

Knowledge Attitude and Practice towards COVID-19 among the People of South Omo Zone Ethiopia

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KNOWLEDGE ATTITUDE AND PRACTICE TOWARDS COVID-19 AMONG THE PEOPLE OF SOUTH OMO ZONE ETHIOPIA

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ABSTRACT

Introduction: Coronavirus disease 2019 (abbreviated “COVID- 19”) is an emerging respiratory disease that is caused by a novel coronavirus and was first detected in December 2019 in Wuhan, China. The main clinical symptoms of the virus include fever, dry cough, fatigue, myalgia, and dyspnea. Ethiopia is one of African countries that confirmed the virus and working on the condition. This study was aimed to investigate Knowledge, Attitude and Practice towards COVID-19 among the people of South Omo Zone and specifically, the study was aimed to find out the Knowledge, Attitude and Practice score reported by respondents related to COVID-19.

Methodology: this study used cross sectional survey method to identify factors that determine Knowledge, Attitude and Practice towards COVID-19 and to compare Knowledge scores of different social and demographic groups. A total of 400 respondents were taken from two woredas of the Zone namely Hammer and Nyangatom woreda by using multi-stage sampling technique. Descriptive statistics and econometric model were used to analyze data. Descriptive statistics include average, t-test and chi-square test were used and binary logit model was used to identify the factors that determine the knowledge, attitude and practice of respondents towards COVID-19.

Result: It was found that majority of the respondent have no knowledge, have no optimistic attitude and have no safe practice towards COVID-19. From the total sampled respondents, 53.5% have good knowledge, 55.75% have optimistic attitude and 44.25% respondents have safe practice towards COVID-19. Demographic characteristics, socio-economic factors and infrastructure barriers were found determining knowledge, attitude and practice of the respondents.

Conclusion: most of the respondents in the study area have no knowledge towards COVID-19, have no optimistic attitude towards the final success in controlling the virus and they have no safe practice concerning the prevention methods of COVID-19. Demographic characteristics of the respondents and socio-economic factors are the most common factors which determined the knowledge, attitude and practice of the respondents towards COVID-19. From the economic status and having access to information perspective, those respondents that have high income and access to information have knowledge, optimistic attitude and good practice towards COVID-19 than those respondents that have low income and have no access to information. Health education programs, by targeting the lower knowledge individuals regarding COVID19, are essential for creating awareness, building positive attitude and maintain safe practices, supporting the low income groups could help the respondents to practice the prevention methods.

Key words: COVID-19, KAP, Logit, South Omo

1. INTRODUCTION

1.1. Background of the study

Coronavirus disease 2019 (abbreviated “COVID- 19”) is an emerging respiratory disease that is caused by a novel coronavirus and was first detected in December 2019 in Wuhan, China. The disease is highly infectious, and its main clinical symptoms include fever, dry cough, fatigue, myalgia, and [18]. Physical contact and respiratory routes are the two most important well established routes of transmission of the virus. Poor hand hygiene practice, overcrowding, and close physical contacts like hand shaking contributes for the fast spread of the virus within a very short period of time [9]. The disease has been recognized as a global public health emergency by World Health Organization after cases had started to be seen outside China in less than two month period. Due to the failure to predict reluctance to use initial information timely and take the necessary actions together with lack of political commitment in nations across the world, the disease has rapidly spread out of China and caused unacceptably high mortality in countries most affected by the pandemic. The virus is severely affecting social, cultural, economic, and political lives, especially in developing countries like Ethiopia. In response to the serious situation, the World Health Organization (WHO) declared that a public health emergency of international concern on January 30 and called for collaborative efforts of all countries to prevent the rapid spread of COVID-19 [16]. The WHO detected community transmission in some African countries and the risk to spreading coronavirus is due in large part to deep challenges in practicing social distancing and frequent hand washing in settings of high population density and lack of running water, as well as the non-specific symptoms of COVID-19 that make it difficult to differentiate from endemic illnesses such as malaria and influenza. Ethiopia is one of among the victim countries which have confirmed the virus and working on the conditions. Considering the status of COVID19, the government of Ethiopia has put new measures to prevent the spread of COVID-19 outbreak. These measures include approval of allocating 5 Billion Birr (USD 150 M) for the fight against the Corona Outbreak, using the security sector to enforce measures directed by the COVID-19, and directing the closure of ground crossing points like all travellers entering in the country through International Airport have to undergo mandatory quarantine for 14 days at the traveler’s expense starting 23 March 2020 [17].

According to [14] with up to 22 percent (23 million people) practicing open defecation, and very low rates of hand washing after the use of a latrine in Ethiopia which means majority of poor households are thereby most at risk of contracting COVID-19 due to poor sanitation practices and hygienic conditions. On the other hand urban areas are densely populated, with small informal dwellings, lack of access to clean water, comprised of multi-generational households with shared sanitation facilities, high level of social mixing, and transient residents [12; 15]. This condition puts the urban area at high risk of transmission especially when there is lack of knowledge towards the transmission and controlling of the ways and lack of good attitudes towards the condition. To prevent the devastating health, social and economic impact of a COVID-19 outbreak, containment is an important first step and extensive mitigation efforts will be required. In order for these efforts to be effective, health authorities need timely and actionable data to design policies and interventions that are easily understood and relevant to the lives of urban slum inhabitants [13].

1.2. Statement of the problem

Ethiopia Confirmed the first coronavirus case on 13 March 2020, and the victim later identified was Japanese citizen. On 8 April 2020, the council of Ministers declared a five month long state of emergency in response to the growing number of Corona virus case in Ethiopia and the state of emergency was approved on 10 April by the parliament of the country. After multiple cases of the virus were reported, several regions of the country took measures to prevent further spread of the virus [8]. The spread of the

virus in the country is increasing from time to time in which two cases (2%) reported on 3 May 2020, and dramatically increased to 61 cases (14%) on 23 May 2020 [6].

Most of the time people in rural areas have no information about different conditions due to the lack of access to information and lack of accessibility of the channel of the information infrastructure. They are economically poor that leads them to be passive for searching information and practicing different measures due to the limitation of economic status. On the other hand, COVID- 19 is an urgent issue which needs high attention and collaborated effort of the people to control the spread of it. It is better to prevent the spread of the virus rather than taking a measure and providing treatment after the virus is out of control and people suffered from it. Because of different limitation like challenges of access to infrastructure in rural areas, early detection of the situation of the people is more crucial than measures that could be taken after the outbreak of the virus. South Omo zone is one of the rural and remote areas in the country in which the people of the area are expected to share the above characteristics of rural population. Even-though the country is in a good situation towards controlling the virus by declaring different temporary rules and following the track of the virus, further investigation is necessary to understand the people condition to formulate rules and continue working on the control of the virus. According to different studies, knowledge and attitudes towards infectious diseases are associated with level of panic emotion among the population, which can further complicate attempts to prevent the spread of the disease. To facilitate outbreak management of COVID-19 in Ethiopia particularly in South Omo Zone, there was an urgent need to understand the public's situation on the KAP towards COVID-19 at the critical moment. This study investigated the KAP towards COVID-19 among the people of Ethiopian residents particularly people in South Omo Zone, Southern Nations, Nationalities and Peoples' Region, Ethiopia.

1.3. Objectives

1.3.1. General Objective

The main objective of this study is investigating KAP towards COVID-19 among the people in South Omo Zone.

1.3.2. Specific Objectives

Specifically, the study addressed the following important points:

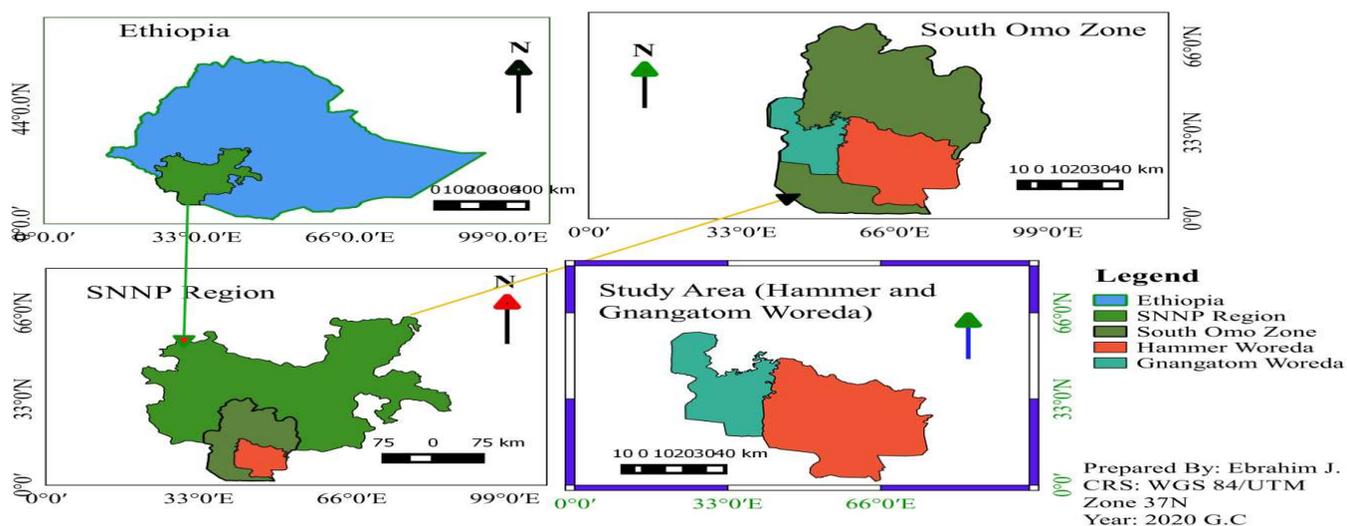
- ☞ Finding out the current KAP reported by households related to COVID-19
- ☞ Identifying factors determining KAP towards COVID-19.
- ☞ Comparing KAP scores of different social and demographic groups.

2. RESEARCH METHODS AND DESIGN

2.1. Description of study area

South Omo (Dehub Omo) is a zone in the Ethiopian Southern Nations, Nationalities and Peoples' Region. South Omo is bordered on the south by Kenya, on the south west by the Ilemi Triangle, on the west by Benchi Maji, on the northwest by Keffa, on the north by Konta, Gamo Gofa and Basketo, on the north west by Dirashe and Konso, and on the east by the Oromia Region. The administrative center of South Omo Zone is Jinka [10]. Based on the 2007 Census conducted by the CSA, this zone has a total population of 573,435 of whom 286,607 are men and 286,828 women: with an area of 21,055.92 square Kilometers, South Omo zone has a population density of 27.23. While 43203(7.53%) are urban inhabitant, a further 25,518(4.45%) are pastoralists. A total of 125,388 households were counted in this Zone, which results in an average of 4.75 persons to a household, and 121,309 housing unit. The eight largest ethnic group reported in this zone were the Ari (44.59%), the Male (13.63%), the Daasanach (8.17%), the Hamar(8.01%), the Bana(4.42%), the Amhara(4.21%), the Tsamai (3.39%), and the Nyangatom(2.95%): all other ethnic groups made up of 10.63% of the population [10].

Figure1. Map of study area



2.2. Sampling techniques and sample size determination

The study employed survey research method. A multi-stage sampling procedure was applied to take sample respondents from selected weredas. First two weredas from South Omo zone were selected randomly by employing simple random sampling method. Next, sample respondents were selected from each wereda by using probability proportional to sample size method. The sample size is determined by using the formula suggested by Yamane (1967) as indicated below.

$$n = \frac{N}{1 + N(e)^2}$$

Where n is the sample size, N is the population size, and e is the level of precision or the sampling error (0.05).

2.3. Method of data Collection

The cross-sectional survey data collection method was employed to collect the data. Data from the respondents were collected by using interview schedule method. The interview schedule consists of three parts: questions related with demographic characteristics, Socio economics and Knowledge, Attitude and Practice (KAP) related questions. Demographic variables including age, gender, marital status, education, occupation, and economic status were included in the interview schedule. According to the guidelines for clinical and community management of COVID-19 by the National Health Commission of the People of Ethiopia, a COVID-19 knowledge questions were developed. The questions include questions regarding clinical presentations, regarding transmission routes and regarding prevention and control of COVID-19. These questions can be answered on a true/false basis option. The interview schedule also included important questions which were used to measure the attitude and practice of the respondents towards the pandemic virus.

2.4. Method of data analysis

Data analysis was carried out by using descriptive statistics and econometric model. Descriptive statistics was used to describe the frequencies of correct knowledge answers and various attitudes and practices towards COVID-19. Practices, knowledge scores and attitudes of different persons based on the demographic characteristics were compared with independent samples t-test, and Chi-squared test as appropriate. Econometrics model analysis using all of the explanatory variables as an independent variables and KAP towards COVID-19 as the outcome variable was conducted to identify the influencing factors of KAP towards COVID-19. Binary logistic regression model was used to identify factors associated with knowledge, attitudes and practices of the respondents.

2.5. Description of variables

2.5.1. Dependent variable

The dependent variables in this study were Knowledge, Attitude and Practice (KAP) towards COVID-19. The determinants of Knowledge, Attitude and Practice (KAP) towards COVID-19 were analysed by using binary logit model. Knowledge: - A total of twelve questions were prepared concerning knowledge towards COVID-19. Those questions include the ways of transmission, clinical symptoms and prevention methods of COVID-19. A respondent who responded a correct answer of 50% (six questions) and above of the total questions was, categorized as knowledgeable respondent or a respondent who have knowledge towards COVID-19 and was coded as 1. A respondent who responded less than 50% (six questions) of the total questions was categorized as a respondent who have no knowledge towards COVID-19 and coded zero. Attitude: - on the attitude side a total of seven questions were prepared to test the attitude of the respondents towards the final success in the control of COVID-19. A respondent that answer three questions (43%) and above correctly, was categorized as a respondents that has optimistic attitude towards the final success in the control of COVID-19 spread and coded as 1.

A respondent that answer below three (43%) questions was categorized as a respondent that has no optimistic attitude towards the final success in the control of COVID-19 spread and coded as zero. In addition to this the respondents were asked whether they have a confidence that the virus would be controlled and eradicated from South Omo Zone, from Ethiopia and From the world level and their confidence level was tested based on their responses. Practice: - is the other component of the dependent variable KAP towards COVID-19. Like the knowledge towards COVID-19, ten questions were prepared concerning the most important practices that helps to control COVID-19 spread and from the total questions a respondent that responded 50% and above correctly, was categorized as a respondent who is practicing COVID-19 prevention methods and was coded as 1. The respondent who responded the correct answer of less than 50% of the total questions was categorized as a respondent who is not practicing the COVID-19 prevention method and was coded as zero.

2.5.2. Explanatory variables

The following variables are the most important variables that were expected to have influence on the dependent variable which is Knowledge, Attitude and Practice (KAP) towards COVID – 19.

Table 1 Hypothesized explanatory variables

Variables	Expected Sign
Sex of the respondent	Positive or Negative
Age of the respondent	Positive
Educational Background	Positive
Marital Status	Positive or Negative
Occupation	Positive
Economic Status	Positive

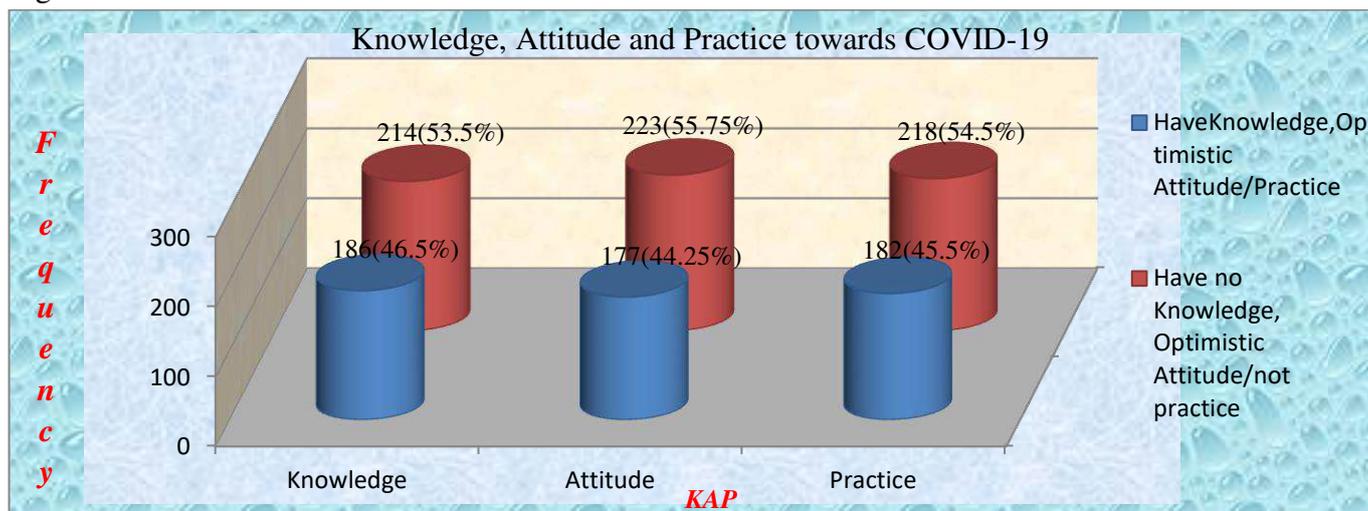
3. RESULTS AND DISCUSSION

3.1. Descriptive statistics result

The study included 400 respondents from two woredas of South Omo zone namely, Hammer and Nyangatom. From Hammer woreda, 309 respondents were interviewed and 91 respondents were

interviewed from Nyangatom woreda of the Zone. Descriptive statistics tools were employed to describe the characteristics of the respondents and explanatory variables concerning KAP towards COVID-19.

Figure 1 KAP towards Covid-19



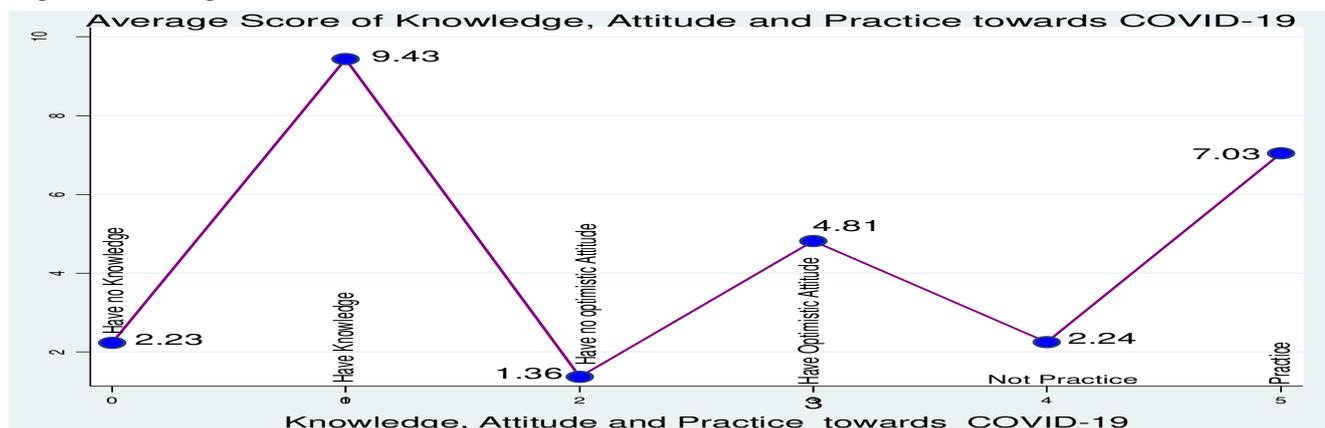
Source: - Survey data, (2020)

As indicated in the above figure (3), from the total (400) sampled respondents, 186(46.5%) have knowledge towards COVID-19 and the remaining 214(53.5%) respondents have no knowledge. In the study conducted concerning knowledge, attitude and practice of health workers, concerning the attitude of the respondents towards COVID-19, 177(44.25%) respondents have optimistic attitude towards the final success in the control of the virus and 223(55.75%) respondents have no optimistic attitude. Majority of the respondents 218(54.50%) were not practicing the prevention method of the virus and the remaining 182(45.50%) respondents were practicing the prevention methods of COVID-19 in the study area (figure, 2).

3.1.1. Average Score of Knowledge, Attitude and Practice towards COVID-19

In the following graph the average scores of knowledge, attitude and practice towards COVID-19 is described based on the category of each variable which were used as dependent variables in this study. The mean knowledge score of the respondents that have no knowledge towards COVID-19 is 2.23 and the mean knowledge score of the respondents that have knowledge towards COVID-19 is 9.43 which show the difference between the two categories with respect to knowledge towards the virus. The highest mean knowledge score in this study is lower than the mean score of Knowledge score reported by [17] in which the mean COVID-19 knowledge score was 10.8 with standard deviation of 1.6, suggesting an overall 90% correct rate on the knowledge test.

Figure 2 Average KAP Score towards COVID-19



Source: - Survey data, (2020)

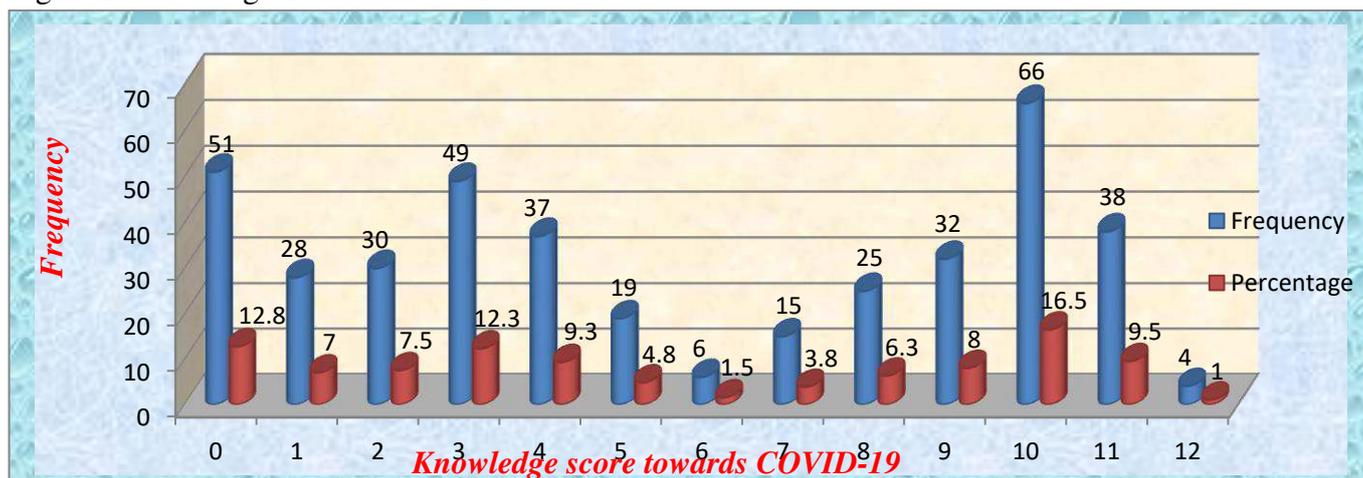
The other variable described in the above figure (4) is attitude towards COVID-19 in which the average attitude score of the respondents that have no optimistic attitude towards the control of the virus is 1.36 and the average attitude score of the respondents that have optimistic attitude towards the final control of the virus is 4.81 which reflects the mean difference among the two categories of the respondents with respects to attitude towards the final control of COVID-19. Concerning then practice of the prevention methods of the virus, the categories of the respondents that were categorized as not practicing scored the average practice score of 2.24 whereas the respondents that were categorized as have good practice of the prevention methods of the virus scored the mean practice score of 7.03. This indicates that there is significant difference of mean score between the categories of the respondents concerning the knowledge, attitude and practice towards COVID-19.

3.1.2. Knowledge score towards COVID-19

The total number of the respondents who answered the knowledge question correctly and the score of their answer is described in diagram below (figure 5). As described in the diagram (figure 5) majority of the respondents scored below five in which 51(12.8%) respondents missed the correct answer, 28(7%) scored one, 30(7.5%) scored two, 49(12.3%) scored three, 37(9.3%) scored four and 19(4.8%) respondents scored five out of twelve total questions concerning the knowledge towards COVID-19 and those respondents were categorized as a respondent that have no knowledge towards Covid-19. From the category of the respondents that have knowledge towards COVID-19, majority 66(16.5%) of them were scored ten out of total twelve questions.

From this category, 6(1.5%) respondents scored six, 15(3.8%) respondents scored seven, 25(6.3%) respondents scored eight, 32(8%) respondents scored nine, 38(9.5%) respondents scored eleven and 4(1%) respondents scored twelve out of total twelve questions concerning knowledge towards COVID-19. Even though the largest number of the respondent is from the right hand side of the diagram 66(16.5%) which is from the category of the respondents that have knowledge towards the virus, the total number of respondents that have no knowledge towards the virus is greater than that of the total number of the respondents that have no knowledge towards CVID-19 as described in (figure 3).

Figure 3 Knowledge Score towards COVID-19



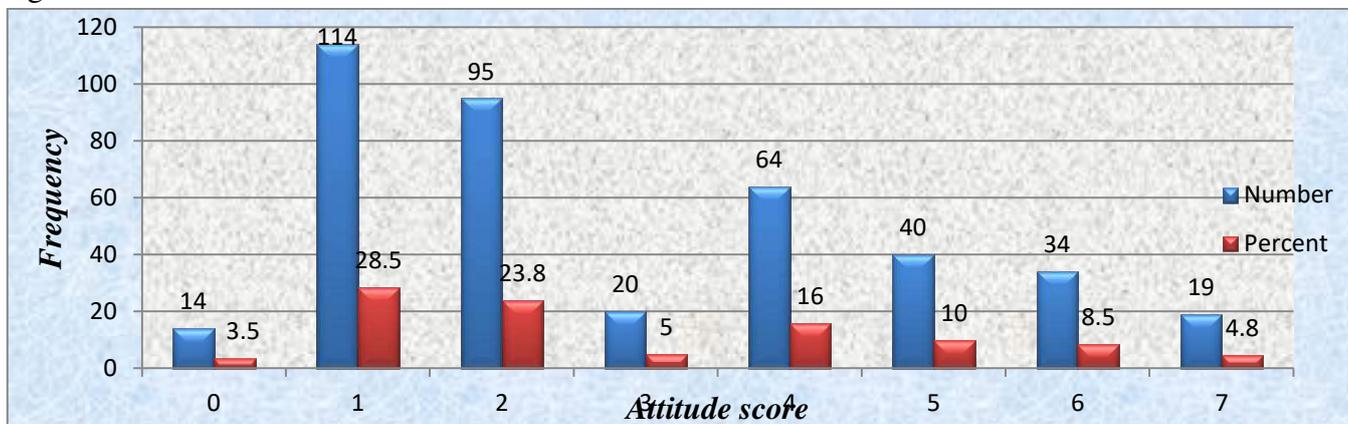
Source: - Survey data, (2020)

3.1.3. Attitude score towards COVID-19

The score of correct answer responded by the respondents is described in figure 6 in the following ways. As described in the diagram, most of the respondents that scored the correct answer are from the category of the respondents that have no optimistic attitude towards COVID-19. From the total respondents 14(3.5%) respondents missed the correct answer, 114(28.5%) respondents scored one and 95(23.8%) respondents scored two out of the total seven questions concerning the attitude towards COVID-19. From the category of the respondents that have optimistic attitude towards COVID-19, 20(5%) respondents

scored three, 64(16%) respondents scored four, 40(10%) respondents scored five, 34(8.5%) respondents scored six and 19(4.8%) respondents scored seven out of seven questions that were prepared to test the attitude of the respondents towards COVID-19 in the study area. This result support the description of the number of respondents indicated in (figure3) concerning the category have optimistic attitude and have no optimistic attitude in which most of the respondents were found in the category that have no optimistic attitude towards COVID-19.

Figure 4 Attitude score towards COVID-19

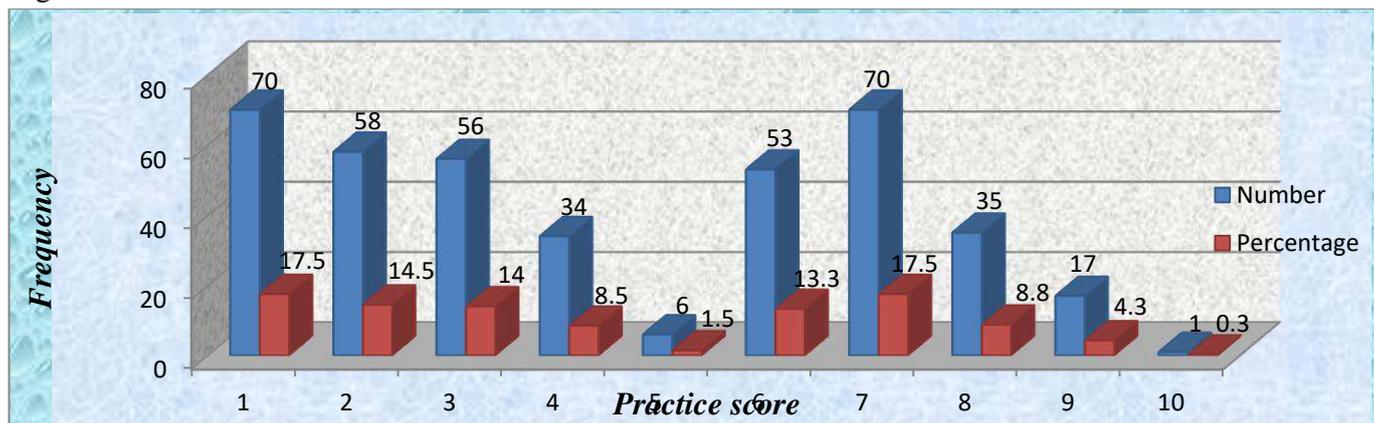


Source: - Survey data, (2020)

3.1.4. Practice score towards COVID-19

Respondents were asked about their practice towards the prevention methods of the spread of COVID-19 and they answered what they have been practicing to prevent the spread of the virus in the study area. A total of ten questions were asked concerning the important practices that help the respondents to protect them and to prevent the spread of the virus and the positive answers responded were scored and described in figure 6 in the following way. Majority of the respondents were from the category of the respondents that were not practicing the prevention methods of the spread of the virus which is below 5 out of ten total questions. From the total respondents 70(17.5%) respondents scored one, 58(14.5%) respondents scored two, 56(14%) respondents scored three and 34(8.5%) respondents scored four out of the total ten questions concerning the practice towards COVID-19. From the category of the respondents that have been practicing the important prevention methods, 6(1.5%) respondents scored five, 53(13.3%) respondents scored six, 70(17.5%) respondents scored seven, 35(8.8%) respondents scored eight, 17(4.3%) respondents scored nine and 1(0.3%) respondent scored ten out of the total ten important questions used to test the practice of respondents in preventing the spread of COVID-19 in study area. This result support the description of the number of respondents concerning the category of practicing and not practicing the prevention methods of the virus described in (figure 3) above in which most of the respondents were categorized as not practicing the prevention methods of the spread of the virus in the study area.

Figure 5 Practice score towards COVID-19



Source: - Survey data, (2020)

3.2. Econometric result

3.2.1. Determinants of Knowledge towards COVID-19

Table 2 Determinants of Knowledge towards COVID-19

Variables	Robust Coefficient	Odds ratios	Robust Standard Error	P-value
Age	1.8849	6.5858*	2.4344	0.000
Sex	2.7899	16.2796*	9.7418	0.000
MSR	0.0483	1.0495	0.7341	0.945
EDLR	2.3867	10.8785*	4.8875	0.000
ATI	3.8379	46.4309*	29.4341	0.000
Occupation	0.3895	1.4762**	0.2611	0.028
MNI	1.3997	4.0540*	1.3894	0.000
Constant	-10.3129	0.0000332*	0.0000406	0.000

*significant at $p < 1\%$, ** significant at $p < 5\%$, *** significant at $p < 10\%$

$Prob > \chi^2 = 0.0000$ $Log\ likelihood = -42.3933$ $Pseudo R^2 = 0.8466$

Age of the respondent: - As hypothesized, age was found significantly and positively influencing the knowledge of the respondents towards COVID-19 at the significance level of ($p < 1\%$). The odds ratio in the favor of having Knowledge towards COVID-19 increases by a factor of 6.5858 when the age of a respondent increases by one year. This indicates that, when people get older they could search for information and find the access to the needed information which helps them to have knowledge. Sex of the respondent: - Sex of the respondent determined the dependent variable at the significance level of ($p < 1\%$). Male respondents have more Knowledge towards COVID-19 than female respondents. The odds ratio in the favor of having Knowledge towards COVID-19 increases by a factor of 16.2796 when a respondent is male. This is due to the fact that most of rural females are housewife, the access to information for them is very limited and on the other hand male respondents could search for information when they move which made them to be knowledgeable.

Educational level of the respondent: - This is one of the independent variables which were expected to have positive impact on the Knowledge of the respondents towards COVID-19. The variable was found to be positively determine the Knowledge of the respondents towards COVID-19 at the significance level of ($p < 1\%$) and the odds ratio in the favor of having Knowledge towards COVID-19 increases by a factor of 10.8785 when the educational level of the respondent increases from lower level to higher level. Since education is the most important thing to have awareness about different things, those educated respondents could get more knowledge by reading and using different methods that can help them to gets knowledge about the conditions happening. Access to information: - This is the strongest variable which determined the Knowledge of the respondents towards COVID-19. It is associated with the dependent variable positively and significantly at the significance level of ($p < 1\%$). The odds ratio in the favor of having Knowledge towards COVID-19 increases by a factor of 46.4309 when the respondents have access to information about COVID-19. This indicates that the more the respondents get access to information about COVID-19, the more they aware about and the knowledgeable they are. In the reality, information plays a great role in the awareness level of the people in day to day activities. Rural peoples have limited channels and information infrastructures when compared with urban areas due to the factors such as lack of civilization.

Occupation of the respondent:- the response rate of the media reporting the severity of COVID-19, as well as increasing the response rate of the public awareness to the media reports, both can significantly

bring forward: - Occupation determined the knowledge of the respondents towards COVID-19 positively at the significant level of ($p < 5\%$). The odds ratio in the favor of having Knowledge towards COVID-19 increases by a factor of 1.4762 when the respondent have get employed and have good occupation. Economic Status of the respondent (MNI):- The economic status of the respondents influenced the knowledge of the respondents towards COVID-19 positively and significantly at the significance level of ($p < 1\%$). The odds ratio in the favour of having knowledge towards COVID-19 increased by a factor of 4.0540 when the income of the respondent increase by one Ethiopian Birr. This indicates that being having enough income contribute to the knowledge of the respondents in which richer people can get more access to the knowledge than the poor respondents.

3.2.2. Determinants of Attitude towards COVID-19

Table 3 Determinants of Attitude towards COVID-19

Variables	Robust Coefficient	Odds ratios	Standard Error	P-value
Age	0.1599	1.1734	0.1355	0.166
Sex	1.0892	2.9720*	0.7352	0.000
MSR	0.3685	1.4455	0.3557	0.134
EDLR	0.4080	1.5039**	0.2559	0.016
ATI	0.6733	1.9608**	0.5417	0.015
Occupation	0.2307	1.2595*	0.1081	0.007
MNI	0.3613	1.4352**	0.2223	0.020
Constant	-2.6682	0.0693*	0.0229	0.000

*significant at $p < 1\%$, ** significant at $p < 5\%$, *** significant at $p < 10\%$

Prob > $\chi^2 = 0.0000$ Log likelihood = -213.4814 Pseudo $R^2 = 0.2226$

Sex of the respondent: - sex of the respondent is one of the variables that were hypothesized to have an influence on the attitude of the respondents towards the control of COVID-19. Sex of the respondents was found that it influence the attitude towards controlling COVID-19 positively and significantly at the significant level of ($p < 1\%$). The odds ratio in the favor of having confidence towards the control of COVID-19 increases by a factor of 2.9720 when the sex of the respondent is male than female. This is due to the fact of that; male respondents can examine the condition than female respondents which helps them to be confidential in the situation. Educational level of the respondent: - this was found significant in positively determining the dependent variable attitude of the respondent towards the control of COVID-19 at the significance level of ($p < 5\%$). The odds ratio in the favor of having optimistic attitude towards the control of COVID-19 increases by a factor of 1.5039 when the educational level of the respondent increase from one category of educational background to the other.

Those educated people can read more and can gather the information which can help them to examine the situation and further lead them to be confidential and have optimistic attitude towards the control of the virus. Thus in this study educated respondents have optimistic attitude towards the final success in the control of COVID-19 than the respondents with the lower educational level. Access to information: - as the result of the model indicated that, respondents that have access to respondents have optimistic attitude towards the success in the final control of Corona Virus. Access to information determined the attitude towards the control of the virus positively at the significance level of ($p < 5\%$). The odds ratio in the favor of having optimistic attitude towards the control of COVID-19 increases by a factor of 1.9608 for the respondents who have access to information than the respondents that have no access to information about the virus. Since access to information could help the respondents to know more about the situation about the corona virus, when they get information they become more confidential. Occupation of the

respondent: - occupation of the respondent was found significant at the significance level of ($p < 1\%$) in positively determining the attitude of the respondents towards the control of COVID-19.

The odds ratio in the favor of having optimistic attitude towards the control of COVID-19 increases by a factor of 1.2595 when the respondent is employed than unemployed respondents. Because those people who have job could focus on the condition of the diseases than worrying about the occupation and by keeping examining the condition they become more confidential than those unemployed respondents.

Economic status of the respondents: this variable was measured by the monthly income of the respondents and was hypothesized to have a positive association with the attitude of the respondents towards the control of the virus. As expected the monthly income of the respondents was found significant in positively determining the attitude of the respondents at the significance level of ($p < 1\%$). The odds ratio in the favour of having an optimistic attitude towards the success in the control of COVID-19 increases by a factor of 1.4352 when the monthly income of the respondents increases from one category of the income level to the other. This indicates that most of the respondents that have high income level have an optimistic attitude towards the control of COVID-19 than the respondents that have low income level and the respondents that have no income.

3.2.3. Determinants of Practice towards COVID-19

Table 4 Determinants of Practice towards COVID-19

Variables	Robust Coefficient	Odds ratios	Standard error	P-values
Age	0.5010	1.6503*	0.2154	0.000
Sex	0.8107	2.2496*	0.5680	0.001
MSR	0.3176	1.3739	0.3512	0.214
EDLR	0.4355	1.5457**	0.2768	0.015
ATI	0.7032	2.0203**	0.5511	0.010
Occupation	0.2251	1.2525*	0.1057	0.008
MNI	0.4257	1.5307*	0.2155	0.002
Constant	-3.0565	0.0470*	0.0165	0.000

*significant at $p < 1\%$, ** significant at $p < 5\%$, *** significant at $p < 10\%$

$Prob > \chi^2 = 0.0000$ Log likelihood = -198.5187 Pseudo $R^2 = 0.2798$

Age of the respondent: - age of the respondent was hypothesized to have positive association with the practice of the respondent to prevent the transmission and the spread of COVID-19. As expected, the age of the respondent determined the practice of the respondent positively and significantly at the significance level of ($p < 1\%$). The odds ratio in the favor of having practice of COVID-19 prevention methods increases by a factor of 1.6503 when the age of the respondent increase by one year. This means older people practice the prevention method of COVID-19 spread than young people in the study area. Sex of the respondent: - according to the result of the model male respondents practice the prevention method of COVID-19 than female respondents in the study area. Sex of the respondent associated positively with the practice of the respondents at the significance level of ($p < 1\%$). The odds ratio in the favor of practicing of COVID-19 prevention methods increases by a factor of 2.2496 when the sex of the respondent is male than female. This indicates that male respondents in the study area practice the prevention method of COVID-19 more than female respondents.

Educational level of the respondents: - educational level of the respondents was found significant in positively determining the practice of the respondents at the significance level of ($p < 5\%$). The odds ratio

in the favor of having practice of COVID-19 prevention methods increases by a factor of 1.5457 when the educational level of the respondent increase from the lower level to the higher educational level. Access to information: - it was hypothesized that those respondents that have access to information could practice the prevention methods of COVID-19 spread than those respondents that have no access to information about COVID-19. As expected, this variable positively and significantly determined the practice of the respondents at the significance level of ($p < 5\%$). The odds ratio in the favor of having practice of COVID-19 prevention methods increases by a factor of 2.0203 when the respondent has access to information about corona virus (COVID-19) than not have access to information about COVID-19. Occupation of the respondent: - occupation of the respondent is one the variables that were positively and significantly determined the practice of the respondent.

It is associated with the practice of respondent at the significance level of ($p < 1\%$). The odds ratio in the favor of having practice of COVID-19 prevention methods increases by a factor of 1.2525 when the respondent is employed than unemployed. Economic status of the respondent (MNI):- the practice of the respondents was influenced by their income level positively and significantly at the significance level of ($p < 1\%$). The odds ratio in the favor of having practice of COVID-19 prevention methods increases by a factor of 1.5307 when the monthly income of the respondent increases by one Ethiopian birr. This indicates that richer respondents can get the materials that could help them to practice the prevention methods easily than the poor one and this made them the more practicing groups in the study area.

3.3. Discussion

The main findings of this study reflect that, most of the respondents in the study area have no knowledge, good practice and optimistic attitude towards COVID-19. From the total respondents, 186(46.5%) have knowledge towards COVID-19 and the remaining 214(53.5%) have no knowledge. Concerning the attitude of the respondents towards COVID-19, 177(44.25%) respondents have optimistic attitude towards the final success in the control of the virus and 223(55.75%) respondents have no optimistic attitude Majority of the respondents 218(54.50%) have no good practice towards the prevention method of the virus and the remaining 182(45.50%) respondents have good practice concerning the prevention methods of COVID-19 in the study area. In the related studies it was found that most of the respondents were found having good knowledge, optimistic attitude towards the final success in the control of COVID-19 and have good practice towards the prevention of the virus [5, 7, 1]. On the other hand, [4] reported that most of the respondents had low levels of knowledge and poor practice towards COVID-19.

Unlike other related study findings, the result of this study is different in which majority of the respondents were found having no knowledge, optimistic attitude and good practice concerning the prevention methods of the virus. This is due to the fact that, most of the KAP related studies were conducted in urban areas where people can get information about the pandemic disease easily and could have optimistic attitude as well as practice the prevention methods of the virus. In Ethiopia, access to information platforms which are used to transmit COVID- 19 related preventive messages, such as mobile phones, newspapers, and television and radio transmissions, reach a significant proportion of the population in urban centers, but many rural households are not reached [11].

4. CONCLUSION AND RECOMMENDATIONS

4.1. Conclusion

In this study 400 respondents from two woredas of South Omo Zone were taken as a representative sample and important information about COVID-19 were collected by employing survey research design. Based on the results obtained by analysing the information, it is concluded in the following way. From the total 400 sampled respondents, 214(53.5%) have no knowledge towards COVID-19 and the

remaining respondents 186(46.5%) have knowledge. Concerning the attitude of the respondents 223(55.75%) respondents have no confidence that the virus can be eradicated from the area and 177(44.25%) respondents have a confidence towards the control of the virus.

Majority of the respondents 218(54.50%) are not practicing the prevention method of the virus and the remaining 182(45.50%) of the total sampled respondents are practicing the prevention methods of COVID-19 in the study area. From this it can be concluded that most of the respondents in the study area have no knowledge towards COVID-19, have no optimistic attitude towards the final success in controlling the virus and are not practicing the prevention methods of COVID-19. Deferent factors determined the KAP towards COVID-19 in the study area and from those factors, demographic characteristics of the respondents and socio-economic factors are the most common factors which determined the knowledge, attitude and practice of the respondents towards COVID-19. From the demographic characteristics, elder, male, educated, and employed respondents have knowledge, optimistic attitude and good practice towards COVID-19 than young, female, illiterate and unemployed (students) respondents. From the economic status and having access to information perspective, those respondents that have high income and access to information have knowledge, optimistic attitude and good practice towards COVID-19 than those respondents that have low income and have no access to information.

4.2. Recommendations

Based on the findings of this study, the following important suggestions are forwarded to help the respondents to get knowledge towards COVID-19, to have optimistic attitude towards the control of the virus and to practice the prevention methods of the virus. Health education programs, by targeting the lower knowledge individuals regarding COVID-19, are essential for creating awareness, building optimistic attitude and maintain safe practices due to the positive association of knowledge, attitude and practice. Supporting the low income groups of the people of the area can help the poor and people without occupation to practice the prevention methods which can decrease the spread of the virus. The prevention knowledge of the community should be implemented into practices and the stakeholders should play their significant contribution by teaching the community in ways to implementing the prevention knowledge to combat the spread of the Novel coronavirus pandemics.

Abbreviations

COVID: Corona Virus Disease; KAP: Knowledge Attitude Practice; WHO: World Health Organization

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Authors' contributions

All authors have equal contribution in the study design, plane and implementation. Data collection, analysis and report writing was done by all authors in this study.

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Consent for publication

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Competing interests

The authors declare that they have no competing interests

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Figures

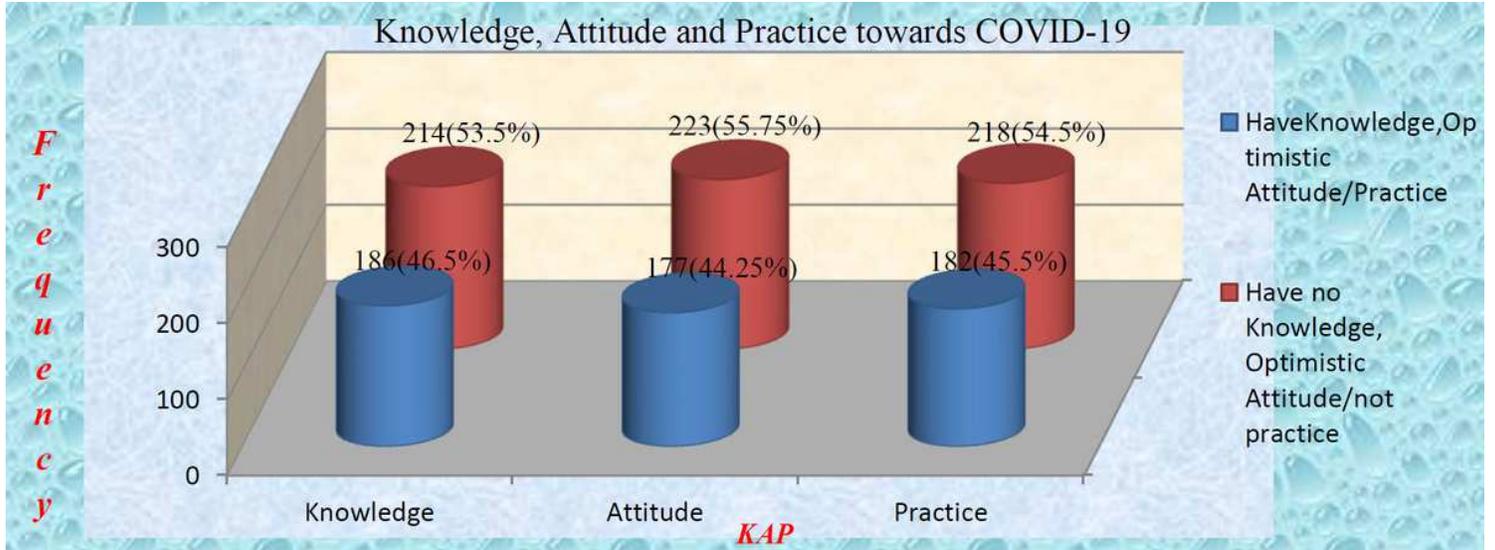


Figure 1

KAP towards Covid-19. Source: - Survey data, (2020)

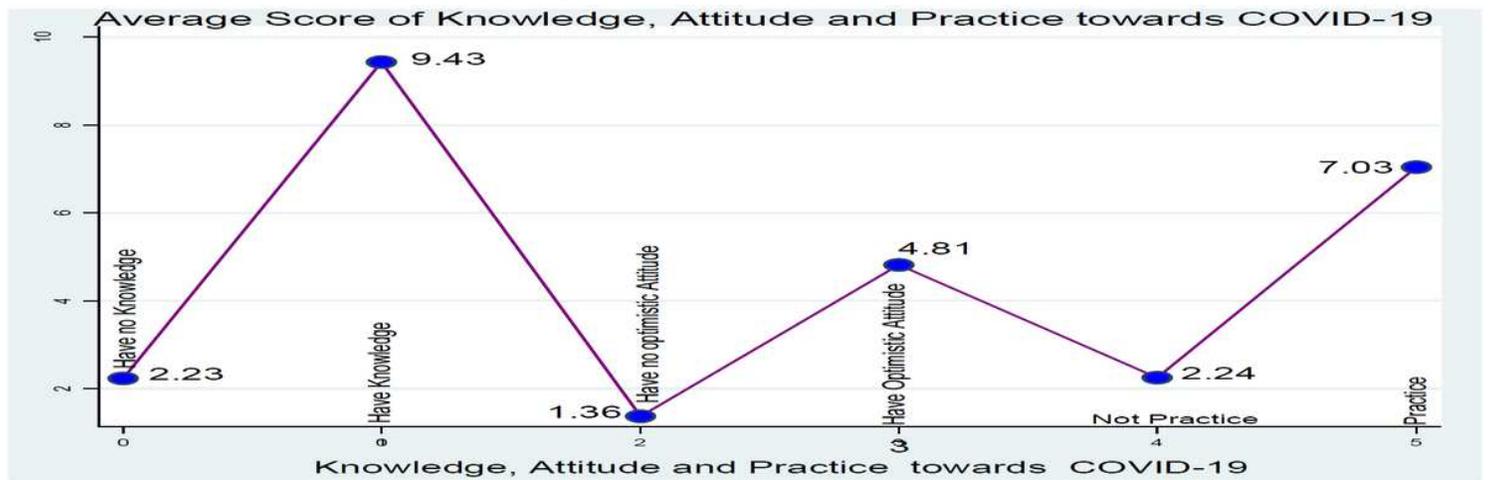


Figure 2

Average KAP Score towards COVID-19. Source: - Survey data, (2020)

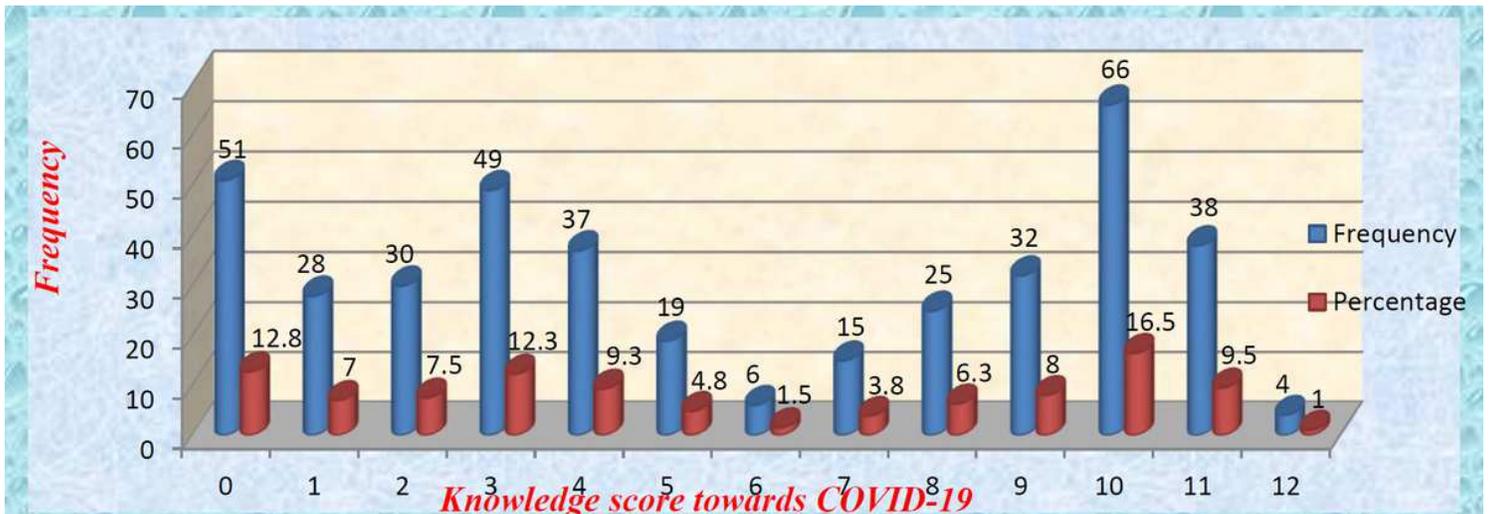


Figure 3

Knowledge Score towards COVID-19. Source: - Survey data, (2020)

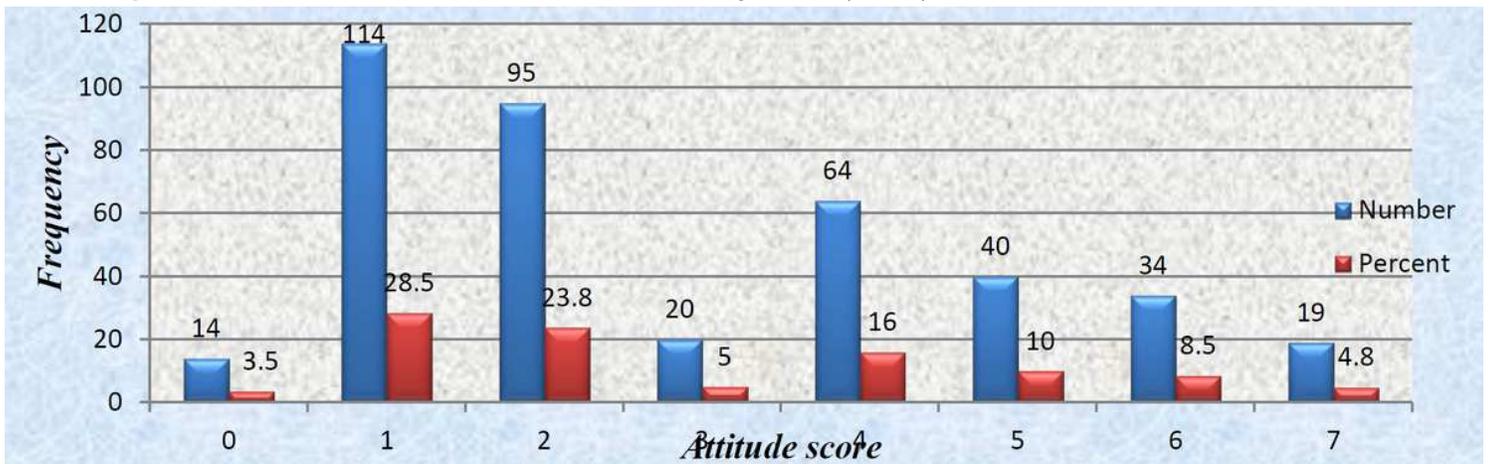


Figure 4

Attitude score towards COVID-19. Source: - Survey data, (2020)

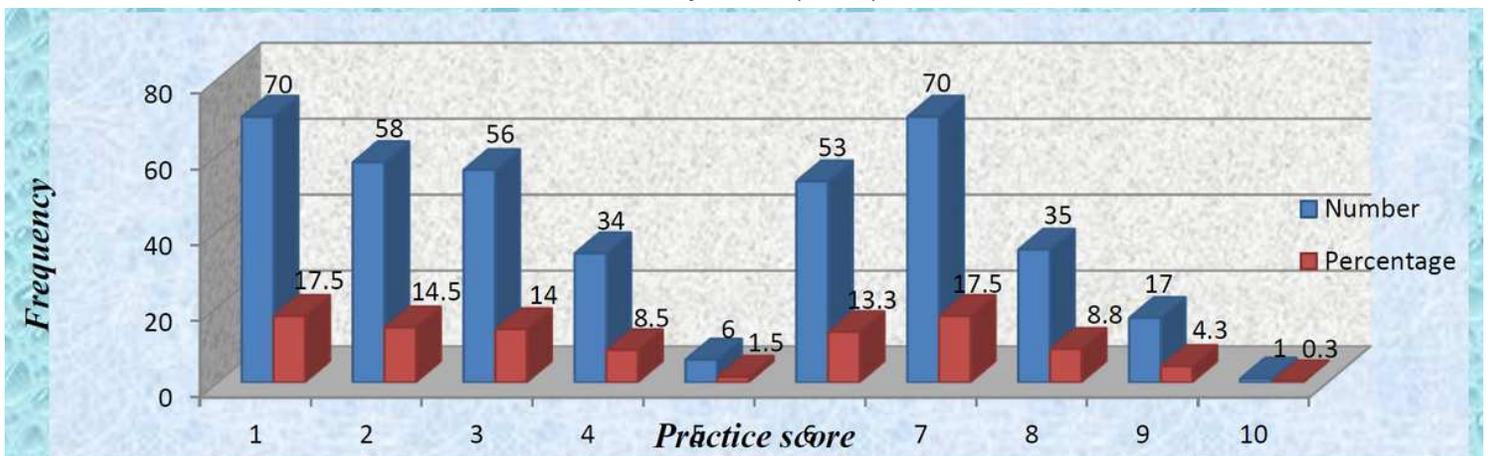


Figure 5

Practice score towards COVID-19. Source: - Survey data, (2020)