whether they go to quarantine if infected were 70.6%. This was higher than that of Pakistan which was 62%.

The study result showed that 64.3% visited the crowded place during the interview and 61.1% didn't wear masks when leaving home, 50.8% of the respondents did not avoid cultural behaviours, such as shaking hands, only 48.4% have been practicing social distancing and nearly half (46.2%) of them did not wash their hands frequently with soap and water for at least 20 seconds. The finding was conflicting with findings of China (1). This may implicate the communities are imprecisely practicing preventive measures and may highly disseminate the disease to the societies.

Conclusion

The knowledge level in Mizan Aman town was high and they had an optimistic attitude, but the behaviors to prevent the disease transmission methods are low and this will increase the communication throughout the communities abruptly if immediate measures are not taken.

Declarations

Ethics approval and consent to participate

This research was conducted after getting approval from Mizan Aman Health Science College research and publication office. Permission was obtained from Mizan Aman town Trade and Industry Office. During data collection the aim of the study was communicated to the respondents and the food & drink establishment owners after signing on the consent form.

Consent for publication

The finding of this study was presented to Mizan Aman Health Science College. Moreover, attempts will be made to publish reputable international journals.

Availability of data and materials

The data that support the findings of this study is available at the hands of Mr. AM, the corresponding author and it can be delivered to the journal based on request at any time.

Competing interests

The authors declare that they have no competing interests.

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Authors' contributions

GM and WA, analyzing the data, drafting the manuscript, reviewing, AM and MG data entering, data cleaning, reviewing and editing

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