

Assessment of Lifestyle, Public Health Measures Practiced by Society and its Impact to Contain Covid-19 Transmission in Community of Horo Guduru Wollega Zone Shambu Town



Girma Waktola Gemechu*

College of Natural and Computational Sciences, Department of Biology, Microbiology and microbial biotechnology, Wollega University, Ethiopia

Submission: October 26, 2023; **Published:** November 24, 2023

***Corresponding author:** Girma Waktola Gemechu, College of Natural and Computational Sciences, Department of Biology, Microbiology and microbial biotechnology, Wollega University, Ethiopia

Abstract

The main objective of this study is to assess the knowledge, attitude, and prevention practices of the community towards the Corona virus (COVID-19) in Shambu town, Horo Guduru Wallaga zone, Oromia, Ethiopia. About 99 respondents were selected from the total lists of the Shambu town community by using a simple random sampling method. About 78 (78.78%) respondents were male and 21 (21.22%) respondents were female. After the necessary process, further classifications were made. The quantities of data gathered through the questionnaire were analyzed through tables and percentages. Each piece of data was coded, entered, and then analyzed using SPSS software version 25. The study results showed that Shambu town communities know Corona virus disease (COVID-19) disease. About 93 (93%) of Shambu town communities know that COVID-19 disease is a communicable disease that can transmit from a patient to another healthy person.

About 83 (83.83%) definitely know the symptoms of COVID-19, such as fever, coughing, sore throat, shortness of breath, vomiting, and joint pain. The transmission of COVID-19 disease was 45 (45.45%) by touching patients, while 42 (42.42%) replied that COVID-19 was transmitted by touching infected materials, based on data gathered from Shambu town communities. The communities used to prevent COVID-19 disease transmission were face and nose masks (39.39%), hand wash with soap (25.25%), physical distancing (21.21%), alcohol, and hand sanitizer (14.14%), respectively. Most communities did not use face and nose masks for themselves or for their families at home, but about 84 (84.84%) used nose and face masks outside.

Keywords: COVID 19; Retrovirus; Knowledge; Sanitizer; Physical distance

Introduction

COVID-19 is a disease caused by a new strain of coronavirus. Formerly, this disease was referred to as '2019 novel coronavirus [1,2] Coronaviruses (CoV) belong to the genus Coronavirus with its high mutation rate in the Coronavirida. CoV infections are common in animals and humans. Some strains of CoV are zoonotic, meaning they can be transmitted between animals and humans, but many strains are not zoonotic [3,4] The most likely ecological reservoirs for SARS-CoV-2 are bats, but it is believed that the virus jumped the species barrier to humans from another intermediate animal host [5]. This intermediate animal host could be a domestic food animal, a wild animal, or a domesticated wild animal that has not yet been identified. After the first infections

in China at the end of 2019, the coronavirus disease (COVID-19) has continued to spread across the world [6] WHO, 2021). No continent has been able to escape this virus, which has recorded an average mortality rate of around 2.3% (WHO, 2020).

The World Health Organization director-general declared the COVID-19 pandemic on March 11, 2020 [2]. The word COVID-19 stands for Coronavirus Disease 2019. Corona viruses are a group of microorganisms belonging to the Corona Viridae family [7,4]. It infects both animals and humans. Most human coronavirus infections can cause mild common cold-like symptoms, and others may cause serious illnesses like SARS (severe acute respiratory syndrome) and MERS (middle east respiratory syndrome) (WHO,

2019). The main mechanism for person-to-person transmission of COVID-19 is through droplets of saliva or discharge from the nose while the infected person sneezes or coughs. It can also be spread via direct or indirect contact with an infected person. Respiratory droplets or aerosols can penetrate the lungs via inhalation through the nose or mouth [2]. The spread of the organism can be halted by proper hand washing, maintaining physical distance, avoiding touching faces with the hands, and covering the mouth and nose with a face mask (WHO, 2021).

Methods and Materials

Description of Study area

The study was conducted in the Shambu town community. Shambu town has the capital city of Horo Guduru Wallaga, located 315 km from Addis Ababa. The district has a latitude and longitude of 9010'N and 9050' and 37°27'E latitude and 360, 00'E and 360, 50'E, with an elevation of 2794 meters above sea level.

Study design

A community-based cross-sectional study design was carried out to assess life styles, public health measures practiced by society, and their impact on COVID-19 transmission. The data was collected from January 25, 2023, to February 20, 2023, in Horo districts of Horo Guduru Wallaga zone community of Shambu Town.

Sample size and sampling technique

Sampling technique

The study was used purposive sampling technique to select the Shambu town health center worker (HCW) due to their more familiarity to COVID-19. Simple random sampling technique was used to select the respondents from total population of Shambu town.

Sample size

The numbers of sample households (HHs) were determined by using (Yemane, 1967:1986) formula at marginal error (10%). The total Shambu town included in this study is determined at 90% level of confidence.

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

Where; N = total target population size (92,119),

n = total sample size and

e = the margin error (0.1)²

n=92119

$$1 + 92119(0.1)^2$$

$$= \frac{92119}{1 + (92119 \times 0.01)} \approx 99$$

Therefore, the study was used 99 respondents from the total population of 92,119 of Shambu town communities.

Data collection methods

Data were collected using a structured, self-administered questionnaire and interview. Information regarding sociodemographic data was collected using a structured questionnaire. KAP towards COVID-19 prevention was assessed by using communities' knowledge, attitude, and prevention practices for COVID-19. Self-administered questionnaires, which contain both open-ended and closed-ended questions, were distributed to 99 respondents after explaining the objectives and purpose of the study.

Data analysis method

Data were collected from selected sites and respondents, and it was analyzed using both qualitative and quantitative descriptive statistical analysis. Each piece of data was coded, entered, and then analyzed using SPSS software version 25. The quantitative analysis was described in percentages, frequency, and table form. Qualitative data analyses were employed through qualitative characteristics.

Results and Discussion

Knowledge, Attitude and Prevention Practice of COVID-19

According to the data gathered from Shambu town communities based on the knowledge they have on Corona virus disease, all respondents (99.99%) know COVID-19 disease. About 93 (93%) of Shambu town communities know that COVID-19 disease is a communicable disease that can transmit from a patient to another healthy person, but 6 (6.07%) do not know that COVID-19 disease is a communicable disease. Regarding the symptoms of COVID-19 disease, 91 (91.91%) knew the symptoms of the disease, while 6 (6.06%) did not identify the symptoms of the disease, and 2 (2.03%) did not know the symptoms of the COVID-19 disease. Concerning the symptoms of the disease, about 83 (83.83%) identified the symptoms of COVID-19 as fever, coughing, sore throat, shortness of breath, vomiting, and joint pain, but some respondents replied as fever (3.03%), coughing (5.05%), sore throat (1.01%), shortness of breath (4.04%), vomiting (1.01%), and joint pain (2.03%) Table 1.

The result of this study was similar to the report stated that "COVID-19 is typically rapidly spread from one person to another via respiratory droplets produced during coughing and sneezing, and common symptoms include fever, cough, sneezing, and shortness of breath" [8]. The same result was reported on the knowledge, attitude and prevention practice reported by [9,10].

Based on the knowledge of the communities of Shambu town and the data gathered from the communities, the transmission of

the COVID-19 disease was 45 (45.45%) by touching patients, while 42 (42.42%) replied that COVID-19 was transmitted by touching infected materials. On the other hand, some respondents (8.08%) gave their answer as COVID-19 was transmitted by shaking the hands of infected people, but 2 (2.035%) replied that COVID-19 disease was transmitted by using contaminated food and water

Figure 1. The result of this study was in line with the investigation by [3] that COVID-19 disease can be transmitted between patients and healthy humans and also from different contaminated or infected materials, such as food and water, totally from living and nonliving materials to human beings.

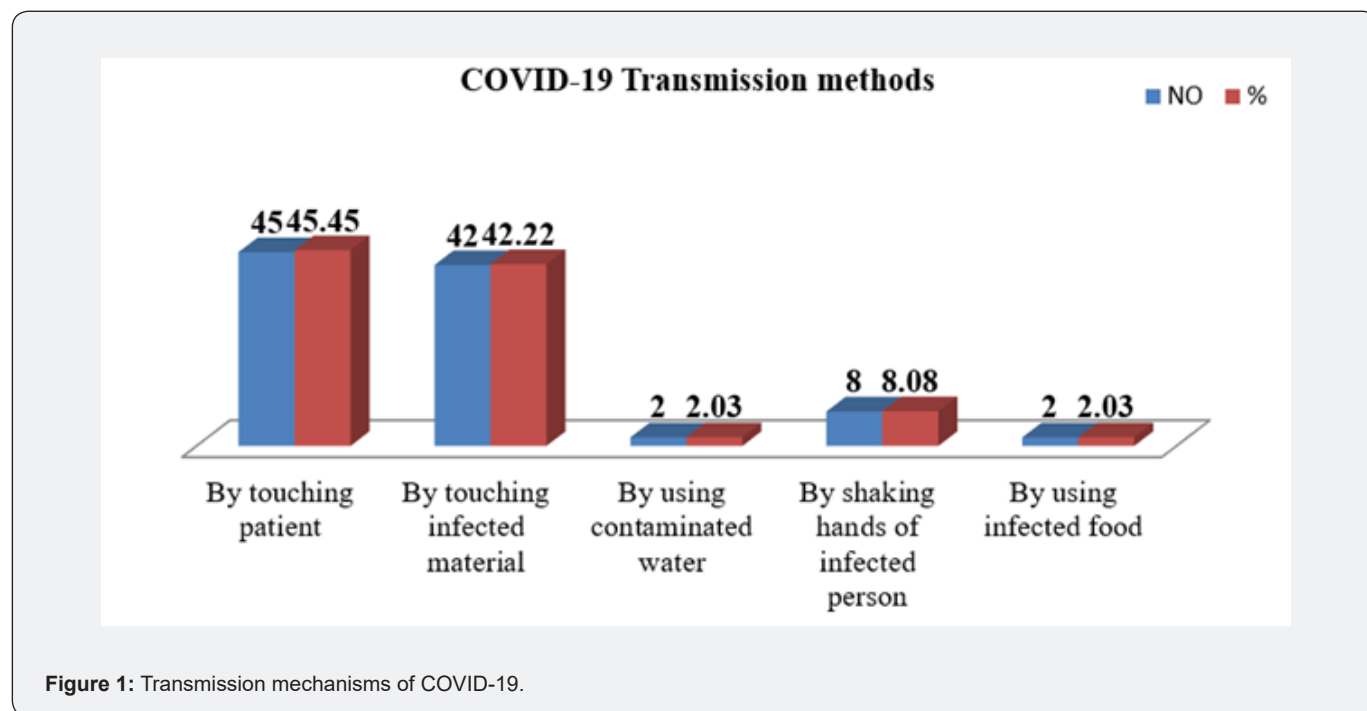


Figure 1: Transmission mechanisms of COVID-19.

Table 1: General knowledge of respondents on COVID-19.

Item	Alternatives	No. of respondents	%
Do you know COVID-19?	Yes	99	100
	No	-	
Is COVID-19 disease communicable disease?	Yes	93	93.93
	No	6	6.07
Do you know the symptoms of COVID-19 disease?	Yes	91	91.91
	No	2	2.03
	I didn't identify	6	6.06
What are the symptoms of COVID-19 Disease?	Fever	3	3.03
	Coughing	5	5.05
	Sore throat	1	1.01
	Shortness of breath	4	4.04
	Vomiting	1	1.01
	Joint pain	2	2.03
	All	83	83.83

According to data gathered from the communities of Shambu town, the societies hear about COVID-19 disease from different sources. Based on the data recorded in Figure 2 below, the source of information concerning coronavirus disease is about 34 (34.34%) heard from television, followed by 26 (26.26%)

heard from their relatives and friends. On the other hand, some respondents (23.23%) replied that they hear from social media such as Facebook, Telegram, and Instagram, while others hear from hospitals 11(11.01%) and a few of them hear from radio.

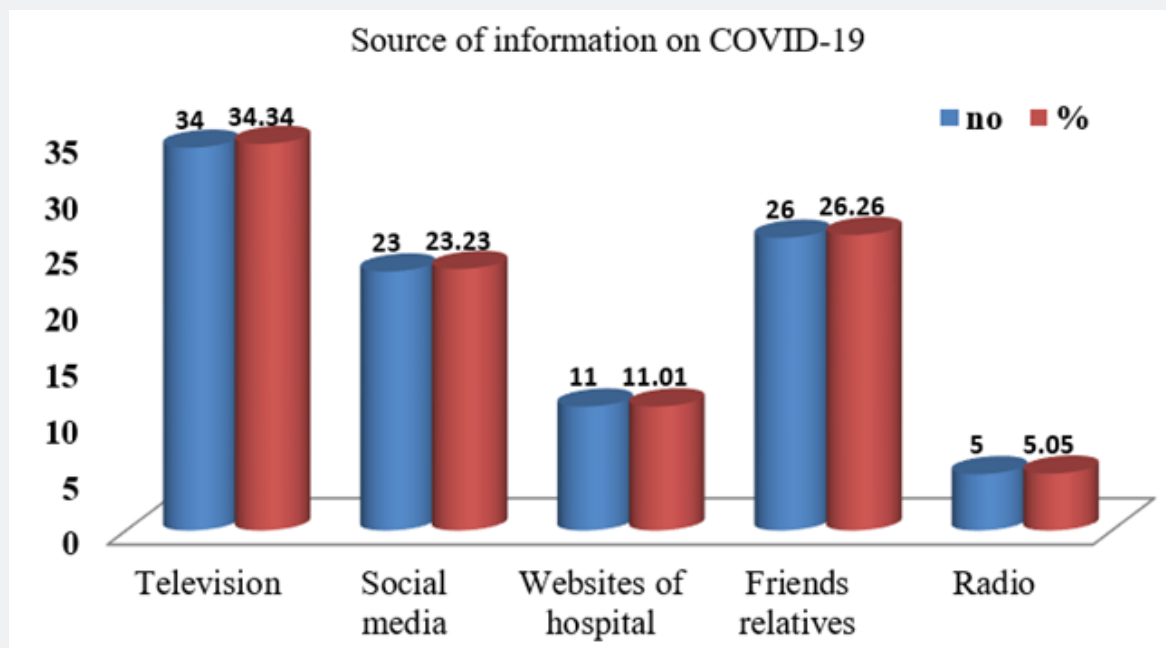


Figure 2: Source of information on COVID-19 in Shambu town.

Concerning the attitude and prevention practices of the community towards COVID-19 disease in the communities of Shambu town, about 75 (75.75%) used precautionary measures to prevent COVID-19 disease transmission. According to the data gathered from the respondents, the precautionary measures the communities used to prevent COVID-19 disease transmission were face and nose masks (39.39%), hand wash with soap (25.25%), physical distancing (21.21%), alcohol, and hand sanitizer (14.14%), respectively. The communities of Shambu town avoid or prevent hand shaking when greeting somebody,

61 (61.61%), and about 45 (45.46%) maintain physical distance when they are at home with their family during eating, sitting, and sleeping Table 2. And also, most communities did not use face and nose masks for themselves or for their families at home; only 15 (15.16%) used face and nose masks at home, but about 84 (84.84%) used nose and face masks outside. About 65 people (65.65%) maintain physical distance when they walk outside with another person. According to data gathered from respondents, 27 (27.28%) have alcohol or hand sanitizer in their home to prevent COVID-19 disease Table 2.

Table 2: Attitude and prevention practice of communities towards COVID-19.

Item	Alternatives	No	%
Can you use precautionary measures to prevent COVID-19 transmission?	YES	75	75.75
	NO	24	24.25
What types of measures you used?	Physical distancing	21	21.21
	Hand wash with soap	25	25.25
	Alcohol and hand sanitizer	14	14.14
	Face and nose mask	39	39.39

Do you avoid or prevent hand shaking when greeting somebody?	Yes	61	61.61
	No	38	38.39
Do you maintain physical distancing when you are at home (with family during eating, sitting, sleeping)?	Yes	45	45.45
	No	54	54.55
Do you have alcohol or hand sanitizer?	Yes	27	27.28
	No	72	72.72

Regarding precautionary measures of communities towards COVID-19 disease during transportation, according to data gathered from communities in Shambu town, face cover (clothes) was 47 (47.48%), face mask was 33 (33.33%), sanitizer or alcohol was 14 (14.14%), and gloves were 5 (5.05%). Concerning crowds or gatherings of communities participating in large public gatherings, about 77 (76.77%) of the communities do not gather in large groups without keeping their distance, and 95 (95.96%) of them know that large gatherings can increase the spread of COVID-19 disease. To protect themselves, they were using protective equipment's in case of participating in large, as data

gathered about 67 (67.67%) face covers (clothes), while some of them used face masks (15.16%), sanitizer sanitizer10(10.01%) and hand gloves (7.07%), respectively Table 3. The results of this study were similar to the report of [11], which stated that the application of these measures has resulted in the closure of many businesses, schools, and organizations (WHO, 2020). Many countries are following the advice from the World Health Organization (WHO) regarding the introduction of physical distancing measures as one of the ways in which transmission of the disease can be reduced [12].

Table 3: Prevention practice of communities in Shambu town.

Item	Alternatives	No	%
What precautionary measures you used while transporting?	Face mask	33	33.33
	Face cover (clothes)	47	47.48
	Sanitizer or alcohol	14	14.14
	Glove	5	5.05
Are you participating in large public without keeping your distance gathering?	Yes	23	23.23
	No	76	76.77
Do you know large gatherings can increase COVID-19 spread?	Yes	95	95.96
	No	4	4.04
What are you using protective equipment's in case of participating in large?	Face mask	15	15.16
	Hand glove	7	7.07
	Sanitizer	10	10.01
	Face cover(clothes)	67	67.67

Conclusion

Corona viruses (CoV) are a family of RNA (ribonucleic acid) viruses and exhibit a characteristic 'corona' (crown) of spike proteins around their lipid envelope. It is a common human disease. Based on the findings and discussion of the results of this study, the following conclusions were forwarded: The communities have general knowledge of coronavirus disease, as

it is a communicable disease that can transmit from a patient to another healthy person. Regarding the symptoms of COVID-19 disease, 91.91% knew the symptoms of the disease and defined fever, coughing, sore throat, shortness of breath, vomiting and joint pain.

Concerning the transmission mechanisms of the COVID-19 disease, the communities know as it can be transmitted by touching

patient, by touching infected materials, by shaking the hands of infected person and e by using contaminated food and water. The precautionary measures that communities used to prevent COVID-19 disease transmission were face mask, hand wash with soap, physical distancing and using alcohol. During transportation and crowd or gathering of community participation in large public, they use face cover, face mask and sanitizer or alcohol to prevent themselves from COVID-19 contact.

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DOI: [10.19080/JOJPH.2022.08.555738](https://doi.org/10.19080/JOJPH.2022.08.555738)

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