

**Research Article**

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## Knowledge, attitude and practice related to corona virus (COVID 19) among daily workers in Hawassa city administration, Southern Ethiopia

**\*Corresponding Author: Kassa Daka Gidebo**

Associate Professor, Wolaita Sodo University,  
Ethiopia.

Tel: +251916825038; Email: kassadaka@yahoo.com

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### Abstract

**Background:** Currently COVID 19 pandemic is a big public health problem in the world. There is no scientifically proven drug treatment recommended for Corona virus. The most important interventions are creating awareness about the transmission ways and practicing the prevention measures. The aim of this study was to assess the awareness, attitude and practice related to COVID 19 among daily workers in Hawassa City administration, southern Ethiopia from March 23 to 28, 2020.

**Method:** The cross sectional study design was employed to collect data from daily workers who were gathered at ten places/streets waiting for work opportunity at Hawassa city administration. The simple questionnaire prepared in local language was distributed to 384 daily workers and 10 observations were conducted using structured study tools. Data was analyzed using SPSS 23.

**Results:** All of daily workers heard about the virus. About 96.9% know the name of virus. About 80% of daily workers have awareness about major prevention measures and virus transmission ways. Ninety three percent believe that virus can affect themselves but 28.1% does not believe that hand shaking can transfer virus. Only 14.8% practice hand washing required to prevent corona virus transmission recommended by world health organization. About 73% believe that social distancing is important to prevent virus transmission but 94.8% of daily workers do not keep the WHO recommended distance when they talk or sit with their friends. Age above 40, Married and urban residents better perform prevention activities such as hand washing and physical distancing compared to counter parts.

**Conclusion and recommendation:** All of daily workers participated in this study heard about corona virus and most know its prevention methods. But the practice of hand washing and physical distancing is very low.

**Keywords:** knowledge; attitude; practice; corona virus; COVID 19.

**Abbreviations:** COVID 19: Corona Virus; WHO: World Health Organization; FMOH: Ethiopian Federal Ministry Of Health; ETB: Ethiopian Birr; MERS CoV: Middle Respiratory Syndrome.

## Introduction

Corona viruses are a large family of viruses which may cause illness in animals or humans. The most recently discovered corona virus causes corona virus disease COVID-19 [1]. Currently COVID 19 pandemic is a big public health problem in the world. According to WHO and other reports on 30 April 2020 it infected more than three million people and killed more than two hundred thousand globally [2-4]. The virus has affected both developed and developing countries [3]. There is no specific antiviral treatment recommended for COVID-19 [5,6]. The most important interventions are creating awareness about the transmission ways and practicing the prevention measures recommended by World health organization [1,7].

The COVID 19 infection in Africa started with the first case in Egypt on 14 February 2020 and followed with the first case in Algeria [8]. Nigeria reported the sub-saran Africa first COVID 19 case on 27 February 2020 [9]. On 30 April 2020 about 53 countries in Africa reported the COVID 19 cases and 43 countries reported deaths. The total COVID 19 cases in Africa as of 30 April 2020 were more than thirty six thousand and the total deaths were more than four hundred and the five countries reporting most cases were South Africa (5,350), Egypt (5,268), Morocco (4,321), Algeria (3,848) and Cameroon (1,832). Most of these countries blocked international flights, declared national emergency and quarantine people coming from abroad for two weeks. But still the case and death number are increasing [3].

Ethiopia is among the high-burden countries for infectious diseases [10]. The corona virus infection is double burden for the country like Ethiopia which has high case rate of infectious diseases such as malaria, tuberculosis, and HIV. The first corona virus case was detected in Ethiopia on 13 March 2020. After the first case detection the Ethiopian government announced the closure of schools, university, government offices, meetings and conferences. National Emergency declared which includes travel restrictions. The main transportation routes are also blocked and people are advised to stay at home. But the number of cases is increasing. According to FMOH and WHO report on April 30/2020 Ethiopia reported 130 cases, 66 recovery and 3 deaths due to COVID 19. Most of these cases and all deaths are in Addis Ababa, capital city of Ethiopia. [11].

Hawassa City administration is the capital city of Southern Ethiopia regional state and it is one of the big cities in the country [12]. It is the nearest city to Addis Ababa compared to other capital cities of regional states and located south direction from Addis. The movement of people from Addis to Hawassa both through bus and air transport is frequent. The city administration is working strongly to prevent the virus transmission in collaboration with regional administration and federal ministry of health. The city administration is frequently conducting public announcement in the city to create awareness and enhance prevention measures according to WHO guideline.

The daily workers, who are paid by the day (as opposed to one who is given a monthly or weekly salary), are the most exposed groups to infectious diseases due to their work nature and contact with different people daily. But the level of awareness, attitude and practice of prevention measures related to COVID 19 among daily workers were not assessed. Therefore,

the aim of this study was to assess awareness, attitude and practice of prevention activities in daily workers in Hwassa City administration.

## Method

### Study area

Hawassa City administration has the total population of 335,508 and it has 8 sub cities. It is 275 kilo meters at southern direction from Addis Ababa, the capital city of Ethiopia. It has different factories and one big industrial park. Due to the job opportunity which is better at Hawassa city than other cities daily workers usually come to Hawassa city seeking job from different places and gather at streets.

### Study design

The cross sectional study design was employed to collect data from daily workers gathered at ten places/streets waiting for work opportunities at Hawasaa city administration. The daily workers usually gathered and sit together at main roads of Hawassa city administration waiting different types of works, mostly construction works. Data collected from three hundred eighty four daily workers using simple questionnaire which were prepared in local language and 10 observations were conducted using structured study tools from March 23 to 28. Data was analyzed using SPSS 23.

### Source population

Daily workers at Hawassa city administration.

### Study population

The study populations are those daily workers gathered at 10 sites/places at Hawasaa city administration waiting for work opportunities.

### Sample size determination

The sample size was calculated using a single population proportion formula with the assumptions of 95% confidence interval, 5% margin of error and 50% of daily workers practice prevention measures. So, the sample size was 384.

### Sampling techniques and data collection

The data collection tool was prepared in two parts (part 1: questionnaire, part 2: observation guide). The questionnaire was prepared in four sections. Section 1: socio-demographic characteristics (age, residence, marriage status, and education), section 2: awareness about COVID 19 and its prevention methods, section 3: attitude towards COVID 19, section 4: questions related to Prevention practice. The second section of the data collection tool was observation guide. The data collectors were observed all ten sites/places about social distancing and hand shaking.

Data collection was conducted in working days for 10 days. Two data collectors were assigned to collect data from 10 sites/ places. Data from 40 randomly selected daily workers were collected each day from one site using structured questionnaire. The data collection was conducted at each site in the morning from 7:00 to 9:00 until they go to their daily works. The data collectors wore face mask and sanitizers and assisted daily work-

ers whenever there is clarity problem in questionnaire during response.

### Quality of data

To increase the quality of data the data collectors were introduced about data source and quality. Pre-test of questionnaire was conducted in two sites which are different from study sites. After pre-test some of the questions in the questionnaire were improved to increase the easiness for the daily workers to fill it. To enhance the clarity of questionnaire the local languages were used and easy sentences were constructed.

### Ethical consideration

All of the participants were asked consent for participation and they were told it is voluntary participation and no payment due to involvement of the participation. The consent form was signed by each of participants. Their name was not mentioned in the data collection tools rather the number indicated. The permission for the study was obtained from the local government health office.

### Operational definition

**Daily workers:** The daily workers are the most important parts of factory, construction and other activities in the city. The daily workers hired and paid only for one day. The payment

is based on their experience, skill and work load which ranges from 100 ETB (2.5 USD) to 350 ETB (10 USD) per day. These daily workers are gathered in different places in the city waiting for work opportunity so that the job owners come and pick them for work. There are more than 10 places which daily workers meet to wait for job opportunity. The gathering is from 7 AM to 10 AM.

## Result

### Socio-demographic characteristics

All of the daily workers gathering in main roads or streets seeking for daily work were males. From age 18 to 27 are about 35.5% and 30.6% are from age 28 to 37. The mean age for daily workers were 33 (range 20 to 52). About 60% of daily workers were married and more than 52% were above grade 8. The current residence for 67% of daily workers is urban (Table 1).

### Awareness/knowledge of corona virus/ COVID 19

All of daily workers heard about the virus. The sources for information were different media, local government offices, city administration, community health offices and the telephone call sound which talks about corona virus transmission before response from receiver. About 96.9 % and 73.9% know the name of virus and it has no treatment respectively. About 80% of daily workers have awareness about major prevention measures and transmission ways. But only 8.8% has awareness about virus transmission during speaking with infected person. About 68.8%, 21.9%, 11.5% have awareness touching nose, mouth, eye can transmit virus respectively (Table 2).

**Table 1:** Socio-demographic characteristics of daily workers, Hawassa city administration, southern Ethiopia, March 23 to 28, 2020.

Characteristics	Frequency	Percentage (%)
<b>Age categories</b>		
18 to 27	136	35.5
28 to 37	118	30.6
38 to 47	103	26.8
Above 47	27	7.1
<b>Marital status</b>		
Single	143	37.2
Married	231	60.1
Divorced	10	2.7
<b>Religion</b>		
Orthodox	168	43.8
Protestant	166	43.2
Catholic	42	10.9
Muslim	8	2.1
<b>Education</b>		
Grade 5 to 8	182	47.4
Grade 9 to 12	188	48.9
College diploma	14	3.7
<b>Current Residence</b>		
Urban	257	67.0
Rural	127	33.0

**Table 2:** Awareness of corona virus/ COVID 19/among daily workers, Hawassa city administration, southern Ethiopia, March 23 to 28, 2020.

Variable	Frequency	Percent
Heard about the virus	384	100
Know the name of virus affecting the world now	372	96.9
know COVID 19 has no treatment	284	73.9
know COVID 19 major prevention measures (hand washing and social distancing)	299	77.9
Know the major virus transmission ways (through coughing and sneezing)	311	81
Know virus can be transmitted during speaking with infected person	34	8.8
Know Touching nose can transmit virus	264	68.8
Know Touching eyes can transmit virus	44	11.5
Know Touching mouth can transmit virus	84	21.9

### Attitude towards corona virus

Ninety three percent believe that virus can affect themselves but 28.1% does not believe that hand shaking can transfer virus. More than 63% think that staying at home is helpful to prevent virus transmission but only 7% support staying at home. Above 77.6% of daily workers believe frequent hand washing can prevent virus transmission. About 73% believe that physical distancing is important to prevent virus transmission (Table 3).

**Table 3:** Attitudes towards corona virus of daily workers, Hawassa city administration, southern Ethiopia, March 23 to 28, 2020.

Variable		Frequency	Percent
Do you believe that the virus can affect you?	Yes	357	93
	No	27	7
Do you think hand shaking and kissing can transfer virus	yes	276	71.9
	No	108	28.1
Do you think stay at home can prevent the virus transmission	yes	245	63.8
	no	139	36.2
Do you support stay at home to prevent the virus transmission	yes	27	7
	no	357	93
Do you believe frequent hand washing is important to prevent virus	yes	298	77.6
	no	86	22.4
Do you believe social distancing is important to prevent the virus	yes	280	73
	no	104	27

### Prevention measures practiced by daily health workers

About 85.2% of the participants reported that they washed their hands during meal time only. Only 14.8% practice hand cleaning (frequent hand washing) required to prevent corona virus transmission recommended by world health organization. About 64.8% reported that they conducted hand shaking with another person at least once in this morning and 94.8% do not keep the WHO recommended distance when they talk or sit with their friends. Observation during data collection in ten sites also indicated that most of daily workers shake hands with their friends freely without fear for corona virus infection and they sit together or stand without keeping recommended gap between them (Table 4).

**Table 4:** Prevention measures practiced by daily workers, Hawassa city administration, southern Ethiopia, March 23 to 28, 2020.

Variable		frequency	Percent
How many times do you wash your hands daily	Three times (meal time only)	327	85.2
	Frequently (after touching objects, surfaces, daily working materials etc)	57	14.8
Did you shake your hands with anybody today	yes	249	64.8
	No	135	35.2
Do you keep social distance when you talk to your friends	yes	20	5.2
	no	364	94.8

### Observation result

The observation guide prepared to observe hand shaking, social distance between daily workers, touching face and kissing each other. Except two people kiss face to face each other at one site there were no kissing observed. Some of daily workers shake hands freely with friends when they meet in the morning when they greet their friends. But most of greet their friends

without shaking their hand. Almost all of daily workers are not practicing social distance. They sit crowded and talk each other for more than two hours. Some of the daily workers even sit very close and their body contacting the other daily worker. Most of daily workers are touching their faces (nose, mouth, eye) frequently.

### Association of variables to prevention practice

From the total daily workers (384) those daily workers age greater than 47 are 27 (7.1%). From this age group (greater than 47) about 65% [18] reported that they wash their hands frequently. This is better performance compared to the other age groups and also the total proportion (14.8%). Regarding social distancing 57% from age group greater 47 reported that they keep 1 meter distance when they talk or sit from their friends. Those academic levels above 12 grade or diploma level also perform hand washing and social distancing better than other academic levels. About 47% and 53% of academic level greater than 12 grade reported that they wash their hands frequently and keep social distance respectively.

### Discussion

All of the daily workers gathering in main roads or streets seeking for daily work were males. This is may be due to female daily workers are afraid to be at street and they directly go to the work site to seek the work opportunity.

All of the daily workers heard about the corona virus and 96.9% mentioned the name of virus affecting the world currently. This is may be due to the awareness created by ministry of health, regional health bureau, and city administration. Especially the mobile telephone call sound which talks about the prevention methods before response from receiver helped to increase the awareness about corona virus transmission ways and prevention measures. This finding is higher than the other infectious disease awareness such as, TB, HIV, malaria, and MERS conducted in different setting and population. [10,13-15].

About 81.3% know the major transmission ways and 78% mentioned at least two prevention measures. This is lower than the study conducted in South Africa, Kenya, and Nigeria, and Saudi Arabia about COVID 19 and MERS CoV in different population. The GeoPoll survey conducted in South Africa, Kenya, and Nigeria from March 10<sup>th</sup>-13<sup>th</sup> 2020 indicated that 94% were aware of the current outbreak (COVID 19) [16]. The study conducted on Middle respiratory syndrome (MERS CoV) in the south western Saudi Arabia among health care workers indicated that about 97% of the participants knew about the preventive measures, 92.9% about causative agent of the disease, 91% about the mode of transmission, and 83.9% about symptoms [13]. The difference in this finding may be due to different study setting and better awareness among health care workers about infectious diseases.

People can catch COVID-19 from others who have the virus. The disease spreads primarily from person to person through small droplets from the nose or mouth, which are expelled when a person with COVID-19 coughs, sneezes, or speaks [1-3]. Most of daily workers (81%) knew the virus can be transmitted through coughing and sneezing but very few (8.8%) mentioned that virus can be transmitted through speaking with infected person.

Even though the awareness about the virus and prevention measures was high the practice of prevention is low. Only 14.8%

of daily workers reported that they wash their hands frequently or as required by buy WHO to prevent COVID 19 infection which recommends regular hand washing with soap and water [1,6,7,16]. About 93% wash their hands only before their meals (breakfast, lunch, dinner) and when they finish their daily work. This is may be due to they are busy with their daily work to earn money, the shortage of water and soap, at working place and gathering places.

In the current study about 77.6% believe frequent hand washing is important to prevent COVID 19. But 85.2% daily workers do not practice frequent hand washing recommended by WHO. The WHO recommends frequent hand washing with soap and respiratory hygiene is important at all times and is the best way to prevent virus transmission [1,17].

Federal ministry of health warns not to shake hands with anybody to prevent COVID 19. But about 35.2% of daily workers reported that they shake their hands with friends and relatives. The most amazing finding in this study is low practice of social distancing. Only 5.2% reported that they keep social distancing during their gathering, work and walking. This is against federal ministry of health and WHO guidelines [1-3].

The observation result is also similar with daily workers report. According to the observation data finding almost all of daily workers do not follow the physical or social distance rule set by WHO [1]. WHO recommends keeping at least 1-metre (3 feet) distance from others to prevent transmission. The daily workers sit very close to each other and talk with friends for more than an hour. Some of the daily workers even sit very close and their body contacting the other daily worker.

About 68.8%, 11.5 % and 21.9% know the virus can be transmitted through touching nose, eyes, and mouth respectively. But the observation finding shows the most of daily workers are touching their faces (nose, mouth, eye) frequently with their hands. More than 63% think that staying at home is helpful to prevent virus transmission but only 7% support staying at home/lock down. The reason may be almost all of the daily workers depend on daily work/activity to get daily consumption. This result agree with the editorial comment by lancet on 20 May 2020 which indicated that “lockdowns at home in low income countries are not feasible because most people rely on daily earnings” [18].

The data analysis also indicated that those daily workers age greater than 47 and academic level greater than 12 grade (diploma level) has good association with prevention activities (hand washing and social distance). This may be due to people at higher age and better academic level more worried about their health and take prevention action better than the younger age group.

#### Limitation of this study

This study does not include those daily workers directly go to the work site without coming to waiting area/street. The recall bias among the daily workers is also among the limitation of this study. The questionnaire understanding also may affect the result or response.

#### Conclusion

Awareness about COVID 19 and its prevention measures was high but the prevention practice was low among daily workers in Hawassa city administration. Almost all daily workers do not practice social distancing; most of daily workers shake hands.

This study finding indicates frequent hand washing among daily workers is low.

#### Declarations

**Funding:** Not applicable.

**Availability of data:** The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

**Consent for publication:** Not applicable.

**Competing interests:** The author declares that they have no competing interests.

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