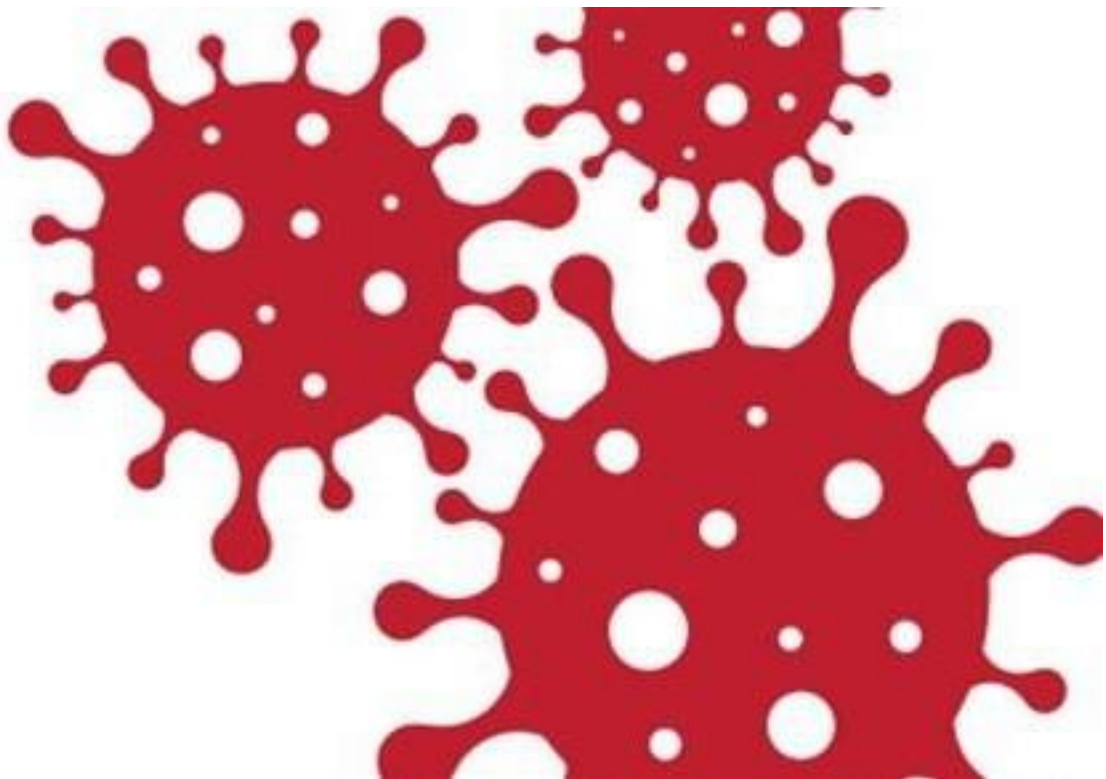




Community risk perception and behavioral response towards
COVID-19 in Ethiopia: A community based Cross-sectional
Mixed methods survey



April, 2021

**Community risk perception and behavioral response towards COVID- 19
in Ethiopia: A community based Cross-sectional Mixed methods survey**

Ethiopia Public Health Institute

**Report prepared by Health System and Reproductive Health Research
Directorate and Risk Communication and Community Engagement
Section/PHEM**

Preliminary Report

**April, 2021
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Acronyms

CDC	Center for Disease Control
COVID	Corona Virus Disease
CSA	Central Statistics Agency
EA	Enumeration Area
EPHI	Ethiopian Public Health Institute
ECDC	European Center for Disease Control
FMH	Federal Ministry of Health
PSU	Primary Sampling Unit
RCCE	Risk communication and community engagement
RPBR	Risk Perception and Behavioral Response
SPSS	Statistical software Package for social science
STATA	Statistical software package
UNICEF	United Nations Children's Fund
WHO	World Health Organization

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Forward

The COVID- 19 pandemic is still a major cause of morbidity and mortality all over the world including Ethiopia. Identifying the level of community risk perception about coronavirus disease (COVID-19) and practice of fundamental COVID-19 preventive methods such as face mask utilization, hand washing and physical distancing can guide the public health experts and policymakers in taking the required measures to limit the impact of the pandemic.

The finding of the survey provides adequate information about knowledge concerned with COVID-19 which will be used to identify the gaps and enhance awareness creation activities. The finding also shows socio-economic impact of COVID-19 on the community which will be used to identify level of impact on the community and design appropriate prevention strategies.

It is our hope that the findings and recommendations will be taken into consideration by the government and all stakeholders those who are working in COVID-19 pandemic response.

The Institute extends a special thanks to all the technical working group members of the assessment who contributed to the successful completion of the survey. I would like to pass our gratitude to all stakeholders specifically the World Bank for the financial support.

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Executive summary

Introduction: Understanding how people perceive the risk of the coronavirus disease (COVID-19) pandemic and its impact on undertaking protective behavior can guide the public health policymakers in taking the required measures to limit the magnitude of the pandemic. This study aimed to assess the risk perception and behavioral response of Ethiopian population towards the prevention of COVID-19.

Methods: This survey was performed in a representative sample of 368 enumeration areas based on the 2019 Central Statistics Agency enumeration area sampling frame and selected with probability proportional to size from nine regions and two city administrations. Tigray region was excluded from the survey due to the security problem in the area during the survey implementation period. Twenty-two households were selected in each EA using systematic random sampling method. Head of the household or his/her substitute of selected households, who were older than 18 years and consented, were interviewed.

Findings: This national level population based study included 8,005 adults with the highest response rate (99%). The distribution of the surveyed Individuals 18 and above years old by urban and rural was (68% versus 32%). The proportion for the male to female was (44% versus 56%). We performed descriptive analysis and presented the result in a proportion as coverage for each indicator.

Source of information about COVID-19:

- Almost all (99.6%) of the Ethiopian population 18 and above years old heard about COVID-19 through various communication channels. Of the main source of information, Radio (54%), Colleagues (47%), TV (44%), Social Media (21%), whereas religious places and “*Edir/Ekub*” were found to be the least source of information related to COVID-19 (10% versus 5%), respectively.

Knowledge about COVID-19:

- **Cause:** 62% of Ethiopian population knew that COVID-19 could be transmitted through virus, while 20% knew COVID-19 as a curse.
- **Prevention:** 97% of the population knew at least one prevention methods for COVID-19, regular hand washing using soap and water was found to be the highest (85%) followed by wearing masks (83%), Physical distancing (77%) and Stay at home (14%).

Perception towards COVID-19

- About 10% of the population perceived that they had previous COVID-19 infection.
- Small proportion (5%) of the population thought that COVID-19 was a government propaganda or media campaign.
- Three fourth of the population thought that Ethiopian government had done enough to prevent or control COVID-19 transmission in the country.

- About one third of the population thought that COVID-19 could be cured with traditional medicine.
- Highest proportion (89%) of the population was willing to receive COVID-19 vaccine when it is available.

Preventive practices

- Recommended mask use was found to be low (15%) in Ethiopian population, with high variation across the study setting, urban (23%) versus rural (7%)
- One third of the population reported that they wash their hands to prevent COVID-19 with high variation among urban (42%) and rural (23%). Lack of hand washing service access was reported as a main reason for not washing hands.
- About four in ten of the population supported the “*No Mask No Service*” strategy to lower the transmission of COVID-19 in Ethiopia.

Others

- About one third of the population reported that health seeking behavior/utilization was affected by the pandemic
- More than half of the population supported school reopening
- More than one third of the population were not satisfied with the free tall centers established for COVID-19, while 12% of the population never used it.

Conclusion: The perceived risk of COVID-19 was found low, while awareness about COVID-19 among Ethiopian population was relatively high. The proper and frequency of undertaking some important protective measures was low. We shade light on that the risk perception of COVID-19 has a weakly positive impact on following precautionary measures and we understood that changing behavior remains a challenge. We recommend that risk communication shall be directed towards enhancing the risk perception and revitalizing COVID-19 measures and ensuring the implementation of appropriate practices towards the prevention of the current COVID-19 pandemic.

CHAPTER 1 INTRODUCTION

1.1 Background

According to the recent data, coronavirus diseases 2019 (COVID-19) has affected 214 countries and territories around the world within a short period of onset. COVID-19 was emerged in Wuhan, China, in late 2019 and now days highly propagating throughout developed and developing world. WHO indicated that COVID-19 pandemic has challenged public health systems and effective community communication. Failure in community communication can lead to a loss of community trust and reputation, economic impacts, and loss of lives. It is the responsibility of leaders to ensure that risk communication and community engagement (RCCE) is an essential component of health emergency readiness and response activities (van der Weerd et al. 2011; Cowling et al. 2010).

Effective control of COVID-19 pandemic depends on the preventive practice of the public. Risk perception could be key factor influencing precautionary behaviours. According to the Protection Motivation theory, individuals who perceive a higher level of risk are more likely to adopt preventive behaviours (Prentice-Dunn and Rogers, 1986). Studies on the 2003 SARS outbreak indicated that the perceived higher risk of SARS infection was associated with engagement in more precautionary behaviours, and compliance with infection control policies (De Zwart *et al.*, 2009).

Perceived risk is influenced by concerns over being infected. It is an effective response to a threat, which can predict protective behaviours independent of risk severity. Worrying is a response to specific stimuli. Public emotional concerns and trust can play an essential role in improving the perceived risk of a pandemic and increasing public participation in adopting preventive measures. Therefore, practitioners can utilize and develop these models of responding to a pandemic when facing newly emergent threats (Ibuka et al. 2010; Khosravi 2020).

Among the study population in Ghana, there were high-risk perceptions (68.3%) and most had moderate preparedness skill (81.4%) to respond to COVID-19. In one study, internet (77.1%) was the major sources of information, and knowledge significantly associated with education, age, employment and health-related occupation but only religion was associated with risk perception (Serwaa *et al.*, 2020).

Effective and proper risk communication is critical in influencing positive behavioral response in a pandemic (Wong & Sam, 2011), such as the COVID-19 crisis (Abrams & Greenhawt, 2020). Unfortunately, such effectiveness may be a challenge with so many sources of information available. Studies show mixed results around information sources and COVID-19 risk perceptions. Higher social media is linked to higher risk perception of COVID-19 in Vietnam – China’s neighbour (Luu & Huynh, 2020). However, informal sources of information coupled with culture are purported to be sources of lower COVID-19 risk perception (Ma *et al.*, 2020).

However, to the best of our knowledge, there is no study on risk perception and behavioural influence at community level in Ethiopia.

The study aimed to assess source of information, knowledge, risk perceptions and behavioural response to COVID-19 among Ethiopians amid the outbreak. The information from the study would enable government, and other stakeholders to implement adequate planning, preparation and responses and learn future outbreaks. The findings will directly improve communication measures and public education and also support policy development and public health implementation. Therefore, practitioners can utilize and develop these models of responding to a pandemic when facing newly emergent threats (Ibuka *et al.*, 2010; Khosravi, 2020).

According to the joint directions of WHO, UNICEF and Red-cross "A clear and integrated Risk Communication and Community Engagement (RCCE) strategy and response are vital for individual, family, and community uptake of essential public health and biomedical interventions to prevent and control the spread of disease" (WHO 2020; UNICEF 2020). The availability of reliable information sources on evolving pandemics, such as COVID-19, may embody certain attributes that encourage compliance with recommended adaptive behaviour. Evidence suggests that the lack of data or information generally drives unpreparedness to contain deadly diseases and discourages positive attributes for behaviour change. Risk perception survey is crucial as improvements in community knowledge about the risk (COVID 19) seem increasing. It is because as the knowledge increases or the information about the risk delivered to the community the expected outcome will elevate communities perception, as a result infectivity of the risk will decrease and positivity rate will also be declined; nonetheless the positivity rates of COVID 19 are increasing in all regions of Ethiopia, which is a suggestive sign of undiagnosed problem within the community. Thus it is

a time to investigate the perception gap as much as the soonest to overcome further impairments due to the risk of COVID 19 in order to assist the policy focus direction to interfere the devastating nature of the disease,

The Specific objectives are:

- To identify information sources related to COVID- 19
- To assess knowledge and community risk perception towards COVID- 19
- To assess behavioral response towards- COVID- 19
- To explore community risk perception and behavioral response towards COVID- 19

CHAPTER 2 Methodology

2.1 Study setting

A survey was conducted in nine regions except Tigray and two city administrations in Ethiopia namely: Afar, Amhara, Oromia, Beneshangul-Gumuz, Somali, Southern Nations Nationalities and Peoples (SNNP), Sidama, Gambella, Hareri, Addis Ababa and Dire Dawa. .

2.2. Study design

A community based a mixed cross-sectional study design, which followed a combination of both qualitative and quantitative approaches, was employed to assess community behavioral and risk perception response towards COVID- 19 in Ethiopia from November 2020- January 2021.

2.3. Household survey

The survey used a sampling frame for enumeration areas prepared by Central Statistics Agency (CSA) in 2019. This frame consists of 147,602 Enumeration Areas (EAs) which covers the entire country. Of which 34,135 were in urban and 113,467 in rural areas. The EA size was found to be adequate for the primary sampling unit (PSU) to take 22 households per EA (**Annex I**). The sampling frame contains information about the EA location, type of residence (urban or rural), and the estimated number of residential households. A sketch map that delineates the geographic boundaries was available for each EA.

2.4. Sampling techniques

A two stage stratified cluster sampling was used. Nine (9) regions and two (2) city administrations were included in the survey.

The first stage used lists of enumeration areas (EA) from the 2019 sampling frame. The cumulative population size for clusters across the study areas was calculated, and 368 enumeration areas were selected with probability proportional to size (258 Urban Vs 110 rural). Each enumeration area formed one cluster, and these clusters constituted the primary sampling unit. Enumeration Areas with security problems were replaced by EAs with comparatively similar demographic character in secured places and a total of 11 EAs were replaced.

In the second stage, a systematic random sampling technique was used to select households. All households within each cluster were listed and a sampling interval calculated. A random start number between one and the sampling interval was selected. The household that

matched the random start number in the list was then picked as the first household.

This process was repeated until the targeted number of 22 households in each cluster was reached. Finally, the head of the household or his/her substitute of selected households, who were 18 and above years and willing give consent were interviewed.

2.5. Sample size

In the sample size calculation, we used the reported proportion (7%) of being positive for COVID-19 tests at the national level. Margin of error 5% and of 95% confidence interval (CI) were used to guarantee a reliable estimation for main survey indicators at the domain level. Finally, the sample size was determined by considering the above statistics and it was a multistage sampling with design effect of 1.5, then the final sample size was 8096.

2.6. Sampling weight

We allocated EAs to different regions and urban/rural areas using used power allocation technique and the possible differences in response rates, a sampling weight was used in all analyses using the Risk Perception and Behavioral Response sample Survey data to ensure the actual representative of the survey results at both the national and domain levels. Since Risk Perception and Behavioral Response sample Survey is a two-stage stratified cluster sample, sampling weights are based on sampling probabilities separately for each sampling stage and each cluster. Weighting keeps the sample distribution close to the distribution of the target population, especially when oversampling is applied in certain areas and Weighting for correcting nonresponse

First stage sampling (PSU) was selection of EAs from each cluster and second stage sampling (SSU) was selection of households from each Enumeration Areas

We use the following notations:

$P1_{hi}$: First-stage sampling probability of the i^{th} cluster in stratum h

$P2_{hi}$: Second-stage sampling probability within the i^{th} cluster (households)

Let a_h be the number of EAs selected in stratum h , F_{hi} the number of households according to the sampling frame in the i^{th} EA, and $\sum F_{hi}$ the total number of households in the stratum. The probability of selecting the i^{th} EA in the 2021 Risk Perception and Behavioral Response Survey, sample is calculated as follows:

$$\frac{a_h F_{hi}}{\sum F_{hi}}$$

Let c_i be the proportion of households in the selected cluster compared to the total number of households in EA, i in stratum h , if the EA was segmented, otherwise $c_i = 1$. Then the probability of selecting cluster i in the sample was:

$$P_{1hi} = \frac{a_h F_{hi}}{\sum F_{hi}} * c_i$$

Let L_{hi} be the number of households listed in the household listing operation in cluster i in stratum h , let S_{hi} be the number of households selected in the cluster. The second stage's selection probability for each household in the cluster was calculated as follows:

$$P_{2hi} = \frac{S_{hi}}{L_{hi}}$$

2.7. Qualitative Method

The qualitative research in this study was aimed to explore the risk perceptions and behavioral response of community for COVID-19. Thus, in order to capture their lived experience we applied a phenomenological approach. We used purposive sampling technique to select study participants for the key informant interview and focus group discussion.

The qualitative interview was conducted in selected districts of nine regions & two city administrations. Participants for KII were religions leaders, community leaders, youth association, and community volunteers, while HDAs were recruited for FGD. In each district, two FGDs were conducted (one in urban and one in rural settings). Meanwhile, in each district four key informant interviews was conducted (one religions leaders, one community leader, one youth association, and one community volunteer). In-depth interviews guide was used and the interviews were done at convenient time for participants. With participant permission, all interviews and FGDs were audio-recorded. A broad data-generating question was first used before the start of the main data collection; like "Please tell me about your experiences risk perception of the community about COVID-19." An open-ended follow-up question was used to obtain detailed descriptions and examples. Probing questions were used to enhance the depth of the discussion. In general, 44 FGDs and 88 KIIs were conducted. Saturation was applied to decide the final sample size and redefined criteria were used to identify participants for KIIs and FGDs.

2.8 Survey questionnaire

The household survey comprised of six sections; (1) the socio-demographic characteristics, (2) Source of information for COVID-19, (3) Knowledge towards COVID-19, (4) Risk perceptions (5) Socio-economic impacts, and (6) Behavioural response. The tool used in this survey was adapted from WHO's, Red-Cross's and UNICEF's tools and guides on monitoring knowledge, risk perceptions, and preventive behaviours inform COVID-19 pandemic outbreak response (WHO 2020; UNICEF 2020).

A group of experts who involved in the survey developed the checklist for KIIs and the topic guide for FGDs. They have followed all the steps needed to develop and finalize the qualitative data collection tool. There were series of workshops that involved experts from supporting partners, professional association, and other stakeholders. Finally, the tools were translated in local language (Amharic, Oromiffa, Afar and Somaligna).

2.9. Survey implementation

There were 30 data collections teams comprised of two enumerators. In total, fifty nine (59) data collectors for quantitative data collection and eighteen (18) data collectors for the qualitative data collection were involved. Health professionals (Nurses, midwives, health officers, environmental health, laboratory, Pharmacy professionals and Statistics professionals) were participated in the data collection.

Data collectors and field supervisors were trained for seven days covering the objective of the study, the study procedures, questionnaires, data collection techniques, how to use tablet computers, quality-assurance procedures, and study ethics.

2.10. Household

Quantitative data were collected using structured interviewer-administered questionnaire using computer assisted personal interview (CAPI) tablet computers. One eligible individual from each selected households was interviewed. The household head or his/her substitute in his/her absence was included in the study.

2.11. Data management and analysis

The quality of data was maintained through training given to all data collectors, supervisors, central coordinators and data manager and the tools translated to the local language, mock

exercise was done. Electronic data collection template was used. Monitoring and supervision of the fieldwork was maintained throughout the data collection period. The office data manager also regularly monitored the completeness and identified possible errors and inconsistencies occurred during data collection and took immediate correction measures.

When internet connection was available, and every day digital data were synchronized from the interviewer devices and transferred to the central data server at EPHI. The data from the server were copied and saved in excel. The quality assurance process was taken place at all phase of data processing.

2.12. Quantitative data

The analyses presented in this report are descriptive and presented in a table and graph using summary measurers such as frequencies (percent) and means, with 95% confidence intervals adjusted for the clustered nature of the data as appropriate. Analyses were performed using STATA 14 (STAT Corp, Texas, USA), excel and SPSS version 24 (IBM Corporation, New York, USA).

2.13. Qualitative data

Recorded interview and discussion data were transcribed verbatim, translated into English, and coded in predefined themes developed based on the research objectives. Field notes were used to substantiate the information generated from the main data. Data were analyzed and compiled using a thematic approach by conducting an on-going content analysis. Multiple readings of the KII transcripts“ was done to ensure familiarity with the data, to get an understanding of the data as a whole, and to begin to identify recurring ideas and generate emerging themes. Finally, results from all sources were triangulated.

The study have numerous benefits in both individual levels, community and country level through information gap identification, communication modality, modification and identification of risk perception gaps to recommend appropriate actions to impact the wellbeing of community and country as a general. The assessment result has brought evidence that support paramount importance in developing prevention strategies.

The evidence provided baseline information for further researchers interested to generate new insights on the pandemic risk perception and implementation of preventive behaviour. However, there were some limitations, as a survey, the limitations were the tool was not validated well due to time constraint and urgency of the information and pre-test was not conducted at field level.

2.14.-Ethical Considerations

Ethical clearance was obtained from EPHI Institutional review Board and then letter of cooperation was obtained sequentially from regional, zonal, woreda and kebele level. Informed consent was obtained from each study participants by informing the purpose of the study, its procedure and confidentiality of the result

Chapter 3. Characteristics of study population

Out of 8096 study samples, eight thousand five (8005) respondents were interviewed. The response rate was 98.88 percent, the mean age of the respondents was 38(SD= ±14.55). Fifty six percent of the respondents were females and majority (68 percent) were the urban population. More than 25 percent of the study population was found in two regions, 14.6 percent and 13.4 percent from Oromia and Amhara respectively (Table.1). More than 40 percent of the population were orthodox and 75 percent were married. Around one third of the population were unable to read and write. Majority (24 percent) of them were farmers in occupation (Table 1).

Table 1 Socio-demographic characteristics of respondents, counts and their percentages, COVID-19 RPBR 2021, Ethiopia (n=8005)

Respondent Characteristics	Percent	Frequency
Residence		
Urban	68	5437
Rural	32	2568
Region		
Afar	7	568
Amhara	13.4	1092
Oromia	14.6	1172
Somali	9	737
Benie- shangule Gumuze	7	519
SNNP	12	965
Sidama	9	744
Gambella	5.5	440
Hareri	5.5	440
Addis Ababa	11	857
Dire Dawa	6	471
Age of Respondent		
18-24	16.6	1331
25-34	32.1	2569
35-44	25	2004
45-54	13.8	1103
55-64	7.2	579
65+	5.2	419
Mean age and SD	38(SD= ±14.55)	
Gender		
Male	44	3524
Female	56	4481
Religion		
Orthodox	41.2	3299

Catholic	1.3	108
Muslim	36	2874
Protestant	21.4	1712
Others	0.14	12
Marital status		
Single	15	1203
Married/ Cohabited	75	6035
Divorced/ Separated	4.6	372
Widowed	5	395
Education status		
Unable to read and right	27	2177
Read and Right only	6.6	531
Attend primary (1-8)	27	2177
Attend Secondary School	18.8	1503
College diploma/TVET	11.5	922
Degree and above	8.56	686
Refused	0.11	9
Occupation		
Government employee	13	1060
Private employee	10.6	853
Non-government Employee	2.2	178
Merchant/Trader	12.4	989
Farmer	23.9	1911
Student	7.2	577
Homemaker/housewife	22.4	1797
Retired/on pension	2.1	166
Unemployed/Job seeker	4	336
Other	1.7	138
Household annual income (in Birr)		
<10,000	8.1	656
10,000-40,000	51	4104
40,001-70,000	23.3	1864
70,001-100,000	10.5	839
>100,000	6.65	533
Working in highly crowded environment (within < 2 m)		
Yes	27.8	2226
No	72.2	5779

Chapter 4. Information about COVID-19

4.1. Source of information

Almost all (99.6 percent) population age 18 and above heard about COVID-19 pandemic. Fifty four percent, forty seven percent and forty four percent got the information only from radio, Colleagues and TV, respectively. While only 5 percent and 10 percent got from “*Edir & Equib*” and religious ceremonies, respectively (Figure 1).

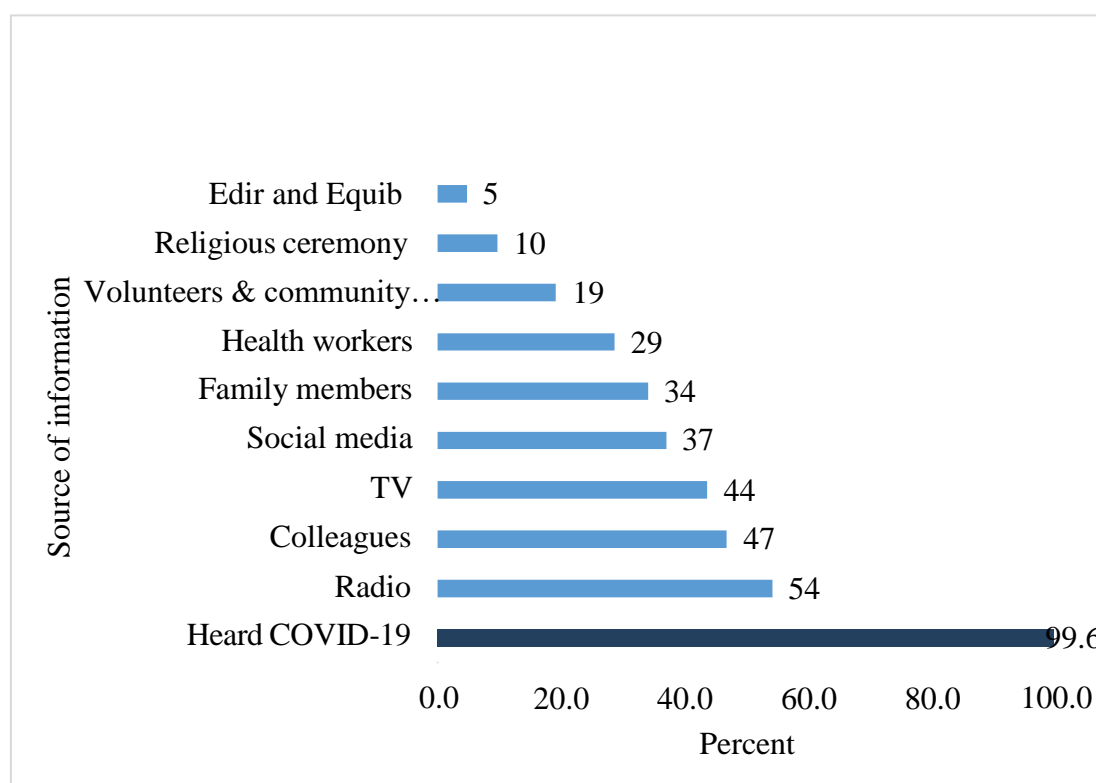


Figure 1. Population Source of information about COVID-19, Ethiopia, RPBR survey 2021

From the qualitative study media and health professionals especially health extension workers took the lead in disseminating COVID-19 related information.

“Media is the source of updated information. The problem was the public do not give attention to it. It informs people important information like the role of health professionals and the role of the people at the time of infection ... So, I am much informed from media and health institutions” (Community leader, KII, Oromia)

"We first saw it on TV, then health extension workers were teaching around, then they were teaching with a microphone outside the health centers, we trust health professionals more" (HDA, FGD, Benshangul-gumuz) (for further, see Annex subsection 1.2.5)

4.2. Trusted source of Information for COVID-19

From the total populations who had information about COVID-19, 36 percent, 34 percent and 13 percent trusted the information they got from TV, radio, and health care worker, respectively and social Medias were the list trusted source of information (1.4%) (*Figure 2*).

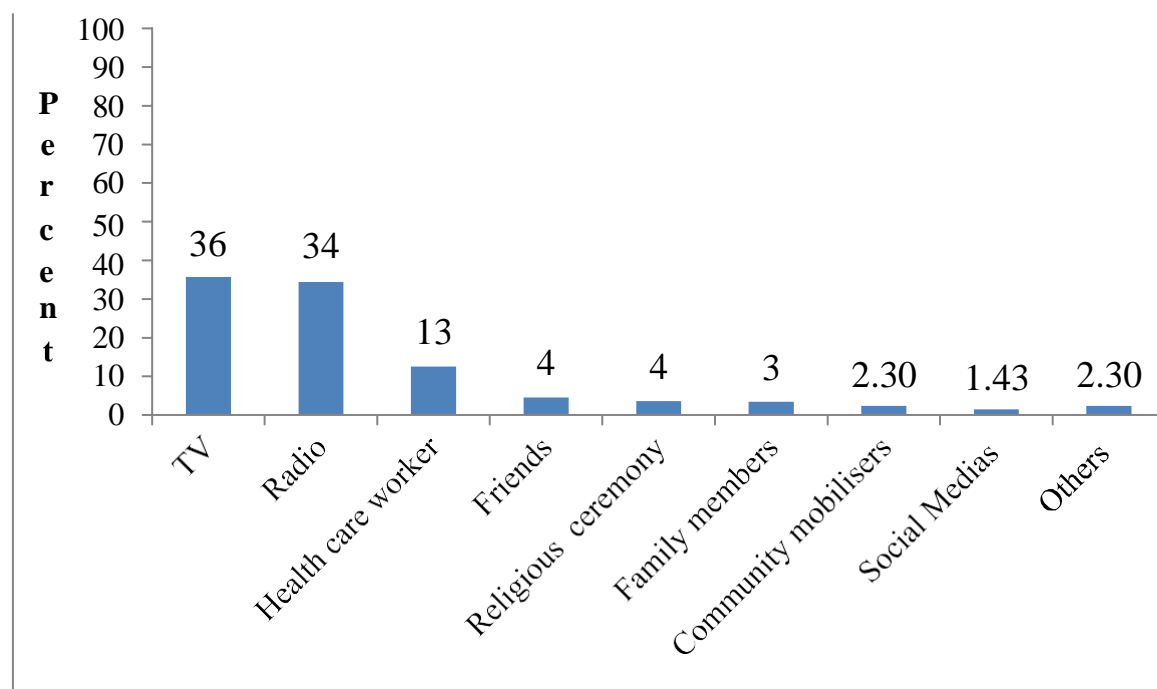


Figure 2. Trusted source of information about COVID-19, Ethiopia, RPBR survey 2021

The qualitative study findings shows that health professionals, information found from MoH were trusted source of COVID-19 related information.

“We trust information from the World Health Organization and believe on the information from the minister of Ministry of Health on a daily basis more than any other information” (HDA, FGD, Oromia) (for further, see Annex subsection 1.2.5)

“We first saw it on TV, then health extension workers were teaching around, then they were teaching with a microphone outside the health centers, we trust health professionals more” (HDA, FGD, Benshangul-gumuz) (for further, see Annex subsection 1.2.5)

4.3. Frequency of seeking COVID-19 information

Out of the total population who heard about COVID-19, 36 percent, 26 percent, 19 percent, and 18 percent sought information for 2 to 4 days, 5 to 6 days, 7 days, and less than 2 days per week about COVID-19, respectively (**Figure 3**).

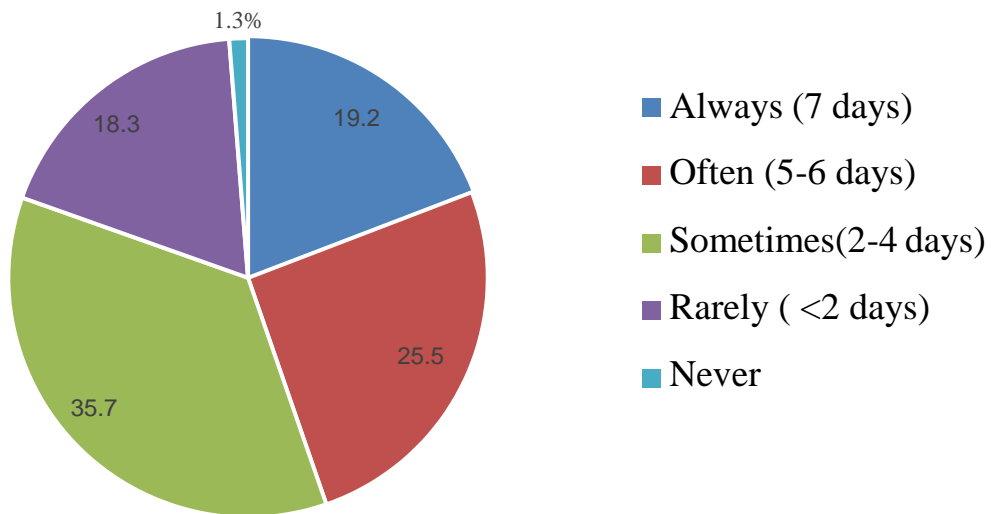


Figure 3. Frequency of seeking COVID-19 information, Ethiopia, RPBR survey 2021

4.4. Type of Information received about COVID-19

Among the population about 54 percent, 46 percent, 43 percent, 34 percent and 24 percent received information about symptoms of COVID-19, take care of children in schooling, mode of transmission, and take care of a person in risk, respectively (Figure 4).

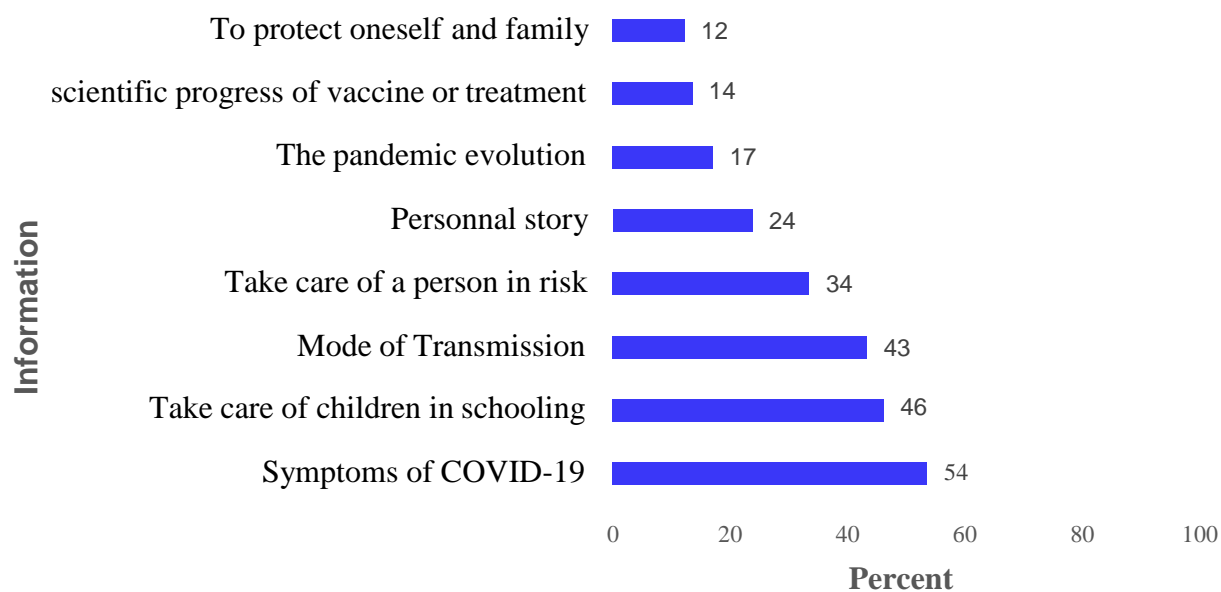


Figure 4. The type of information received about COVID-19, Ethiopia, RPBR survey 2021

Six in ten of the respondents sought information about mode of transmission of COVID19.

While, 57 percent, 44 percent, and 22 percent sought information about protective mechanisms for COVID-19, about symptoms of COVID-19, scientific progress in development of vaccine and information about authorities' decision, respectively (Figure 5).

However, the finding from the qualitative study shows, the communities are confused about the mechanism of transmission of the pandemic from one person to another,

„Why only one person gets infected from family?“

“I received information from my family about my relative and he was caught by covid-19..... His wife, who was sleeping with him, was not infected by corona. I want to know how this happened” (KII, Addis Ababa)

“..... It is said that if corona catches a baby, he will not affect the baby, is that right?” (KII Afar)

Qualitative result also shows the need for updated information on treatment and vaccine for the pandemic. They want to know more of the progress made towards the treatment and trial made.

“.... why not there is medication haven’t founded till now? these are the things that I would like to know. Also, if medication founded, is there any means that our country can access the medication” (KII, Dire Dawa)

“.... is the currently invented covid-19 vaccine really effective? Have those who took the vaccine really recovered from the virus?” (HDA, FGD, Oromia) (Annex 11 subsection 1.7

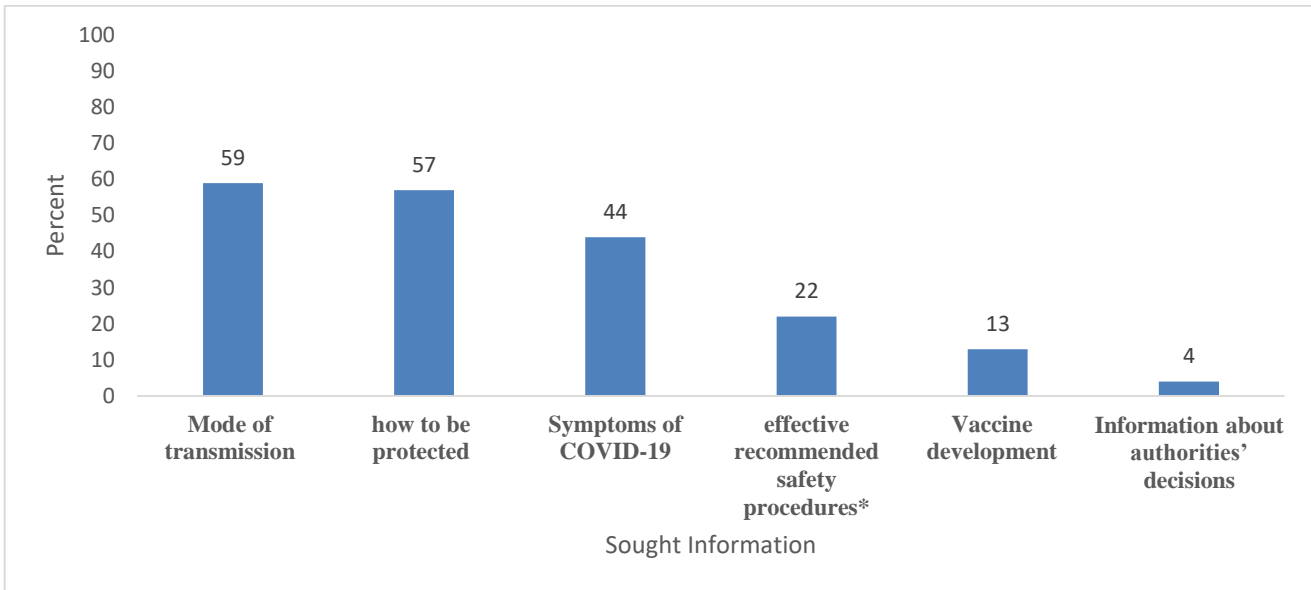


Figure 5. Type of Information Sought related to COVID-19, Ethiopia, RPBR survey 2021

4.5. Hearing status and distribution of information by background characteristics

Table 2 shows the source of information for COVID-19 disaggregated by background characteristics

The majority 94% of Addis Ababa population got COVID-19 information from TV, whereas only 23% of Somali population got from it. Radio as source of information range from the highest 70% in Somalia to the least 20% in Gambella. All regions and city administrations didn't properly utilize "Edir & Equib", HDA, and youth & women association platforms as sources of information for COVID-19 to transmit to their population. The highest percent (19.4%) of Amhara region population got COVID-19 and related information from religious ceremony. But almost none of Benishangul Gumuz population got from such ceremony.

About 61% of rural population got the information from radio compared to 45% of urban population. About 13% of rural and 4.6 % of urban population got information from religious ceremony.

The preference for the source of information differs by sex. Half of female and only 36 % of male population got the information from TV, while 64% of male and 45% of female population got the information from radio.

The source of information that population got about COVID-19 varies by education level. There was very high variation in the use of TV as source of information by education status that ranges from 90% of degree & above and 18% of illiterate (**Table 2**).

Table 2. Percent of hearing status and distribution of source of information by background characteristics, Ethiopia, RPBR Survey 2021

		Heard about of COVID-	Source of Information channels(Yes)												
			Radio	TV	Social Media	Health care worker	Family members	Friends	Community mobilisers	HDA	Edir	Youth & Women association	Printed materials	religious ceremony	Other
Region	Afar	99	30	48	55	51	15	46	15	1	1	0	.3	2.8	6.5
	Amhara	100	41	36	46	40	35	54	11	3	6	0	1.1	19.4	3.0
	Oromia	100	61	45	31	21	43	57	16	0	6	0	1.6	6.8	3.1
	Somali	97	70	23	45	41	15	40	24	0	2	1	2.3	5.9	3.1
	Benishangu-G	100	46	48	31	22	17	18	44	1	0	0	.7	0	.4
	SNNP	100	51	43	37	33	19	22	32	2	2	1	2.8	8.0	7.1
	Gambella	99	20	36	23	16	16	31	40	6	6	0	6.2	9.3	4.5
	Harari	100	67	36	47	40	43	46	15	0	0	0	1.5	1.7	1.6
	Sidama	99	59	76	40	15	24	22	7	0	5	1	10.1	11.6	3.5
	Dire Dawa	100	50	73	53	30	29	29	11	0	2	0	4.5	4.0	2.7
Location	Addis Ababa	100	40	94	41	16	33	29	11	1	3	1	3.8	.6	.2
	Urban	100	45	79	37	22	25	37	15	0	2	0	4.0	4.6	6.7
	Rural	99	61	19	37	33	41	53	22	2	6	0	.6	13.2	1.9
Sex	Male	100	64	36	41	31	32	48	19	1	5	0	2.4	11.2	3.7
	Female	99	45	50	33	26	36	46	19	1	4	0	1.6	8.3	4.0
Education	Illiterate	99	48	18	31	31	43	53	22	1	6	0	.0	12.8	2.9
	Read & write only	100	61	29	33	31	29	45	14	1	7	0	.9	12.9	1.8
	Primary (1 -8 grade)	100	62	46	32	26	31	44	20	2	5	0	.6	9.0	4.5
	Secondary (9-12)	100	51	71	42	26	29	45	17	1	2	1	3.8	6.5	4.6
	College diploma/TVET	100	51	83	55	25	22	37	15	1	2	0	6.4	2.8	3.6
	Degree and above	100	51	90	69	32	26	39	14	0	2	1	14.1	7.0	7.5
Religion	Orthodox	100	53	44	37	29	38	55	13	1	6	0	1.1	9.9	2.3
	Catholic	99	59	37	27	24	13	16	24	3	4	1	.1	19.3	3.7
	Muslim	99	56	41	39	30	29	38	24	2	3	0	2.2	7.8	6.1
	Protestant	99	54	46	35	27	31	36	30	2	4	1	4.1	10.6	5.7
	Other	100	76	24	4	1	36	65	8						8.6
National Total		100	54	44	37	29	34	47	19	1	5	0	2.0	9.7	3.9

Chapter 5. Knowledge about COVID-19

This section presented the knowledge of population about COVID-19, the signs and symptoms, mode of transmission, incubation period, and prevention methods.

5.1. Knowledge about the cause of COVID-19

Figure 6 depicts the population response about the cause of COVID-19. About 62 percent of the population knew that it was caused by a virus. Of the total population, one fifth of the population (20 %) reported that the cause of COVID-19 as a curse and 8% of the population reported as it is unspecified disease. However, seven percent of the population did not know about the cause of COVID -19.

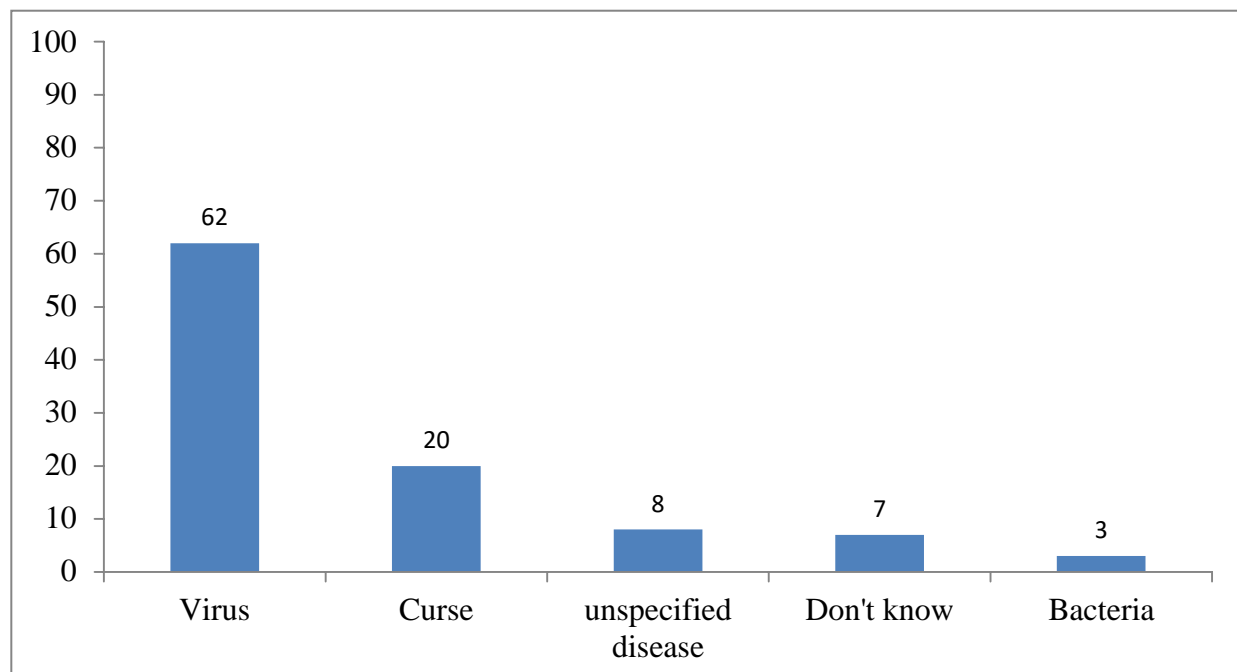


Figure 6. Percentage of responses on the cause of COVID-19, Ethiopia, RPBR Survey 2021

5.2. Knowledge on the cause of COVID- 19 by background characteristics

Table 3 shows the percent distribution of knowledge of population about the cause of COVID -19 stratified by regions, residence, educational status and religion.

Most of the population responded that COVID -19 is a virus that causes a disease, this ranged from the lowest in Gambella (38 %) and the highest in Benishangul Gumuz and Dire Dawa (88%). While 27% of population from Gambella, 24% each from Amhara and Addis Ababa, and 21% from Oromia responded that COVID-19 as a curse.

More than half (57%) and 26 % of rural populations reported that COVID -19 is caused by a virus and a curse, respectively. Sixty four percent of male population said that it is caused by a virus, and about one fifth of female population (21 %) responded that it is caused by a curse. One third of the illiterate and 30% of respondents who were read & write only, responded that COVID -19 as a curse (Table 3).

Table 3. Percent distribution of knowledge of population about cause of COVID -19, according to background characteristics, Ethiopia, RPBR survey 2021

Causes of COVID-19					
	Virus	Bacteri a	Curs e	Unspecified disease	Don't know
Region					
Afar	63.7	9.1	10.5	11.8	4.7
Amhara	50.0	2.6	24.0	9.6	13.2
Oromia	70.3	1.4	21.3	3.8	2.7
Somali	77.8	3.0	16.8	.7	1.5
Benishangul	87.5	1.3	5.1	1.1	5.0
SNNP	52.6	4.1	16.7	16.6	8.6
Gambella	38.2	6.0	26.8	7.3	18.7
Harari	81.7	0.0	2.2	1.8	13.7
Sidama	70.6	.3	1.2	27.1	.5
Dire Dawa	87.8	.6	8.9	1.8	.9
Addis Ababa	67.0	6.7	24.2	0.0	2.1
Residence					
Urban	70.7	2.4	12.8	10.9	2.5
Rural	56.6	2.5	25.5	5.2	9.6
Gender					
Male	64.3	2.2	19.3	8.2	5.4
Female	60.5	2.8	21.2	6.9	7.9
Education					
Unable to read and write	46.8	1.8	32.6	6.7	11.5
Read and write only	49.0	3.8	29.6	10.8	6.3
Primary (1 -8 grade)	64.4	3.2	17.3	9.0	5.4
Secondary (9-12 grade)	80.9	2.2	6.2	6.6	3.2
College diploma/TVET	86.1	2.7	5.3	4.8	1.1
Degree and above	88.2	1.9	3.1	6.7	0
Religion					
Orthodox	65.1	1.7	21.6	4.8	6.5
Catholic	18.1		36.7	6.6	34.3
Muslim	59.0	3.6	19.0	11.4	6.5
Protestant	60.2	3.7	17.9	10.9	6.3
Other	100.0				
National Total	62.3	2.5	20.3	7.5	6.7

5.2. Knowledge about Incubation period of COVID-19

Figure 8 shows the knowledge about the incubation period of COVID-19. Nearly half of the population (46%) cited correctly that the incubation period for the COVID-19 was between 2 and 14 days and 33 % of the population reported that they did not know the incubation period of COVID-19 (Figure 7).

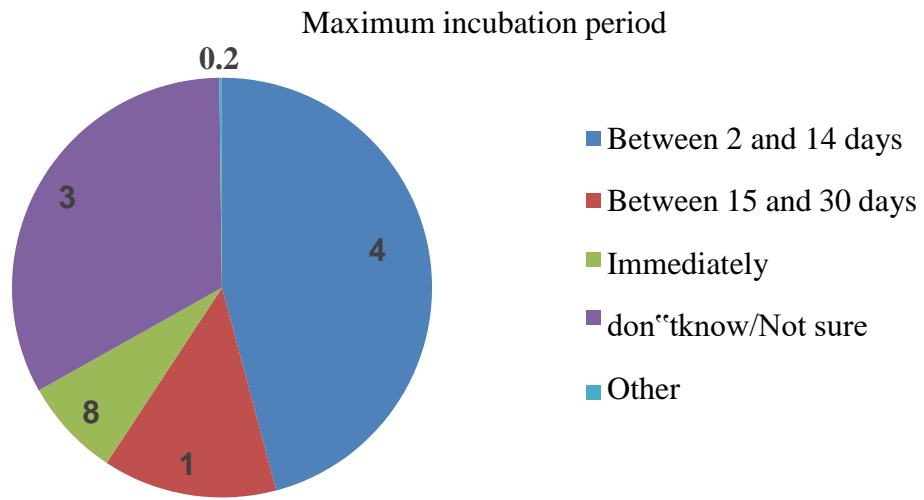


Figure 7. Knowledge of population towards incubation period of COVID-19, Ethiopia, RPBR Survey 2021

5.4. Knowledge about Sign and Symptoms of COVID-19

The most commonly reported signs and symptoms of the COVID-19 included cough/sneezing/ runny nose/congestion/sore throat (86 %), followed by fever/chills/rigor (68%), headache (35%), and shortness and difficulty in breathing/ chest pain (34%). The less commonly reported signs and symptoms were muscle pain and/or joint pain/ fatigue/general body weakness, gastrointestinal symptoms, and loss of taste & smell, 13%, 6%, and 4%, respectively (**Figure 8**).

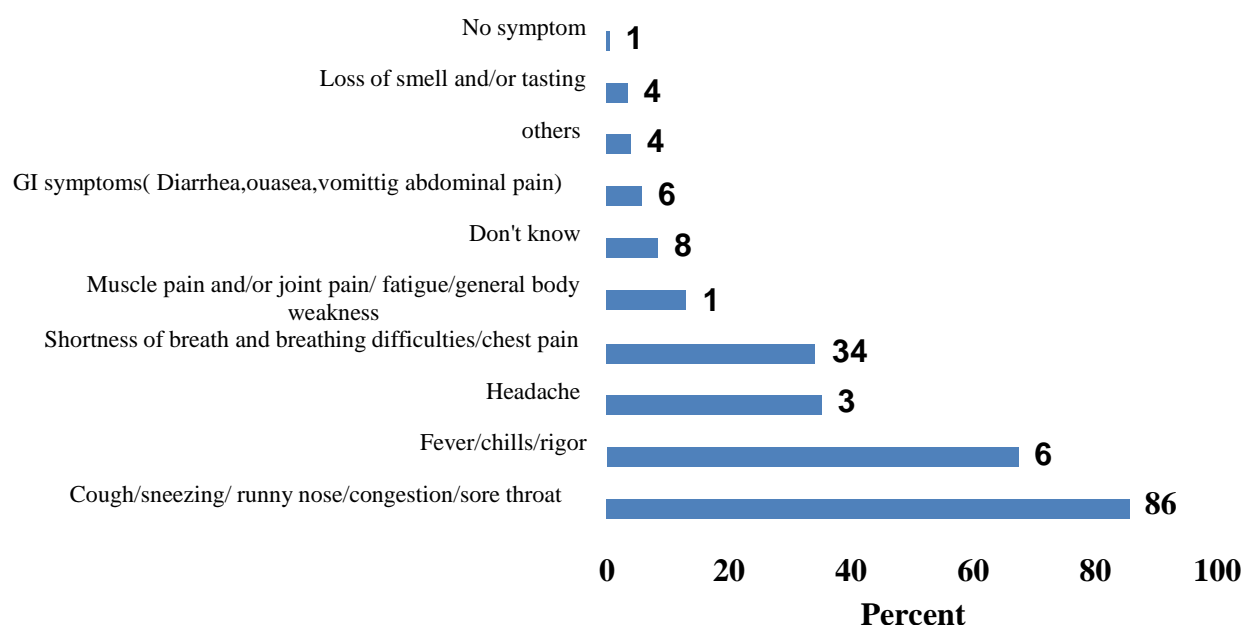


Figure 8. Knowledge about main symptoms of COVID-19, Ethiopia, RPBR Survey 2021

The qualitative study also revealed that most of the population knew the prominent symptoms of COVID-19 such as high degree fever, dry cough, sore throat, shortness of breath, headache, diarrhea, nasal congestion, fatigue and runny nose.

“Well, the first symptom is dry cough followed by quick breath, severe headache and fever. If these symptoms are observed it indicates that the person is infected, that is why temperature checks are usually made” (Community leader, KII, Oromia)

“.... In the first place you will have fever then you start to cough and also there is a feeling of chills like malaria” (Community leader, KII, Dire Dawa)

“The symptoms include persistent fever and cough. It has a continuous Cough and sneezing. Now, if the eye is red and have tears, that is COVID-19 symptom”

{Religious leader, KII, SNNP}

5.5. Knowledge about mode of Transmission of COVID-19

Table 4 shows the percentage of population that knew the transmission and prevention methods of COVID-19. Three-fourth of the population revealed that COVID-19 virus could be spread via direct contact with infected people, 49% of the population said that mode of transmission of COVID-19 is respiratory droplets from infected people, and 46% of the population revealed that touching contaminated objects/surfaces is the mode of transmission of COVID-19. However, 57% of the population reported that the COVID-19 could be transmitted via airborne droplets (Table 4).

The qualitative study also revealed that population had an in-depth knowledge on the modes of COVID-19 transmission such as direct contact with infected people; respiratory droplets were the primary ways for the spread COVID-19 among people. FGD from Harari participant mentioned;

“I think the disease can be transmitted through air droplets, contact, using the same utensils in common, lack of hand washing, greeting with hand shaking, closeness to each other, lack of mask wearing, and crowding in religious institutions and markets”

(HDA, FGD, Harari)

Another FGD participant in Gambella region also stated the role of note (Birr) exchange in transmitting the disease. He described that;

“COVID- 19 will be transmitted through Birr Notes. If I give birr note to other person, the disease will be transmitted to him/her unless he/she uses hand gloves during receiving” (HDA, FGD, Gambella)

Some respondents also revealed that they believe COVID-19 is an airborne disease.

“...This is a viral disease, but something that makes it different from other diseases is that it's airborne, it's not just like HIV, does not transmit by sharp materials or by sexual intercourse, it transmits by air, by a physical contact and by not keeping social distance” (HDA, FGD, Oromia)

“It is transmitted by coughing, it is transmitted by sneezing, when we sneeze, we should sneeze away from people, and we should not breathe close to people. If someone coughs and sneezes, the disease is contagious. If a person wants to cough, should cough covering his mouth with his hand; (demonstrating) so that he does not pass it on to another person” (Community leader, KII, Somali) (for further see Annex II, Section 1.2).

5.6. Knowledge about Prevention methods of COVID-19

Figure 9 shows the population response about the prevention methods of COVID-19. Majority, 97 % of the population reported that they knew the prevention mechanisms of COVID-19 (**Figure 9**).

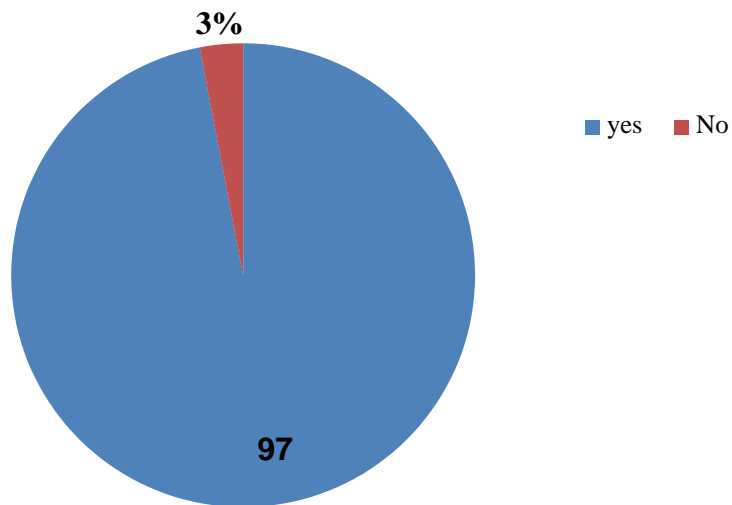


Figure 9. Knowledge on the prevention mechanism of COVID-19, Ethiopia, RPBR Survey 2021

The majority (85%) of the population reported that regular hand washing using soap and water, 83% mentioned wearing masks, and 77% mentioned physical distancing as a means of COVID-19 prevention methods. While, stay at home (14%), using sanitizer (29%), avoiding close contact with anyone who has fever and cough (17%), and cover mouth and nose during coughing or sneezing (13%) were the least reported prevention methods (**Table 4**).

Table 4. Percentage of population knowledge on the COVID-19 Transmission and prevention methods, Ethiopia, RPBR Survey 2021

Knowledge	% weighted	unweighted frequency
Transmission methods of COVID-19		
Direct contact with infected people	76	6325
Air borne	57	4259
Droplets from infected people	49	4345
Touching contaminated objects/surfaces	46	3439
Contact with contaminated animals	2	191
Eating contaminated food	2	165
Drinking unclean water	1.3	65
Blood transfusion	1.2	152
Sexual intercourse contact	0.7	113
Mosquito bites	0.1	5
Don't know	4	240
Other	1	88
Prevention methods of Covid-19		
Wash hands regularly using soap and water	85	6554
Wearing masks	83	6496
Physical distancing	77	5770
Clean with sanitizer	29	2881
Avoid close contact with anyone who has a fever and cough	17	1181
Stay at home	14	1601
Cover mouth and nose when coughing or sneezing	13	1214
Avoid direct contact with surfaces	9	494
Cook meat and eggs well	1.4	186
Don't know	0.3	21

5.7. Knowledge on prevention methods of COVID- 19 by back ground characteristics

Table 5 shows the percent distribution of knowledge of population on top prevention methods of COVID-19 by stratifying through regions, residence, educational status and religion of population.

The most prevention methods stated from both regions were wash hands regularly using soap & water (72 % in Somali to 96% in Harari), wearing masks (64% in Afar to 92% in Addis Ababa), and physical distancing (50% in Harari to 84% in Amhara). Knowing physical distancing the lowest in Harari (50%) and the highest in Amhara region (84%) followed by Oromia and Dire Dawa each (83%). Regarding to washing hands regularly using soap & water as a prevention mechanism, the highest in Addis Ababa and Harari each (96%) and the lowest in Somali region (72%).

Regarding to residence of the population, 87 % of population from rural area responded that wash hands using soap and water for the prevention method from COVID-19, which was higher than from urban areas (82%). Less knowledge reported on Stay at home, Cover mouth and nose when coughing or sneezing as a prevention mechanism for COVID-19 (**Table 5**).

Table 5. Percent distribution of knowledge of population on the prevention methods of COVID-19, according to background characteristics, Ethiopia, RPBR Survey 2021

	Percentage of population on top prevention methods of COVID-19										
	Physical distancing	Stay at home	Wearing masks	Wash hands regularly using Soap And water	Clean With sanitizer	Cover mouth and nose when coughing Or sneezing	Avoid close contact with anyone who has fever and cough	Cook Meat And eggs well	Avoid direct contact with surfaces	Don't know	
Region											
Afar	76.4	19.2	63.8	85.0	16.1	5.9	7.5	5.7	2.9	.1	
Amhara	84.0	18.2	81.7	88.2	18.9	17.2	10.9	.2	5.5	.1	
Oromia	82.6	12.0	85.2	86.7	34.4	11.3	20.1	1.6	13.2	.1	
Somali	80.0	42.4	64.9	72.1	17.2	30.8	11.3	1.0	3.4	1.5	
Benishangul	77.4	5.9	85.1	82.0	31.4	5.0	19.9	.9	6.6	.6	
SNNP	55.0	9.3	82.4	78.9	26.6	11.1	17.2	1.9	4.1	1.0	
Gambella	61.0	6.8	80.5	75.9	23.2	11.1	16.0	.2	6.1	.4	
Harari	49.5	27.5	72.6	96.2	36.8	6.9	6.0	9.5	1.3	.0	
Sidama	57.6	13.0	90.0	94.6	53.1	12.0	4.9	.2	1.6	.0	
Dire Dawa	82.8	23.8	90.7	88.2	47.9	10.2	9.2	2.0	5.2	.0	
Addis Ababa	81.3	27.9	91.6	95.6	61.8	45.0	22.7	10.6	9.9	.0	
Location											
Urban	76.8	17.3	86.2	81.7	44.0	15.5	19.1	1.7	10.5	.2	

Rural	76.6	12.0	80.9	87.1	18.6	11.4	14.7	1.3	7.5	.4
Sex										
Male	78.6	14.4	85.4	84.8	28.5	14.5	18.6	1.6	9.8	.2
Female	75.0	14.0	81.0	84.9	29.7	11.8	14.7	1.3	7.8	.3
Education										
Unable to read and write	73.9	10.6	74.4	84.5	13.7	10.7	11.2	.6	5.8	.3
Read and write only	82.5	18.8	81.9	82.7	11.8	12.5	6.5	1.0	6.3	.2
Primary(1-8grade)	73.3	12.8	85.5	84.7	30.0	10.2	18.4	1.9	9.7	.3
Secondary(9-12grade)	78.3	15.9	90.1	84.0	46.6	17.4	22.5	1.8	9.3	.3
College diploma/TVET	86.8	22.0	92.0	89.3	57.2	21.1	22.7	2.1	15.6	.1
Degree and above	87.1	23.8	94.2	87.2	58.8	22.3	27.7	2.9	14.6	.1
Religion										
Orthodox	82.7	15.5	87.3	86.8	28.8	13.3	12.5	1.2	8.4	.2
Catholic	68.5	16.2	84.2	89.4	19.9	6.6	12.3	1.3	1.1	
Muslim	75.5	15.7	71.5	83.1	25.5	13.3	22.3	1.8	8.7	.3
Protestant	62.8	9.5	83.1	81.7	33.9	12.7	21.9	1.6	9.8	.6
Other	99.9	1.5	89.0	54.3	27.3	3.8			33.7	
National Total	76.7	14.2	83.1	84.8	29.1	13.1	16.5	1.4	8.8	.3

The findings from the qualitative study also substantiated the quantitative findings. The qualitative study respondents revealed that they have been edified with different prevention mechanisms from different sources. Cleaning hands often, using soap and water, or an alcohol-based hand rub, wearing a mask, physical distancing, not touching eyes, nose or mouth and covering nose and mouth with bent elbow during coughing or sneezing were some of the prevention mechanisms mentioned by respondents. A community leader in Sidama region noted;

" ... We've been doing a lot of work on this. Regarding prevention: What we used to say is that to use masks, wash hands often, and keep distance. In the past, keeping social distance was very important, now this is reduced. By maintaining distance and general hygiene; at the same time, the community is recovering from another diseases. We can prevent this disease by wearing a mask and keeping our distance and keeping our hygiene" (Community leader, KII, Sidama)

"For the prevention, when a person has the safety material as I have the mask, since a mask is prepared for covering the mouth, people should not hold it on their hands" (Youth association leader, KII, Dire Dawa)

Behavioural changes as a response to prevent COVID-19 were also detected in some areas. These includes, avoiding coffee drinking ceremony, separating sleeping beds for family members, and avoiding sharing of drinking cups and eating plates. In illustrating this issue, FGD from SNNP best illustrates this idea;

“Even though the disease didn’t happen to us, we wash our hands with soap and water and put on a mask. Our children do not go to places of our mother in laws just like the previous times. Even mothers and children do not sleep together at home. Our children do not sleep with us. We sit in a distance. For example, now, our mother said, “why don't you come and drink coffee?” we said no, we won’t go inside. we said, we won’t get inside, it's corona. Half of the people agree that the disease exists, the rest do not since nothing has happened yet. We are protecting ourselves and our children. Our children go to school wearing masksEven when we go to funerals, we take a drinking cup from our house. During the day, we would sit down and drink our cup of coffee and then return to our places. When corona started, we didn't go out from our home, we just sat at home. Now it's getting lessened, and when we leave, we take our cup with us and sit in a distance” (HDA, FGD, SNNP)

The interview transcripts reveal the role messages transmitted through Medias to create awareness of the community in tackling spread of the virus. In explaining the issue, the discussants from Amhara region noted;

“.... we first saw it on TV. Then, we have been taught by the health care professionals to keep our distance on meetings, to use masks and sanitizers, and to reduce the number of people by half during transportation. To change our clothes, we put on during the outdoor activities while we return to our home. Generally, Experts have taught us not to do anything without washing our hands thoroughly. As it was broadcast live on television by the Prime Minister and is recommended by the professionals, we are keeping our hygiene, we also assure our customers are washing their hands before they enter to our home for the service we are providing” (HDA, FGD, Amhara) (for further see Annex II, Section 1.2).

Chapter 6. Perception towards COVID-19

6.1. Perception towards cause of COVID-19

About 76 percent of the population perceived that COVID-19 is disease caused by a virus and 20 percent of the population perceived that COVID-19 is a curse. Five percent of the population thought that COVID-19 was a government propaganda or media campaign. (**Figure 10**).

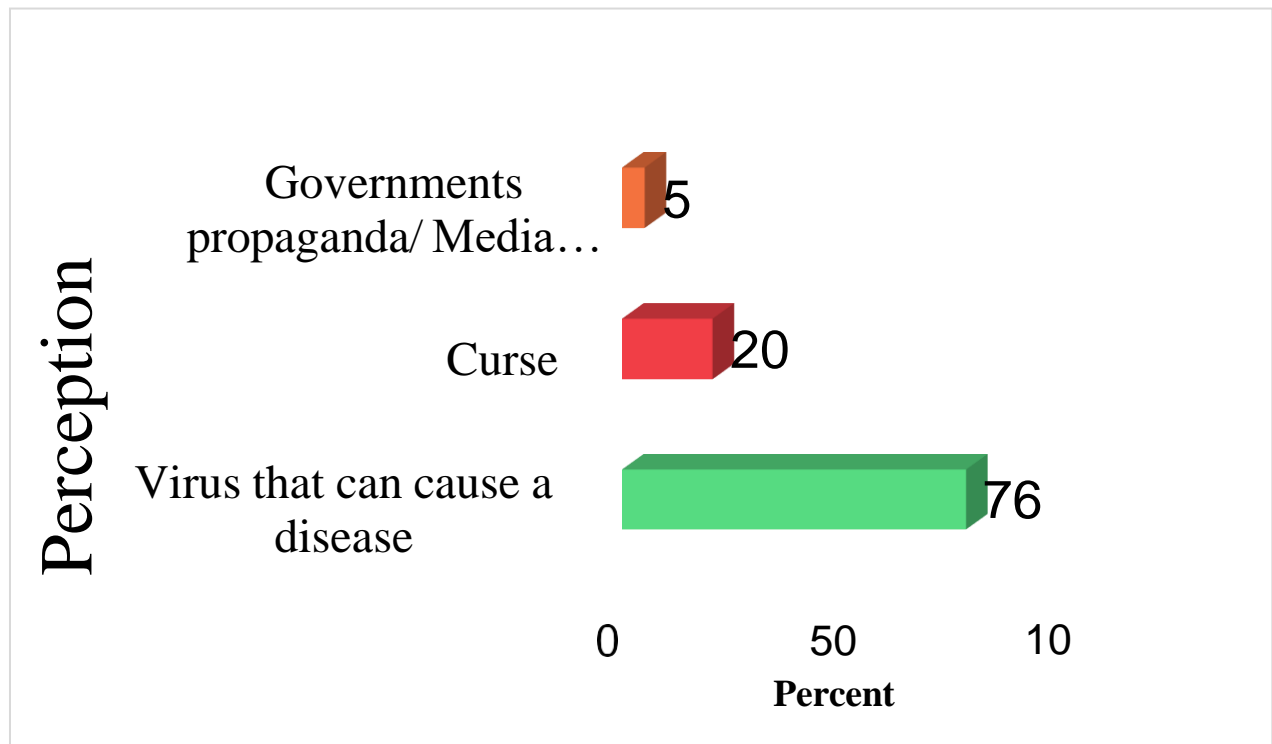


Figure 10. Population Perception about COVID-19, Ethiopia, RPBR survey 2021

6.1. Perception on severity towards COVID-19

The weighted population showed that nearly 7 in 10 participants perceived that COVID-19 is a fatal disease and only 3% considered it as a mild disease like a common cold (Figure 11). The above result was supported with the qualitative findings, discussants believed that COVID-19 is the most serious and fatal disease. They agreed that it disrupts every aspects of their lives including health, family and economy, that made the disease to be understood as the most fatal problem across the world. Some participants described the severity of it as quoted below

“Formerly, HIV/AIDS was the most feared disease. However, COVID-19 is a very serious and bad disease than any other” (HDA, FGD, Amhara)

“Because it can kill thousands of people in a matter of hours ... there no cure but the vaccine is still available and the disease is constantly changing. It is so bad that it causes so much economic and social crisis (HDA, FGD, and Amhara)

“COVID-19 is a non-curable virus. It causes loss of lives, reduces love, and undermines unity. Because of that, there is a big risk. I think that if this trend continues, the elderly and those with comorbidities will be more likely to be affected” (Community leader, KII, SNNP) (For further see annex II, section 1.3.).

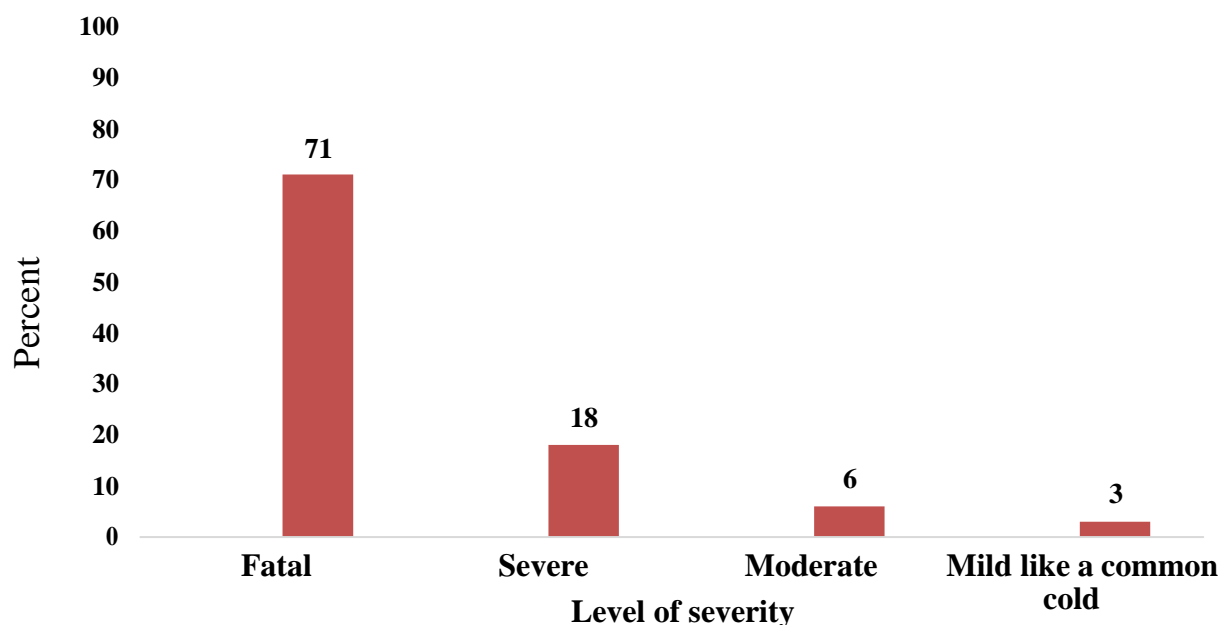


Figure 11. Percentage distribution of perceived severity level of COVID-19, Ethiopia, RPBR survey 2021

6.3. Perception on being affected and discriminated by COVID-19

Forty seven percent of population thought that COVID-19 affected both female and male equally. Majority (67%) perceived that old peoples were at a higher risk to get COVID- 19 compared with other age groups; while 21% of them perceived that all age groups were at equal risk to acquire the disease. Thirty eight percent of the total population perceived that people with chronic health conditions were at higher risk of acquiring the disease and 16% thought that health workers were at higher risk (Table 6). In the qualitative study participants were asked to identify the most vulnerable people to COVID-19. Accordingly, they noted that health professionals and peoples with disease history were the most susceptible to COVID-19 as compared to other groups as described below by some discussants:

“According to information I have, a segment of society I consider them as more vulnerable are doctors and nurses ... as information I have, they are highly affected in other countries” (HDA, FGD, Oromia)

“... I have already told you that it is risky to people who have additional diseases.”
(*Community leader, KII, Sidama*) (For further, see Annex II subsection 1.3.5)

Table 6 reveals that 23% of the population thought that COVID-19 created social isolation. Among this, 79%, 28% and 19% mentioned that people who had the disease, who came close contact with COVID-19 cases and health workers would be discriminated, respectively. The qualitative result also supports the existence of stigma and discrimination due to COVID-19

“We stigmatized them and restrict them to share and give materials and services due to fear of the fact of the dangerousness of the disease” (HDA, FGD, Amhara)

“In most cases people coming from cities, foreigners, and mainly those coming from areas where there is high number of reported COVID-19 cases are highly susceptible to stigma and discrimination” (HDA, FGD, Sidama)

“There is stigma in a significant manner. Beyond other things, this is a new disease. HIV would also make stigma. If that person is mentioned as infected by the disease, you wouldn’t even pass through the area of that person. Because, you would feel that you would be infected with it. The disease is horrible” (HDA, FGD, Dire-Dawa)

(for further, see annex II sub section 1.3.4).

Table 6. Perception of population being affected and discriminated by COVID-19, Ethiopia, RPBR survey 2021

		% weighted	unweighted frequency
Gender	Male	14	1,333
	Female	20	1,269
	Both	47	4,371
	Don't know	19	997
Age group	Old people only	67	5,366
	Adults only	8	554
	Young and Teenagers	7	395
	Under 5 children	16	1,082
	All age will be infected	21	1,968
Segment of population	Health workers	16	1,565
	Pregnant women	10	709
	Daily laborer	12	963
	People with chronic health conditions	38	3,186
	Students	7	474
	Infants & children	1.2	87
	Others	3.3	320
Think creates social isolation against specific people		23	2,320
Groups dis-criminated in community due to COVID-19	People who have contact	28	889
	People who have COVID-19	79	1,881
	Survivors of COVID-19	17	554
	Health workers	19	1782
	Travellers	13	377

6.4. Perception towards prevention and control of COVID-19

About 10% of the population felt that there was possibility of becoming infected with COVID 19. Most (94%) were willing to take COVID- 19 test. Among 6% of the population who were not willing to take the test, the reasons were sample giving was uncomfortable (35%), followed by fear of social isolation (26%), and 23% reported that there was no treatment. The qualitative study Participants also raised the presence of ambiguities and fear towards the vaccine and concern about the safety of the vaccine and wondered if people who took the vaccine can share their experience before introducing it as stated below:

".... is the currently invented covid-19 vaccine really effective? Have those who took the vaccine really recovered from the virus?" (HDA, FGD, Oromia)

"It is better if case story of a person who took the vaccine and cured from corona virus is publicized before rolling out of the vaccine" (Youth volunteer, KII, Oromia) (For further, see Annex II, section 1.7)

Nine in ten (89%) population would accept COVID-19 vaccines when it is available. Some of the participants in qualitative study were keen to know more on when the vaccine will be available to them, and most of them raised the question related to the fact vaccine already started in developed countries.

"China has begun, the United States has begun. When will the vaccine reach to our continent of Africa? Where does it come from? When will the vaccine reach to our continent of Africa" (Community leader, KII, SNNP)

"It is said that vaccine is found for developed countries. Do poor country like us get the vaccine?" (HDA, FGD, SNNP) (For further, see Annex II section 1.7)

Less than half (47%) of the population believed that they were at risk of getting infected with the COVID-19 virus. Eighty-three percent of the population thought that COVID-19 is preventable and 28% of the population thought that COVID-19 has treatment.

Out of the total population 29% believed that traditional remedies are helpful for COVID-19(Figure 12). Some people in qualitative study also believed that COVID-19 is curable using traditional means such as utilization of leaves used to prevent COVID-19. For instance, discussants noted that;

"According to our culture for instance our village community uses culture than science, like khat chewing. If we develop cough, we don't ask the community and go to anywhere, we will chew khat it didn't affect us and we didn't get soap we will use

ash. If soap and ash is not available, we will use sanitizer. Personally, it can be prevented” (HDA, FGD, Harar) (For further, see Annex II, section 1.3.10).

Some participants in the qualitative study consider themselves that they are infected by COVID-19 as explained below

“I think I was infected with COVID-19 because once up on a time when the disease out broke in Ethiopia, I was sick with severe type of common cold but I took a hot drink and recovered well, I take care of myself, but at that moment I was severely sick with flu symptoms similar with COVID-19” (HDA, FGD, B. gumuz)

“In my current residence one of my neighbours went to a bank and became ill when he comes back. We were stressed by considering that we exposed to the virus. Until health personnel told us that we were free we considered ourselves infected” (HDA, FGD, Oromia)

“I think I am likely to become sick with COVID. I go to where many people are there like weddings, funerals, markets, and I suspect myself, I have a chance of being infected” (HDA, FGD, Amhara) (For further, see Annex II section 1.3.2)

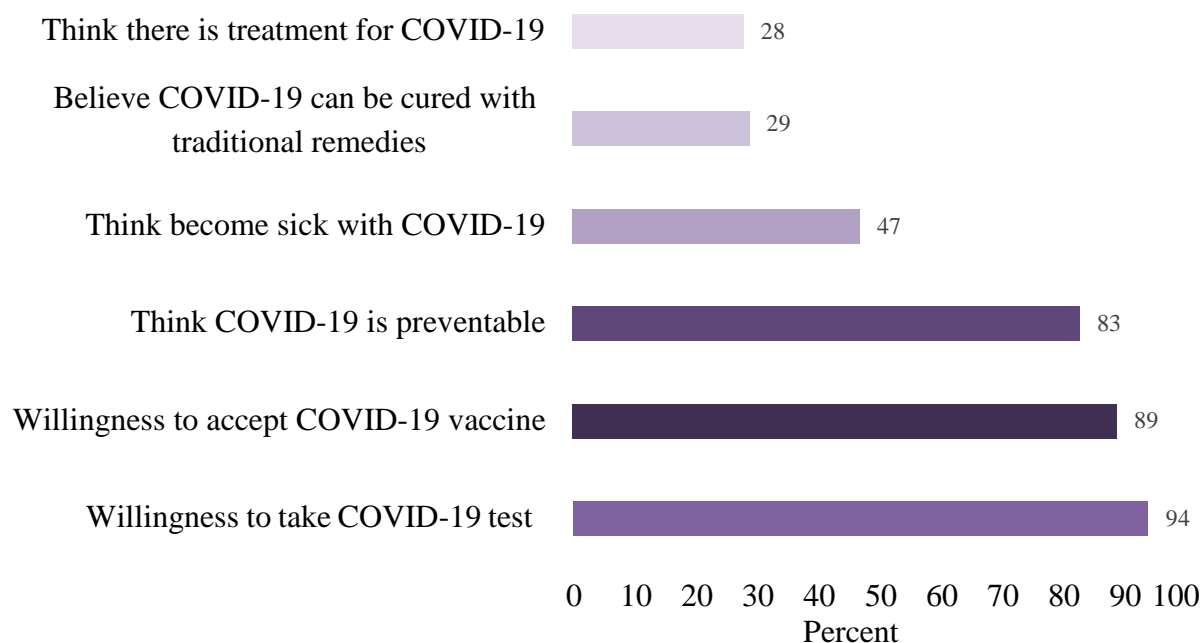


Figure 12. Perception towards prevention and control and being sick, Ethiopia, RPBR survey 2021

6.5. Perceived Reasons not comply with the prevention measures

The top four reasons mentioned why people were not complying with COVID preventive measures by the population were negligence 51%, due to insufficient knowledge 32%, thought being safe 32% and moral belief 14%. While only 6% of population mentioned that, it was due to lack of personal protective equipment (**Figure 13**).

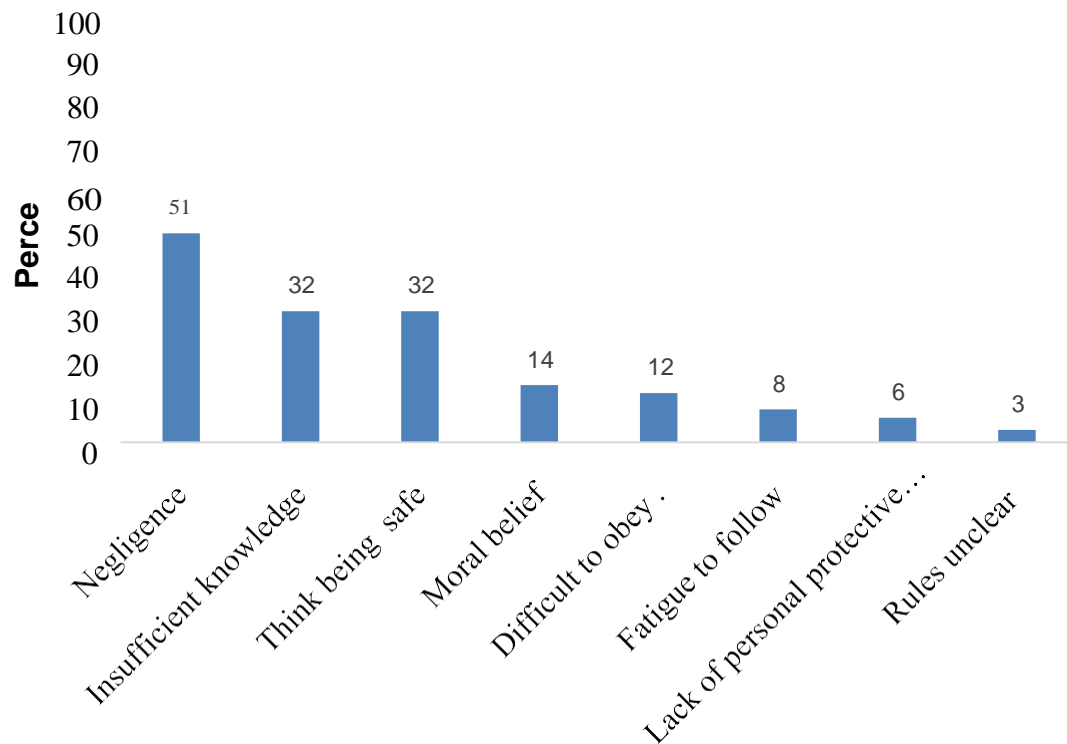


Figure 13. Noncompliance to the prevention measures towards COVID-19, Ethiopia, RPBR survey, 2021

6.6. Perception towards measures taken to prevent COVID-19

Figure 14 shows the population perception on the effectiveness of COVID-19 prevention methods. Washing hands with soap and water for at least 20 seconds and using facemask were 90 and 62 percent respectively, physical distancing (44%), avoiding touching eyes, nose or mouth with unwashed hands (24%) and using alcohol based hand sanitizer(19%)(figure 14).

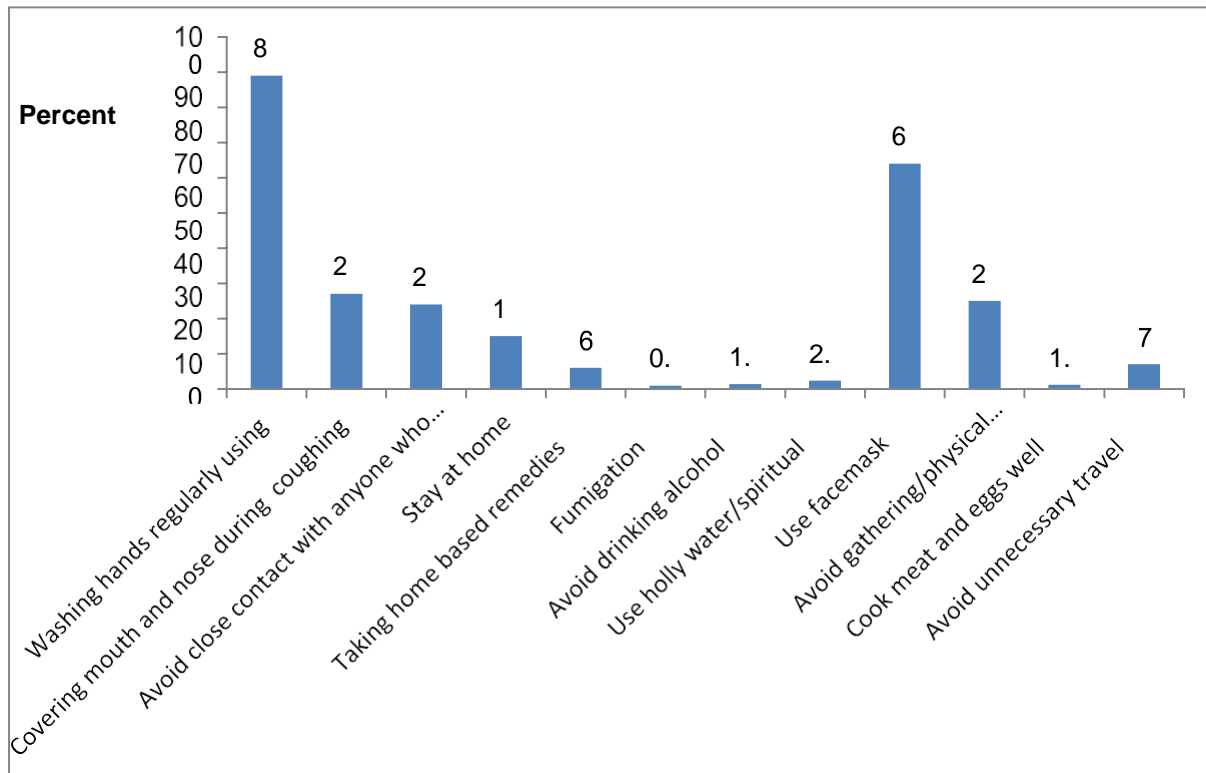


Figure 14 Perception towards measures taken to prevent COVID-19

6.7. Perception about government's measures towards COVID-19

About three-fourth of the population thought that the government of Ethiopia has been doing enough to control COVID-19 since the occurrence of the pandemic in the country. Numerous decisions were made previously in Ethiopia during the occurrence of COVID-19. Among the decisions made during the occurrence, 63%, 49% and 48% of population mentioned that avoiding public gathering, keeping physical distance and avoid handshake as the top three right decisions. In the qualitative the participants believed the community would comply with preventive measures better if the command post re-initiated again. The participants mentioned that the action taken by the government to prevent COVID-19 at the beginning was good.

“It is better if the government strengthen the previous rules on COVID 19 control. Face mask is not utilized during transportation. Government should strengthen monitoring, sanitizer utilization and physical distance. Individuals should avoid negligence and strengthen monitoring of action that were applied in previous time. Environmental health workers should strengthen monitoring on availability of water and soap” (HDA, FGD, Addis Ababa)

“Closing schools is appropriate action. Since 3-4 students were sit densely in a chair and if one student is infected with COVID 19 all student of schools will be infected. Re-opening schools is also appropriate action. Now density of student is decreased and up to 25 students are learning with physical distance in one class. Stay at home is appropriate action” (HDA, FGD, Gambela)

" COVID- 19 cannot be prevented with a single person, it affects the economic, social and religious interaction. And it is a fatal disease. Unless we take care and comply with measures recommended by the government, we will be affected. Government minimized COVID transmission by apply actions in closing schools, limiting number of people in transportations, decreasing social, religious, and edir interactions" (HDA, FGD, Addis Ababa)(For further, see Annex 11 sub section 1.5.4)

Reopening of school, “No mask no service” and normalizing passengers in the transportation were reported as the right decisions has been made currently, which were 52%, 39% and 31%, respectively (Table 7).

Table 7. Population perception about government's measures towards COVID-19, Ethiopia, RPBR survey 2021

	% weighted	Unweight frequency
Think government has been doing enough to stop COVID-19	76	6,004
Stay at home	38	3085
Avoid Public gathering	63	4973
Greetings by handshake are banned	48	3522
The right decisions that		
have been made during		
the		
occurrence		
Closing of schools	46	3981
Minimizing no of passengers on transportation service	35	3089
Physical distancing	49	3661
Use face mask	1.2	88
Hand hygiene(sanitizer and washing)	0.7	53
The right decisions that		
have been made currently.		
Reopening of school	52	4414
No mask no service	39	3112

Normalizing of passengers on transportation	31	2690
Don't know	22	1589

Ninety-four percent of the population agreed that consistently hand washing with soap and physical distancing were highly effective in preventing the spread of COVID-19. Moreover, 86% of population believed that consistently wearing facemask was also highly effective in preventing the spread of the pandemic. Thirty-five percent of the population mentioned that thought health seeking behaviour was affected by the disease and 29% of the population felt that their health was at risk due to work or occupational characteristics (**Figure 15**).

Ninety four percent (94%) of the population were agreed to notify suspected/ contact cases to authorized bodies (**figure 15**)

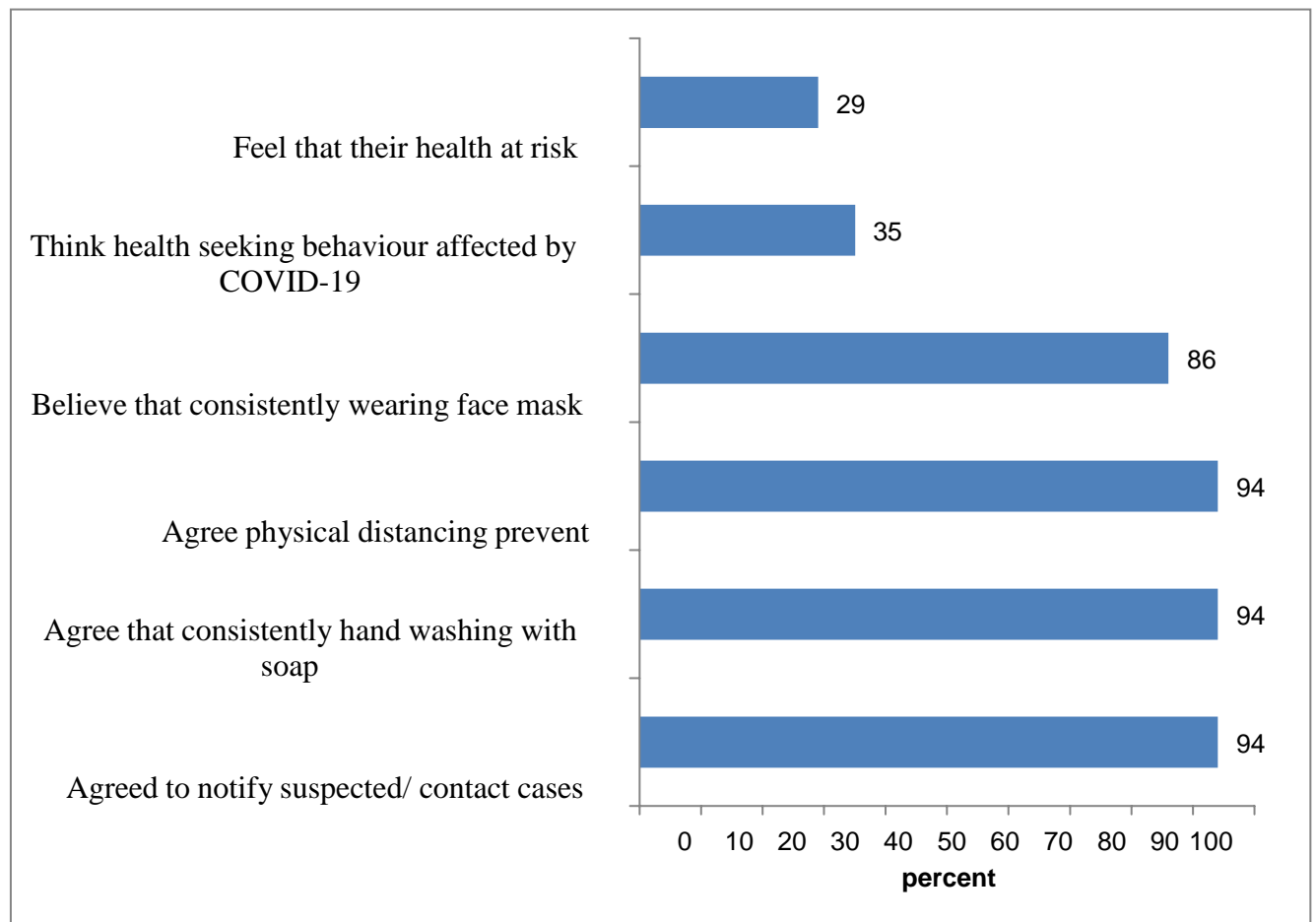


Figure 15. Perceived agreement and believe towards the prevention measures towards COVID-19 and health seeking behaviour, Ethiopia, RPBR survey 2021.

6.8. Perception towards prevention and control of COVID-19 by background characteristics

Table 8 shows age 18 and above population COVID testing willingness and vaccine acceptance by region, location, sex, education and religion. There were no high regional variations on taking of COVID-19 test (ranged from 87% to 97%) among regions. In general most population age 18 and above were volunteer to be tasted.

Similarly, there was slight regional variation on vaccine acceptance ranged from 83 percent to 97 percent among regions. More than 95 percent of Benshangul Gumuz and Somali population age 18 and above had interest to be vaccinated. The high proportion (17%) of population age 18 and above in Addis Ababa refused to take vaccination.

Both urban and rural population had almost similar interest for testing (ranges from 93% to 94.2%) and vaccine (ranges from 87.2% to 90.7%).

There was slight difference in vaccine acceptance by gender; the higher proportion (91.3%) of male accepted compare to 87.4% of female (Table 8).

Table 8. Percentage of population willing to take COVID-19 test and vaccine by background characteristics, Ethiopia, RPBR survey 2021.

Response	Take COVID- 19 Test		Accept COVID- 19 Vaccine	
	ye	s	ye	s
Region				
Afar	94.2		94.7	
Amhara	91.7		86.0	
Oromia	94.9		92.2	
Somali	87.6		95.2	
Benishangul	97.1		97.0	
SNNP	94.4		85.0	
Gambella	94.5		86.3	
Harari	88.6		89.3	
Sidama	90.8		92.3	
Dire Dawa	94.1		89.8	
Addis Ababa	93.7		83.1	
Location				
Urban	93.0		87.2	
Rural	94.3		90.7	
Sex				
Male	95.3		91.3	
Female	92.3		87.4	
Education				
Unable to read and write	92.3		89.5	
Read and write only	92.7		88.6	
Primary (1 -8 grade)	94.9		90.6	
Secondary (9-12 grade)	94.6		89.3	
College diploma/TVET	93.6		86.9	
Degree and above	96.4		83.3	
Religion				
Orthodox	93.4		88.6	
Catholic	97.9		93.1	
Muslim	94.9		94.0	
Protestant	93.5		86.5	
Other	72.5		72.5	
National Total	93.8		89.3	

Chapter 7. Socio-Economic impact and Satisfaction level on COVID-19 Response

7.1. Socio-economic impact of COVID- 19

Three forth (76%) of population aged 18 and above reported that COVID-19 had a negative impact on their daily economic and social interaction. Among this, 89 % faced economic disruption, 41 % lost their job and 36% faced psycho- social crises (**Figure 16**).

One fourth of the population (25%) were graded the extent of the impact of COVID-19 on their daily life were high.

Similarly as it is observed in our qualitative findings, pandemic has brought socio-economic impact. Accordingly, the study participants mentioned that COVID-19 has brought great economic crisis. The study participants explained the impact of the pandemic on economy in such a way that; high cost of living, closing of business facilities, as well as enforcing individuals to stay at home without work are some of the issues noted.

“... there were so many problems; everything became expensive because of COVID-19. There were times when you would buy something for 10 birr - up to 100 birrs, because there is no transportation, the price was elevated. The cost of living was high and there were people who depend on daily incomes, how did these people could live? ... people could not able to raise their children and it has a lot of pressure. There is pressure on everyone, and the cost of living is very high” (HDA, FGD, Sidama)

“Yes, it has affected our economic sphere because during corona time most of the time we were staying at home, we have stoped working and if you didn”t work how

is we going to buy the food? We used our saving but it won't last long” (HDA, FGD, Dire Dawa) (for further, see Annex II, sub section 1.6.1)

“... Yes, it also affected the social life. According to our culture, the best and honest relationships is tested and assured during funerals. For this, as much as possible all attend it. But when someone had a funeral alone, he/she will be affected. More than I can explain the disease affected such events. I believe it endangered the social life” (KII, Amhara) (for further, see Annex II, section 1.6.2)

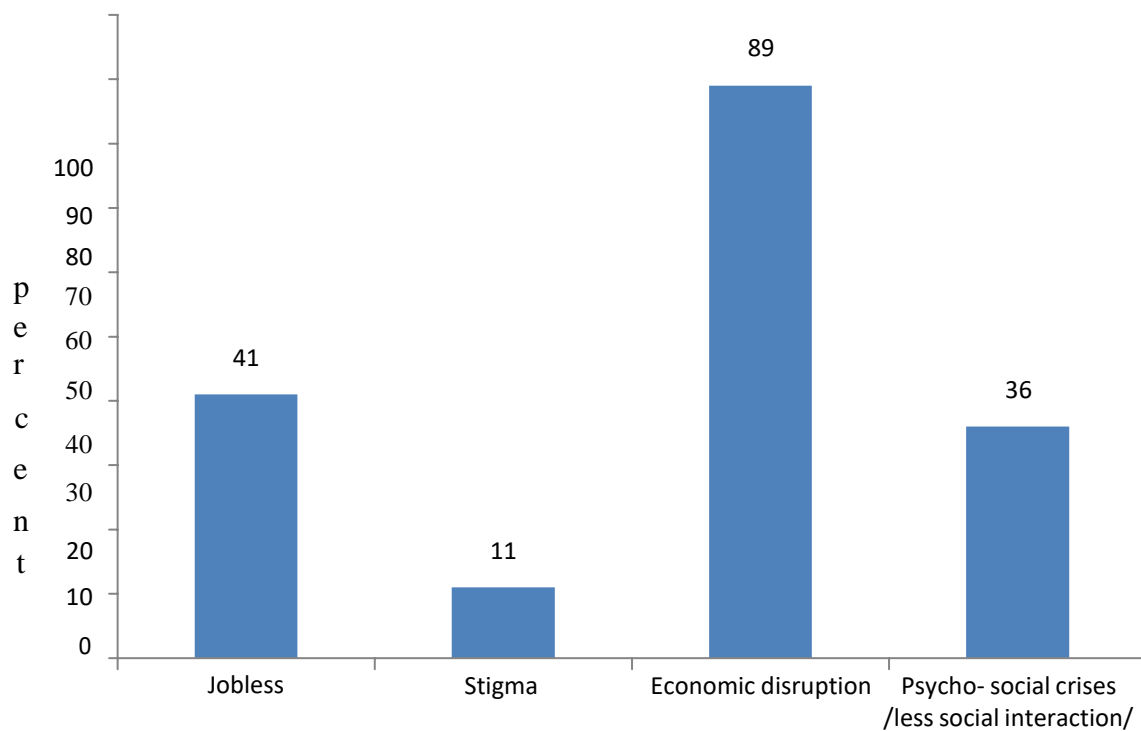


Figure 16. Types of Socio–Economic impact of COVID-19, Ethiopia, and RPBR 2021

7.2. Satisfaction level of by Government response against COVID- 19

Figure17 shows the satisfaction levels of population age 18 and above about country's Response against COVID-19 as very high (15%), high (25%) and low (9%) respectively. Similarly, the population were rated their satisfaction level regarding quality and coverage of media and social media as very high (14%), high (24%) and low (8%)(Figure 17).

Furthermore, the population were rated their satisfaction level regarding services provided by free toll centers as high (9%), moderate (36%), low (20%) and very low (17%)(Figure 17).

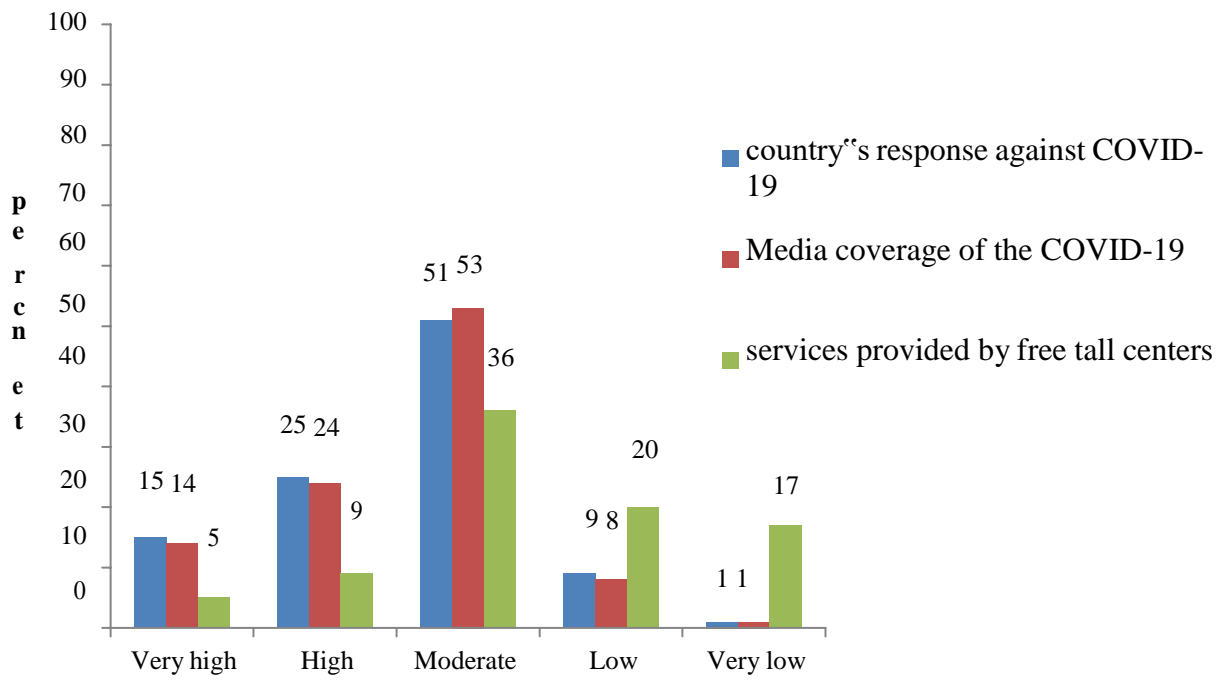


Figure 17. Population satisfaction level of COVID- 19 responses, Ethiopia, RPBR survey 2021

7.3. Population Satisfaction level of COVID- 19 response by background

Characteristics

There was high variation among region by satisfaction level of social media coverage. The very high satisfied with social media coverage ranged from the lowest 1.7 percent in Harari to the highest 27 percent in Somalia. The satisfaction level for highly satisfied category for social media coverage for COVID-19 ranged from the highest 41 percent in Dire Dawa to the lowest 18 percent in Harari. Five percent of Harari population aged 18 and above had very low satisfaction (**Table 9**).

According to the residence, one third of urban population aged 18 and above were highly satisfied with media coverage. The satisfaction level for media coverage for COVID-19 varied by educational level. Highly satisfied groups ranged from the highest 37 percent who had degree and above and the lowest 17 percent didn't read and write. Eight Percent of Catholic religion follower populations aged 18 and above had very low satisfaction. Concerned with service provided with free tall centers, around one third of SNNP population were satisfied. Fifteen percent of urban population aged 18 and above was very satisfied with free tall services (**Table 9**).

Table 9. Population Satisfaction level of COVID- 19 response by background characteristics, Ethiopia, RPBR survey, 2021

Categories	Satisfaction level											
	Social media coverage for COVID-19					Services provided by free tall centers						
	Very high	High	Moderate	Low	Very low	Very much satisfie	Very satisfie	Satisfied	.Not satisfie d	Not very	didn't use	
Region												
Afar	13.9	28.5	47	10.3	0.1	0.8	4.6	59.6	17	17.5	0	
Amhara	19	21	48	8.8	2.2	3.0	4.8	19.5	12	26	35	
Oromia	11	24	60	5.4	0.1	6.9	12	46	26	8.1	1.7	
Somali	27	21	40.9	8.7	1.8	8.8	11	40.3	35	1.5	3.0	
Benishangu	17	24	50	6.7	1.6	18.6	19	28.7	32	2.2		
l											0	
Gumz												
SNNP	12	28	48	11.4	1.4	2.5	6.6	34.4	16	30	10	
Gambella	11	20.7	59.7	6.8	2.2	1.0	4.5	31	4.3	39	20	
Harari	1.7	18.2	52	22.7	5.2	0	10	48	25	16	0	
Sidama	13.4	25.5	42.0	19	0.0	10.0	18.9	22.3	41.4	7.3	0	
Dire Dawa	16.4	40.5	36.4	6	.6	8.4	20.6	29.4	14.5	9.5	18	
Addis Ababa	19.5	39.4	32.6	8	.6	1.5	5.5	30.8	30.3	31.9	0	
Location												
Urban	11.9	30.0	50.8	6.6	.7	5.8	15	36.7	13	16	13	
Rural	15.2	20.6	54.7	8.3	1.2	4.7	5.5	36.0	24.4	18.	11	
Sex												

Male	14.5	24.7	51.9	7.7	1.2	5.1	8.4	35.2	22	16.8	13
Female	13.3	24.1	54.3	7.6	.8	5.2	10.1	37.3	18	17.8	11
Education											
Unable to read and write	12.8	16.9	60.1	8.8	1.3	3.7	5.9	33.5	24.7	18.2	14
Read and write	16.8	23.9	50.9	7.1	1.3	6.4	9.0	38.2	14.8	18	14
only Primary (1-8 th)	13.1	27.4	50.9	7.7	0.8	5.2	9.0	38.5	18.8	19	10
Secondary (9-12th)	14.7	29.8	48.1	6.7	0.6	5.8	13.3	38.6	16.3	17	9
College diploma/ IVEI	15.8	29.0	49.5	4.8	0.9	6.8	14.4	35.5	17.5	12	14
Degree and above	16.4	37.2	39.8	6.1	0.5	8.9	16.6	34.0	13	12	15
Religion											
Orthodox	16.4	24.4	52	6.6	0.9	6.3	12	35.7	16.0	14.8	16
Catholic	7.9	29.9	51.9	6.0	4.3	1.7	8.7	36.6	26.5	24	2.8
Muslim	11.7	24.3	54.3	8.6	1.2	3.6	8	35	30	16	7.5
Protestant	9.9	24.2	55.8	9.3	.8	3.8	4.8	39	19.8	25	8.1
Other	1.5	15.9	64.0	18.6	0	0	11	43	17.4	19	10
National Total	14	24	53	8	1.0	5	9	36	20	17	12.0

Chapter 8. Behavioral Response on Fundamental prevention Methods of COVID-19

8.1. Facemask utilization

Even if 82% of the population reported that they used facemask at different level, only 14.6% were wearing mask consistently and 85.4% were not wearing mask consistently (**Figure 18**).

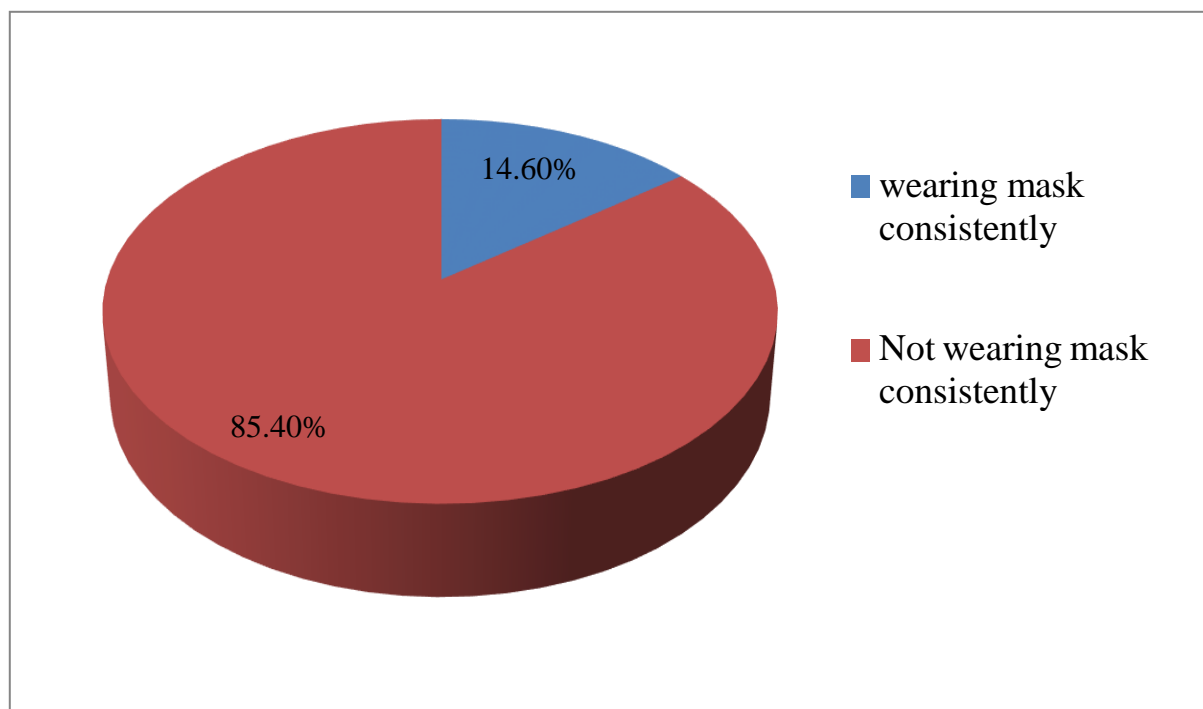


Figure 18. shows facemask utilization for prevention of COVID-19

Eighteen percent of population did not use facemask at all, whereas the rest of the population used facemask at different level of utilization.

As shown in the Figure 19, the reasons that did not wear facemask, 39 percent mentioned that they did not have access to mask as major cause of not practicing the mentioned COVID-19 preventive method followed by not believing its effectiveness (17%) and the discomfort it causes when used (17%). Reasons mentioned as other causes of not wearing facemask (14%) included fatigue, denial of presence of COVID-19, religious views, COVID-19 not being primary concern and negligence (**Figure 19**).

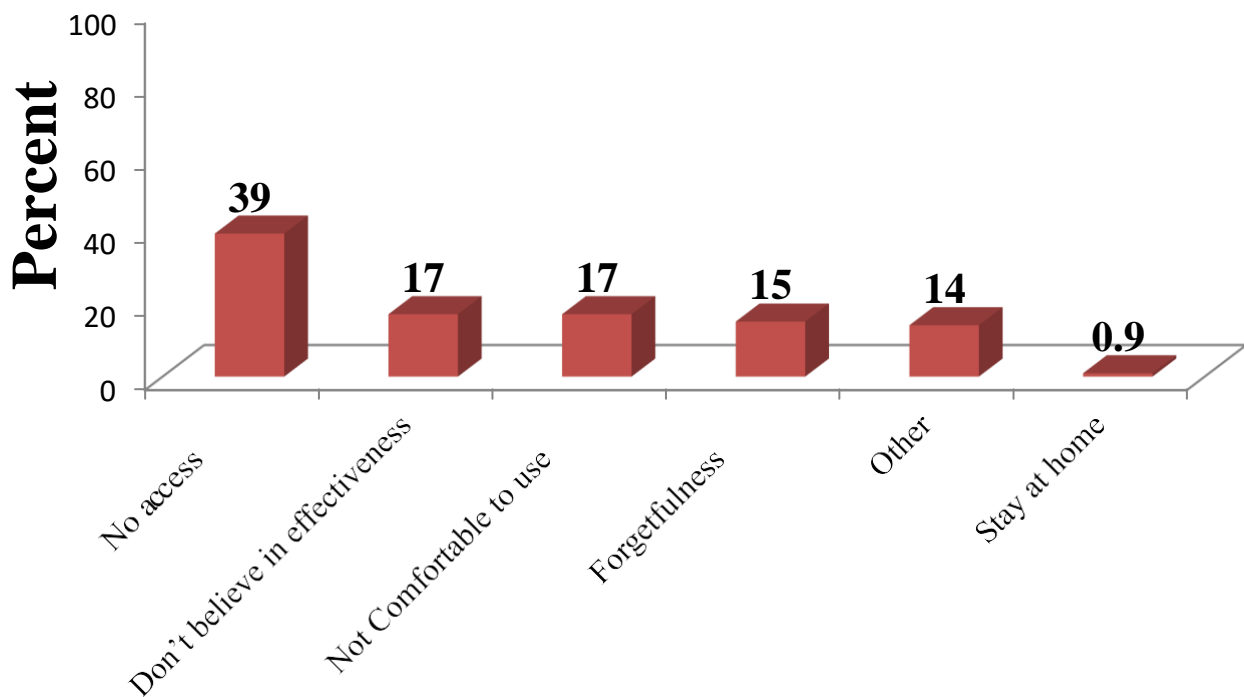


Figure 19. Reasons for not to wear facemask, Ethiopia, RPBR survey, 2021

8.2. Population facemask utilization practice to prevent COVID-19, by background characteristics, Ethiopia

More than half of the population (51 percent) living in Dire Dawa city administration followed by 18 percent of the population in Addis Ababa city administration always wore facemask to prevent COVID-19. Population that used facemask properly accounts for 23 percent of the urban and 7 percent of the rural population. Proper facemask utilization increases with educational level with the highest utilization among population with an educational level of degree and above (40 percent). Among this category population only 6.2 percent wore facemask rarely (**Table 10**).

Table 10. Population facemask utilization practice to prevent COVID-19, according to background characteristics, Ethiopia, RPBR survey, 2021

	Facemask utilization			
	Always	(Weighted %)		Rarely
		Often	Sometimes	
Region				
Afar	2.6	12.5	38.1	46.8
Amhara	9.0	17.1	39.5	34.5
Oromia	14.2	25.7	44.1	16.0
Somali	16.1	12.1	45.0	26.8
Benishangul	15.9	18.0	57.2	8.9
SNNP	13.7	28.0	41.2	17.1
Gambella	9.2	35.9	43.0	11.9
Harari	5.1	24.3	37.7	32.9
Sidama	17.3	18.9	48.3	15.5
Dire Dawa	51.2	29.3	14.8	4.7
Addis Ababa	18.0	36.5	33.2	12.4
Location				
Urban	23.1	29.2	37.1	10.5
Rural	7.2	20.6	45.0	27.2
Sex				
Male	14.6	23.8	42.1	19.4
Female	14.5	25.3	40.7	19.5
Education				
Unable to read and write	5.6	16.4	44.5	33.5
Read and write only	6.2	18.5	49.7	25.5
Primary (1 -8 grade)	11.7	27.2	44.3	16.8
Secondary (9-12 grade)	22.0	32.1	38.5	7.5
College diploma/TVET	31.1	29.5	30.4	9.0
Degree and above	40.3	28.7	24.8	6.2
National Total	14.6	24.6	41.3	19.5

Based on the qualitative findings, high level of self-reported practice of hand washing, mask wearing and social distancing reported by the study participants in qualitative study. Those who appeared to follow a consistent COVID-19 prevention measures on their daily life are individuals with known health conditions.

“Since I am known as asthmatic, I am using a face mask always. Similarly, I don't have physical contacting and I avoid material sharing. I use sanitizer well. Additionally, I change clothes I put on in the outdoor while I enter my home. I am also good at using water. I took more water which is important” (KII, Addis Ababa)(for further, see Annex II, section 1.4.3)

Additional reasons for decline in the practice of prevention methods including face mask utilization were found to be the government's lifting up of the COVID-19 state of emergency, and lack of coordination between the different stakeholders making it difficult for the public at large to follow preventive advices. It was also reported that some of the government offices themselves such as MOH did not adhere to COVID-19 prevention measures. One of the participants argued that,

“Things we see in the media are not good. We were doing many different activities as Addis Ababa youth association like helping persons to wash their hand on the street, keeping distance in taxi area. But there are meetings on media. But there is a rule for this that not more than prohibiting meeting of more than fifty persons at a time. Because of this the community was in confusion and we were in difficulty to defend them. Meetings were obstacles. Even I participated the ministry of health meeting with more than three hundred persons and that made me perplexed. It is difficult to create awareness about COVID-19 when the ministry of health didn't do it as it is the concerned body. These things create gap and cause people to be careless” (Youth Volunteer, KII, Addis Ababa)—physical distancing--

“We used to wear mask and wash our hands at the start, in collaboration with kebele and health extensions, we were teaching others to wash their hands and wear mask. But now since they are no more news about number of infected, people who die from corona, as the government opens school and work places, the community thinks that there is no more corona so I think that we have to create awareness again” (HDA, FGD, Dire Dawa) (for further see Annex II, section 1.3.4)

In addition, the current attitude of the community regarding the use of mask might have also discouraged many people from using masks in public areas. One participant explained how the community behaves with vigilant people as;

“If they see you wearing mask, they think that you are the one who infects them. There is no precaution; they have feared the mask itself. There is no precaution just eating and drinking together in mass gathering” (HDA, FGD, Harari)(for further see Annex II, section 1.4.3)

8.3. Hand hygiene practice

Around 99% the population aged 18 and above reported that wash their hands with water and soap, and/or sanitizer but only one third of the population 31% washed regularly to prevent COVID-19 (figure 20).

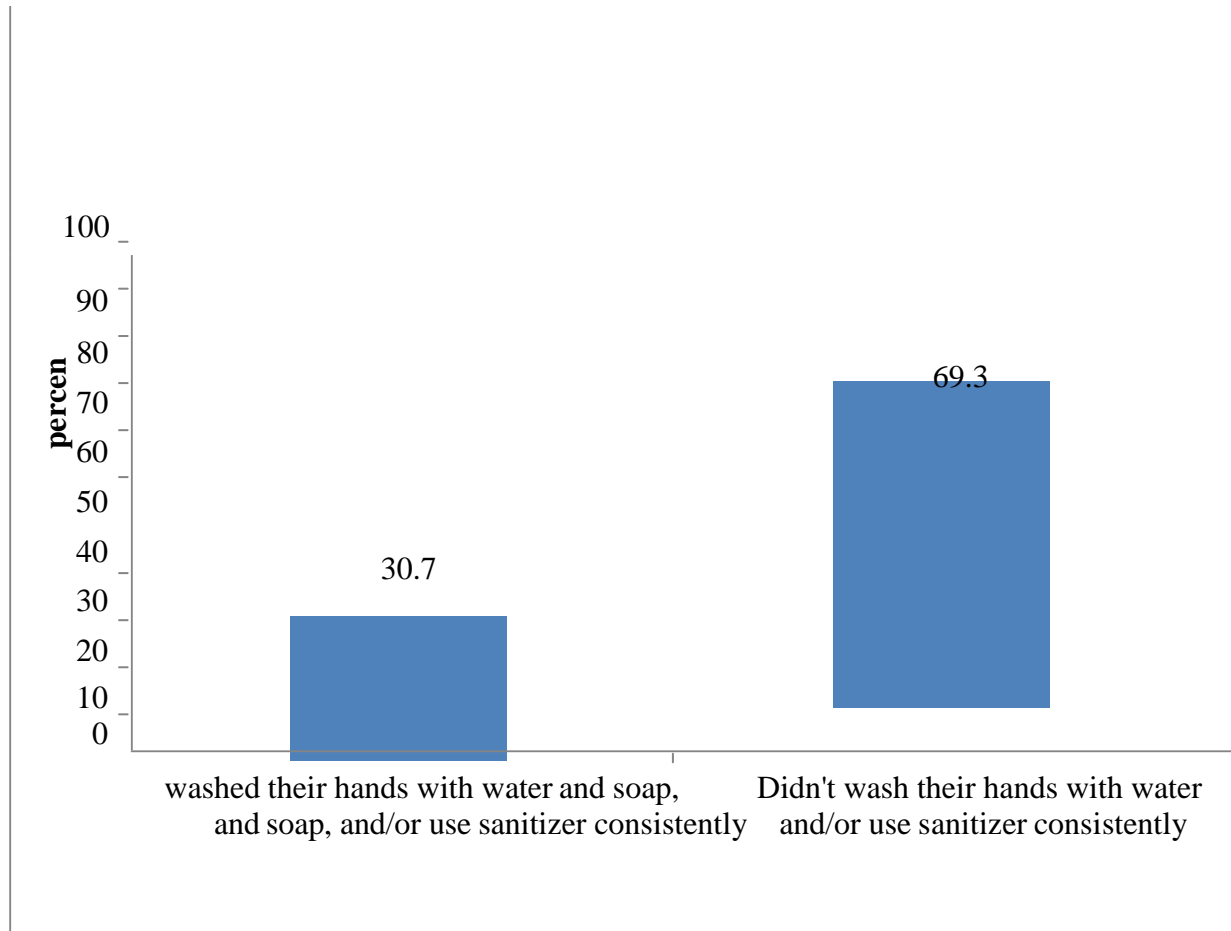


Figure 20. Shows hand washing practice for prevention of COVID-19

8.4. Population hand washing practice to prevent COVID-19, by background characteristics, Ethiopia, RPBR, 2021

Regular hand hygiene was practiced in higher proportion among Dire Dawa city administration population (67%) and Somali region population (55%). Practice of regular and proper hand hygiene was higher in urban population (42%) than rural (23%). Practice of regular and proper hand hygiene varied from the highest (54%) with population with educational background of degree and above to the lowest (21%) of who didn't read and write. No significant difference was observed between male and female facemask utilization and hand hygiene practice throughout all stages of utilization (Table 11)

Respondents in qualitative study responded that, with increased practice of the preventive methods, especially during the announcement of the importation of the first case, availability of water and soap. In ascertaining that most of the prevention measures are now abandoned one participant goes on to say;

“Yes, I used to do it myself, we used to wash our hands with soap and water at the entrance to our house, we used to put water and soap on in front of my house, other people came and went to the house and washed our hands outside with soap and water. Applying this now seems a bit slow. This is because there is a perception that corona disease has decreased “(Community leader, KII, Afar) (For further, see Annex II, section 1.4.3)

Another participant from a different region also added as, *“at the beginning of COVID-19, many people wear mask; there was water and soap everywhere; people used to take sanitizer always, but currently it is totally not practiced or absent” (HDA, FGD, B.Gumuz)* (For further, see Annex II, section 1.4.3).

Government's compromised response especially failing to enforce provision of COVID-19 prevention, failure to prevent mass gathering and the relaxation of earlier restrictions might have been the sources of doubts if COVID-19 is indeed a problem. Furthermore, health professionals' and government authorities' failure to consistently wear mask in meetings and the limited number of deaths as compared to level of fear could also be the main reasons for the declining realization of the preventive practices.

Table 11. Population hand washing practice to prevent COVID-19, according to background characteristics, Ethiopia, RPBR survey, 2021

	Wash hands with water and soap, and/or sanitizer			
	Always	Often	Sometimes	Rarely
Region				
Afar	19.4%	58.1%	15.0%	7.4%
Amhara	31.4%	33.8%	25.1%	9.7%
Oromia	28.1%	49.0%	20.8%	2.0%
Somali	54.6%	25.0%	16.4%	4.0%
Benishangul Gumz	41.5%	37.9%	18.0%	2.5%
SNNP	20.6%	31.0%	37.5%	10.9%
Gambella	48.5%	26.3%	19.5%	5.7%
Harari	53.3%	19.1%	22.5%	5.1%
Sidama	24.3%	28.4%	41.1%	6.2%
Dire Dawa	67.0%	24.9%	6.2%	1.9%
Addis Ababa	36.9%	53.5%	8.1%	1.5%
Location				
Urban	41.8%	33.6%	21.3%	3.3%
Rural	23.2%	43.9%	25.8%	7.2%
Sex				
Male	28.9%	40.6%	24.4%	6.0%
Female	32.4%	38.8%	23.5%	5.3%
Education				
Unable to read and write	20.9%	43.1%	27.8%	8.3%
Read and write only	24.9%	42.7%	24.4%	8.0%
Primary (1 -8 grade)	31.7%	39.8%	24.0%	4.5%
Secondary (9-12 grade)	38.8%	38.4%	20.3%	2.5%
College diploma/TVET	48.0%	29.9%	18.3%	3.8%
Degree and above	53.9%	27.9%	16.2%	1.9%
National Total	30.7%	39.7%	24.0%	5.6%

8.5. Practice of other prevention methods for prevention of COVID-19

Almost half of the population (46%) practice physical distancing includes not participating in social gatherings and avoiding mass gatherings. Avoid close contact with sick person (24%) and avoid touching eyes, nose or mouth with unwashed hands (24%).

According to qualitative findings, the experience of attending social events during COVID-19 era evidenced that, while majority of the participants said such social events are still happening with attendance of fewer people with careful practices such as masking and observing social distancing, some still argue that social events are not happening at all by giving some real-life examples where such event were cancelled for fear of the disease-.

“Since corona is said to have arrived, people have stopped visiting women who gave birth” (HDA, FGD, Amhara)

Visiting women while they give birth to a child is one of the most important cultural practice that is duly respected across many communities in Ethiopia. This cultural phenomenon is one of the centuries old traditions that have kept the Ethiopian people all together. Most participants have also argued that on many occasions, people tend to be less careful in taking precautionary measures while attending social events. This notion appears to be a wide spread phenomenon across the different region of Ethiopia.

“Yes, it is right. At present time, both wedding and other social events are happening as previous. For example, if you wear either mask or other things and go there, people would feel unpleasant or they would say that you yourself got Corona. They would say that why don’t we are infected? Or they would insult you, or they don’t even care” (HDA, FGD, Dire Dewa)

“Weddings and mourning are coming to normal. Wedding has just begun; normal wedding has started” (KII, Sidama)

On the contrary, some even said they did not change their practice at all;

“I will go anywhere as before” (KII, Somali) (for further, see Annex II, section 1.4.2)

8.6. Action taken during showing COVID-19 symptoms

Majority of the respondents (90%) sought medical care by going to a hospital or nearby health facility when showing symptoms of COVID-19. Calling to toll free line and self- medicating were practiced by 12 and 7 percent of the population respectively, as shown below when they or their family members showed COVID-19 symptoms (Table 12).

Table 12 Population actions when showing COVID-19 symptom, Ethiopia, RPBR survey, 2021

	Percent (weighted)	Frequency (unweighted)
Go to the hospital / health facility	90	7083
Call to toll free center	12	1021
Self-medicate	7	571
Look for a more experienced relative to advise them	6	655
Stay home	5	378
Will go to holy water or spiritual places	3.4	165
Other	2.4	195
Look for the traditional healer	2	239

Similar to the above findings, the qualitative study revealed that the participants would immediately go to health facility if they or someone from their family got sick with corona virus. This finding appears to be uniform across all regions. While this is the case, some participants have indicated that they would rather isolate the infected person in a separate room and took the necessary precautionary measures such as wearing mask and keeping distance than going to health care facilities. Majority of the participants had reported that they will force the whole family, including themselves, to self-quarantine and also get tested if someone got infected with corona virus disease. In addition, the discussants said they will call the dedicated hotlines to report to the government if they had come to know someone who is showing symptoms of COVID-19. While the existing behavioural response to COVID-19 infection is positive, participants were ready to call and to inform to the health facility.

“Yes, the first step is to take the persons with corona disease to the hospital immediately, so that he can get treatment. After he is taken there, if the government put him in an isolation center, he would get treatment there, and I would report any other people who had been in contact with him” (Community leader, KII, Afar)

“If I am infected, I will use a private room. I will be careful of my children not to infect them. They will follow and give me what I need with caution. I will also restrict them not to get others infected. Since the disease has no curative medications, I prefer staying in a well-organized home than going to institutions. It is better to isolate oneself in the home consuming a healthy diet” (HDA, FGD, Amhara) (for further, see Annex II section 1.4.1)

Some participants had also indicated that the use of homemade remedy to treat someone who exhibits symptoms of corona is a good option. They feel confident and healthy when they got cultural medicines.

However, it appears that participants with such belief are not completely discarding the option for seeking medical attention at health care facilities.

“I think there is a cultural homemade remedy for covid-19, so if we take that I believe we will be fine, until I get to the health institution, I use cultural medication, I will be fine, taking hot drinks is a good option” (KII, Diredewa)

“Before we go to the health center, we start with home remedies such as Ginger, Feto, and Honey. Only then will we go to the health center, but if it gets worse, we will be

treated at home. I did it on my own. During the start of Corona, the community took advantage of this. We will give the person hot water and garlic and then we will take the person to health center” (HDA, FGD, Harari)(for further, see Annex II section 1.4.1)

Chapter 8. Strengths and Limitation of the Study

8.1. Strength of the study

- ✓ This is the first of its kind that generated evidence on community risk perception and behavioral response at the national level.
- ✓ The response rate was high
- ✓ Using mixed method approach (quantitative and qualitative part)
- ✓ In the qualitative part of the study those individual who have outstanding listeners and reachable capacity (religious leader, community leader, community volunteer, Youth association and HDAS/WDAs) were involved on the study to see the gaps in the community level.
- ✓ The survey conducted within short period of time due to urgency of the information

8.2. Limitation of the Study

- ✓ Unable to cover one region due to security problem
- ✓ The study did not include observational study.
- ✓ Due to time constraint, field practice was not implemented
- ✓ Some EAs were replaced due to security problem

Chapter 9. Conclusion and Recommendations

9.1. Conclusion

The perceived risk of COVID-19 was low, while awareness about COVID-19 among Ethiopian population was relatively high, majority of population knew the cause and prevention methods of COVID-19, however, still there are peoples who thought as the cause COVID-19 is a **curse**.

In addition, there is a high variation on knowledge on the cause and prevention methods of the disease among regions and educational status of the population, which is low in peoples who have low educational status.

Majority of the population faced socio-economic disruption due to COVID-19 and the impact was high on the daily life of the population. Satisfaction level regarding services provided by free toll centers was found to be low.

The practice of undertaking fundamental COVID-19 preventive measures such as face mask utilization and hand hygiene practice was found low.

We shade light on that the risk perception of COVID-19 has a weakly positive impact on following precautionary measures and we understood that changing behaviour remains a challenge

9.2. Recommendations

- ✓ To disseminate COVID-19 disease and related information, there are different platforms which are very near to the communities. These are “*Edir & Equib*” and religious ceremonies; which were not well used. Hence, the MOH and concerned bodies should reactivate these and other channels to disseminate the severity and the current situation of the disease. Moreover, the media coverage should be scaled up and strengthen.
- ✓ To transmit trusted information about COVID-19 to the community, the health administrators and government should strengthen the electronic media (TV & radio) and the health system setting in better ways.
- ✓ The media should focus and cover on the areas of mode of transmission, how to be protected from COVID-19, symptoms and effective recommended safety procedures (Face mask, hand wash and physical distancing).
- ✓ All regions and city administrations should properly utilize “*Edir & Equib*”, HDA, and youth & women association platforms as sources of information for COVID-19 to transmit to their population.
- ✓ Provide a continuous public health education about the COVID-19 cause, symptoms, and the prevention methods by the government in collaboration with healthcare organizations and religious leaders.
- ✓ High proportion of population believed that COVID-19 was a curse. Hence, both religious leaders and health administrators should teach and aware the population about COVID-19 from disease and religious point of views.

- ✓ The finding shows that COVID-19 created social isolation in some group. In order to avert such discrimination and stigma against people with confirmed cases, who have close contact with cases and health workers, psychiatrists and sociologists should teach the community to avoid such behaviors.
- ✓ To increase willingness of taking COVID-19 tests, the MOH and regional health bureaus should use appropriate channels to aware the people about the test and unfavorable consequences following testing.
- ✓ In order to minimize dropout of vaccine acceptors, the MOH should aware about the vaccine effectiveness, side effects (AEFI) and other related issues.
- ✓ Government of Ethiopia should re-implement and a variety actions and precautionary measures that were implemented during the occurrence of the pandemic and renovate new policy actions that will be feasible to practice in response to the COVID-19 pandemic in the current situation.
- ✓ Risk communication and community engagement section shall be directed towards enhancing the risk perception and revitalizing COVID-19 measures and ensuring the implementation of appropriate practices towards the prevention of the current COVID-19 pandemic.
- ✓ The government and other concerned bodies should create job opportunity to decrease social impact of COVID-19.
- ✓ MoH and other concerned bodies should expand pyco-social therapy through health facilities.
- ✓ The practice of fundamental prevention methods of COVID-19 such as face mask utilization, hand washing practice and physical distancing should be strengthen.

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Annex I. Enumeration areas and households

Annex I: Enumeration areas and households						
Distribution of enumeration areas (EAs) and average number of households in a EA by region, according to residence, Ethiopia Covid-19 Risk Assessment Survey (2020/21 EC-19 RAS)						
Region	Enumeration Area			Average Household Size		
	Urban	Rural	Total	Urban	Rural	Total
Tigray	2,334	6,901	9,235	174	122	135
Afar	383	1,404	1,787	170	120	131
Amhara	7,207	29,261	36,468	177	121	132
Oromiya	11,156	45,343	56,499	169	117	127
Somali	1,506	5,453	6,959	172	123	133
Beni Shangul Gumuz	431	1,259	1,690	166	119	131
SNNP	4,162	18,235	22,397	168	109	130
Sidama	1,238	4,794	6,032	181	121	150
Gambela	216	376	592	169	119	128
Hareri	183	194	377	171	122	132
Addis Ababa	4,979		4,979	169		169
Dire Dawa	340	247	587	173	125	153
Ethiopia	34,135	113,467	147,602	171	119	131

Source: The upcoming Population and Housing Census (PHC) Sampling frame provided by the Central Statistical Agency (CSA).

Annex II. Qualitative Result Findings

Study on COVID 19 Risk Perceptions and Behavioural Response in Ethiopia

1. Qualitative result

1.1 Socio –demographic characteristics of the study participants

This study employed four categories of participants for key informant interview; religious leaders, formal or informal community leaders, youth associations/community volunteers and HDAS/WDAS for FGD. Accordingly, to gather information from a standardized set of respondents 22woreda`s (districts) were selected for focus group discussions (FGD) and key informant interviews. In total 44 FGD and 88 key informant interviews was conducted. Of the total of the study participants majority were females. The age group of participants ranges from 18 to 65 and majority age ranges from 25-34 age groups. Majority of the respondents were married and belongs to Muslim by religion. Majority of study participants attended 1-8 grade education, while only few of them have a degree (*For detail please see table Qual 1; annexed*).

1.2 COVID 19 KNOWLEDGE AND AWARENESS

1.2 1 Knowledge about modes of transmission and symptoms of COVID 19

The qualitative findings of the study have explored participants` knowledge and awareness across the regions.

On a general note, majority of respondents are aware of the incidence of the current pandemic with even a detailed information about its symptoms, prevention methods, modes of transmission and after math. Almost all respondents across the regions explained the knowledge they have about the disease characteristics.

Accordingly, high degree fever, dry cough, sore throat, shortness of breath, headache, diarrhoea, nasal congestion, fatigue and runny nose are the prominent symptoms of the pandemic in addition to the asymptomatic cases detected.

“Well, the first symptom is dry cough followed by quick breath, severe headache and fever. If these symptoms are observed it indicates that the person is infected, that is why temperature checks are usually made” (Community leader, KII, Oromia)

Participants also related COVID-19 symptoms with other diseases such as malaria, flu, meningitis and common cold due to their similarity in manifestation. Focus group discussants from Harari region has depicted it as follows.

“They (COVID-19 victims) are vulnerable to malaria. Malarial has signs of headache, dizziness, and fever like the disease (Covid-19). There is nothing to differentiate from one another” (HDA, FGD, Harari)

“As tried to explain, this disease seems like similar to other diseases. It is similar with meningitis and malaria.” (HDA, FGD, Harari)

A community leader respondent from SNNP and Diredawa region also supplemented that;

“First, there is a fever, cough, and cold like malaria. They said these symptoms should be treated, therefore as soon as the fever starts, we need to go to a health centre and talk to health care professionals. There is also fever and vomiting” (Community leader, KII, SNNP)

“.... In the first place you will have fever then you start to cough and also there is a feeling of chills like malaria” (Community leader, KII, Diredawa)

One of the symptoms of the disease, conjunctivitis was mentioned by WDAs from Somalia region noted that;

“There is a change in your body parts, red eyes” (HDA, FGD, Somalia)

By the same token, key informants from SNNP and Gambella regions also mentioned redness of the eye as one of the manifestations of the disease.

“The symptoms include persistent fever and cough. It has a continuous Cough and sneezing. Now, if the eye is red and have tears, that is COVID-19 symptom” (Religious leader, KII, SNNP)

“The first symptom a patient manifest is cold; will have sneezing, cough and red eye. The majority have cough and sneezing” (Youth Association, KII, Gambela)

Only a handful of respondents consider Covid-19 itself as a complication from previous illnesses particularly common cold and flu.

"We have heard that the symptoms of corona disease are coughing, sneezing, runny nose, then it turns into a common cold, that flu turns into a disease, and so on. We have heard that the disease affects people" (HDA, FGD, Afar)

".... The symptoms are like persistent flu. These are the symptoms" (KII, Benshangul-gumuz)

Furthermore, the asymptomatic and unpredicted nature of the disease was also well described along with the *symptoms*.

" ... I have information about the symptoms. symptoms include a sore throat. It is being said that the former signs are no more manifesting now. It has something like a cough; there are so many types it's difficult to list. Now it doesn't even show any signs. The signs are changing and ... there are many different signs" (Community leader, KII, Sidama)

Another informant from SNNP region also described that;

"..... Sometimes there might be no symptoms and victims may be screened positive. The same was true at the beginning. Yes, in the beginning, sneezing and difficulty of breathing were symptoms that I knew. At another time, however, people were diagnosed with covid-19 without any symptoms" (Youth volunteer, KII, SNNP)

Participants have an in-depth knowledge apropos modes of covid-19 transmission. Respiratory droplets and contact routes were the primary ways mentioned to spread the virus among people. FGD from Harari participant mentioned;

"I think the disease can be transmitted through air droplets, contact, using the same utensils in common, lack of hand washing, greeting with hand shaking, closeness to each other, lack of mask wearing, and crowding in religious institutions and markets" (HDA, FGD, Harari)

Another FGD participant in Gambella region also stated the role of note (Birr) exchange in transmitting the disease. He described that;

"COVID 19 will be transmitted through Birr Notes. If I give birr note to other person, the disease will be transmitted to him/her unless he/she uses hand gloves during receiving" (HDA, FGD, Gambella)

Some respondents also revealed that they believe covid-19 is an airborne disease.

"...This is a viral disease, but something that makes it different from other diseases is that it's airborne, it's not just like HIV, does not transmit by sharp materials or by sexual intercourse, it transmits by air, by a physical contact and by not keeping social distance" (HDA, FGD, Oromia)

"It is transmitted by coughing, it is transmitted by sneezing, when we sneeze, we should sneeze away from people, and we should not breathe close to people. If someone coughs and sneezes, the disease is contagious. If a person wants to cough, should cough covering his mouth with his hand; (demonstrating) so that he does not pass it on to another person" (Community leader, KII, Somali)

"It is transmittable through breath. When somebody sneezes, the bacteria would be dispersed and this would be transmitted among people. Therefore, I think physical distancing shall be done and shall cover our mouth by our hands" (HDA, FGD, Diredawa)

How the virus can be transmitted from person to person through contact with a person from high prevalence area was explained by a community leader from SNNP region as follows.

"Covid-19 virus is transmitted through air depending on seasons. If you came from Addis Ababa here because of you or if someone interacts with you, it may come in with you" (Community leader, KII, SNNP)

1.2.2 Knowledge of COVID-19 prevention methods

In addition to knowledge about modes of transmission and symptoms, an assessment of knowledge of the prevention mechanisms of the disease was one of the focus of the study. Respondents revealed that they have been edified with different prevention mechanisms from different sources. Cleaning hands often, using soap and water, or an alcohol-based hand rub, maintaining a safe distance from people showing symptoms of COVID-19, wearing a mask,

physical distancing, not touching eyes, nose or mouth and covering nose and mouth with bent elbow during coughing or sneezing were some of the prevention mechanisms mentioned by respondents. A community leader in Sidama region noted;

" ... We've been doing a lot of work on this. Regarding prevention: What we used to say is that to use masks, wash hands often, and keep distance. In the past, keeping social distance was very important, now this is reduced. By maintaining distance and general hygiene; At the same time, the community is recovering from another diseases. We can prevent this disease by wearing a mask and keeping our distance and keeping our hygiene" (Community leader, KII, Sidama)

"For the prevention, when a person has the safety material as I have the mask, since a mask is prepared for covering the mouth, people should not hold it on their hands" (Youth association leader, KII, DireDawa)

Life style changes as a response to Covid-19 were also detected in some areas. These includes, avoiding coffee drinking ceremony, separating sleeping beds for family members, and avoiding sharing of drinking cups and eating plates. In illustrating this issue, FGD from SNNP best illustrates this idea;

"Even though the disease didn't happen to us, we wash our hands with soap and water and put on a mask. Our children do not go to places of our mother in laws just like the previous times. Even mothers and children do not sleep together at home. Our children do not sleep with us. We sit in a distance. For example, now, our mother said, "why don't you come and drink coffee?" we said no, we won't go inside. we said, we won't get inside, it's corona. Half of the people agree that the disease exists, the rest do not since nothing has happened yet. We are protecting ourselves and our children. Our children go to school wearing masksEven when we go to funerals, we take a drinking cup from our house. During the day, we would sit down and drink our cup of coffee and then return to our places. When corona started, we didn't go out from our home, we just sat at home. Now it's getting lessened, and when we leave, we take our cup with us and sit in a distance" (HDA, FGD, SNNP)

Howbeit respondents listed the different ways of prevention mechanisms, yet complying to the rules was described as challenging due to multiple reasons. As per the respondent's

opinion, the minimal attention to the disease from the government resulted in negligence by the community members as well.

“I am talking to you clearly that we say COVID-19 is decreasing because the government is not talking about the disease like before. Previously, restrictions on the carrying capacity of vehicles was reduced by half but now they are allowed to load up to their full capacity and beyond, illegally and road traffic police are not inspecting always. Sometimes they inspect mask wearing. But they are not fully inspecting that too. This is what makes us under threat of the disease even though we are giving awareness during face- to-face discussions, at markets and funerals. However, we perceive that the disease is decreasing because no one was allowed to go for market and public transport without wearing mask previously, and now the government’s control has become loose”
(Youth Association Leader, KII, SNNP)

The interview transcripts reveal the role messages transmitted through medias to create awareness of the community in tackling spread of the virus. In explaining the issue, the discussants from Amhara region noted;

“... we first saw it on TV. Then, we have been taught by the health care professionals to keep our distance on meetings, to use masks and sanitizers, and to reduce the number of people by half during transportation. To change our clothes, we put on during the outdoor activities while we return to our home. Generally, Experts have taught us not to do anything without washing our hands thoroughly. As it was broadcast live on television by the Prime Minister and is recommended by the professionals, we are keeping our hygiene, we also assure our customers are washing their hands before they enter to our home for the service we are providing” **(HDA, FGD, Amhara)**

1.2.3 COVID 19 management /Self care

Almost all respondents affirmed that people with symptoms of covid-19 should be secluded from family and friends due to the contagious nature of the disease and seek for a medical attention.

“ Most of the time Covid-19 symptoms are very much similar with that of the common cold. Many people ignore going to hospital/clinic when they encounter with

covid-19 symptoms saying “this is common cold; I can get through”. But as to me, everyone should immediately go to health centre when he/she encounter with such symptoms” (**Youth Association Leader, KII, Oromia**)

“Anyone coughing and sneezing should go to the hospital and get tested for corona disease. When we see people with the exact symptoms of corona, they should tell them that there is a hospital with a treatment for corona disease” (**HDA, FGD, Afar**)

It’s also stated that selfcare can be managed by physical distancing, eating balanced food and exercising.

“Self –care is staying at home to prevent virus transmission to others, hand washing with soap frequently, using facemask, taking drugs for fever and headache, eating quality food, drink safe water, and avoiding non cooked foods” (**Religious leader, KII, Gambella**)

Traditional ways of self-care are also mentioned in line with the scientific management. Discussants mentioned the importance of applying indigenous knowledge as prevention mechanism.

“Person infected with COVID 19 should be kept in separate place, should eat goat meat because goat eats different plants and vegetables therefore goat meat is used as a traditional medicine previously and it is known culturally. Exercise is also good but should exercise based on professionals advise, the exercise should be based on his/her ability” (HDA, FGD, Gambella)

“We have a local culture to prevent corona, they use ginger, garlic, and honey to prevent corona and this has been the practice of many people” (Community leader, KII, Afar)

Yet, isolation and selfcare might be challenging in some setups. Participants noted the problem of family size and social cohesion in affecting prevention.

“When you look at our woreda or our community, it is a district with a small family and connected and very crowed community. Therefore, self-prevention may not be possible” (Woreda representative, KII, Addis Ababa)

1.2.4 Risks and complications

Risks and complications of the virus is one of the areas communities are found to be well informed. People with comorbidities, children and adolescents, and elderly were identified as vulnerable groups with a high risk to contract the virus. In explaining the issue discussants from Amhara FGD stated;

“I think the disease can be aggravated by the presence of HIV/AIDS, Liver disease, especially, asthmatic patients could get COVID easily. It is because it affects the lung and reduces lung capacity..... I think COVID becomes severe among patients with pneumonia, AIDS, and TB. It is due to losing resistance. You know it better.....We are hearing now; malaria patients are increasing. We should use a sleeping net. otherwise, malaria may complicate COVID-19” (HDA, FGD, Amhara)

“If the infected person had cardiac problem or TB, the chance of death is high. The person might also stress about dying if infected with COVID19, and becomes hopeless. When someone has been infected with COVID 19, no one drinks coffee with them, and HH economy might also be affected, if there are 6 family members in a house and they face economic problems, those all people will may die, and this is more serious than COVID 19” (HDA, FGD, Gambella)

“The elderly was the one who were previously diagnosed with the disease. But now it is the young people who are most vulnerable. Because young people do not listen to advices, I don't know what they are. The young people just don't listen to advice. For example, if I start with my own children, they will not avoid touching a cell phone. So, I say young people are very vulnerable to this virus. I think it would be good if government worked on the youth in the future” (Youth Volunteer, KII, Sidama)

“For example, children are affected. That is, children and homeless people are infected with this virus I understand that children and the elderly are more likely to be affected” (Youth Volunteer, KII, Sidama)

12.5 **ies source of information about COVID 19**

Medias and health professionals especially health extension workers, take the lion share in disseminating Covid-19 related information to the community followed by other sources.

"We first saw it on TV, then health extension workers were teaching around, then they were teaching with a microphone outside the health centers, we trust health professionals more" (HDA, FGD, Benshangul-gumuz)

"I trust in information from the World Health Organization and I believe the information from the minister of Ministry of Health on a daily basis more than any other information" (HDA, FGD, Oromia)

Yet it is stated that Information should be disseminated by people who have deep understanding about the pandemic, they should not see their role as an obligation, rather they should be accountable.

"..... A person who gives this education about corona disease.... Should take it seriously as it is a national issue, as it is a matter of life. But the people who give this lesson does it as an obligation, does not seem to believe in what they teach" (Youth volunteer, KII, Afar)

In some cases, information from the media is seen as equally important with the information received from health professionals; as the latter is highly desirable, the former is also actively encouraged.

"Media broadcasts visualizing something visible, which can simply be captured; it's not a scandal, it's more realistic. Media is transmitting clearly about those infected, diseased and died. I trust in media because I am watching what is happening with my eyes" (KII, Harari)

"Yes of course, media is the source of updated information. The problem is the public do not give attention to it. It informs people important information like the role of health professionals and the role of the people at the time of infection ... So, I am much informed from media and health institutions" (Community leader, KII, Oromia)

The transcripts of the study also showed the importance of interviewing recovered patients of COVID 19, discussants mentioned as they are able to acquired more information.

".... People in the media and those who have recovered from the pandemic and out. When they were interviewed, I learned a lot from them" (HDA, FGD, AA)

Discussions among friends and neighbors, awareness creation sessions organized by religious leaders, government and NGO's, social medias (Facebook, telegram, MOH& EPHI websites) and information dissemination by Ethio-telecom were mentioned as other sources of information. In addition, information written on papers were also noted to be means of addressing information to the public.

".... From TV, radio, Facebook, EPHI and ministry of health. The other thing that created awareness is the recorded voice you hear before the phone ringing created in collaboration with telecommunication" (Youth volunteer, KII, AA)

".... we got the information from a variety of leaflets" (Youth volunteer, KII, Sidama)

Respondents noted the role played by government sectors in disseminating information about the pandemic and supporting the economy during the pandemic.

".... We also got from the Office of Women, Children, and Youth, while we were working in collaboration with them and we have come up with a lot of things to create awareness in the community. Using this opportunity, I would like to thank this sector. They focus on the work we do and goes down to the lowest administrative level with the young people and does a lot of things Though there is a concerned sector (Health Office); they (the Office of Women, Children and Youth) have done a lot of things, they provided us mask and sanitizer from their own source" (Youth volunteer, KII, Sidama)

Though coverage of, sustainability and consistency government intervention were raised as an issue, the role of government during the initial period were well appreciated in disseminating information and controlling the pandemic. This issue is explained among the discussants as;

"Government's activity on COVID 19 is good. The activity is good in Addis Ababa, but it's less in Gambella region. The activity done by government was good for about four to Five months after the first onset of COVID 19. Currently, there are no activities done by the Government. Except Mass Media, nobody is working on community awareness creation. Even awareness creation via TV has decreased. Information about COVID 19 used to reach us on daily bases during the initial time.

Currently, participation of community and government on delivering information related to COVID 19 has reduced a lot" (Religious leader, KII, Gambella)

1.3 COVID 19 risk perceptions

1.3.1 Perceived perceptions on severity of COVID-19

The majority of the study participants believed that COVID-19 is the most serious and fatal disease than any other communicable diseases. They agreed that it disrupts every aspects of their lives including health, family and economy, which made the disease to be understood as the most fatal problem across the world. Example, a FGD participant in Amhara Regional State described that COVID-19 is the most serious disease as compared to HIV/AIDS. The discussant described that;

"Formerly, HIV/AIDS was the most feared disease. However, COVID-19 is a very serious and bad disease than any other" (HDA, FGD, Amhara)

"HIV/AIDS was perceived as one of the deadliest and disastrous disease in the world in general and in our country in particular. But currently, Covid-19 is even more serious than HIV/AIDS" (Youth leader, KII, Oromia)

Some participants also viewed that COVID-19 is dangerous and serious case than any other social problem. A FGD participant and a religious leader in Amhara Regional State described that COVID-19 is a horrible disease its consequences are severe even than war.

"Because it can kill thousands of people in a matter of hours ... there no cure but the vaccine is still available and the disease is constantly changing. It is so bad that it it causes so much economic and social crisis (HDA, FGD, Amhara)

"COVID-19 is a horrible disease ... It has been difficult in both the United States and China ... It affects everyone and its consequences are severe even more than war (Religious leader, KII, Amhara)

There are a variety of factors that influenced the perception of the study participants to view COVID-19 severe disease. One of the key factors mainly described by most of the respondents was the nature of the disease, mainly its rapid spread and attacking human body easily, which rapidly led to death. FGD discussants noted;

“Once infected with corona it will kill. For that we take care of ourselves by keeping physical distance from people who have cough and sneezes” (HDA, FGD, SNNP)

They also assumed that the disease is the most serious problem since there is no cure for the pandemic.

“COVID-19 is a non-curable virus. It causes loss of lives, reduces love, undermines unity. Because of that, there is a big risk. I think that if this trend continues, the elderly and those with comorbidities will be more likely to be affected” (Community leader, KII, SNNP)

Most of the study participants believe the seriousness of the disease by realizing the number of people died and infected. Through media and social workers, most of communities realized the increasing number of deaths and spread of the infection and this reality influenced them to fear. A youth working as a volunteer in Oromia Region described;

“I see people dying and getting sick. We are watching them in the media; we see them in person and they are telling us what kind of pain they are going through. They are telling us that there is a lot of pain” (Youth volunteer, KII, Oromia)

A key informant interview with community leader in Dire-dawa illustrates why they considered COVID-19 is the most serious disease as follows:

“The seriousness of COVID-19 is that it has no medication, that’s the threat. Second, individuals who are in quarantine, who are infected and died this all makes me fear. There is no medication to treat, once one person gets infected. I don’t think he/she will be healthy again; this is the first threat I have. The other concern is that not everyone in the community has the same awareness like I have” (Community leader, KII, Diredawa)

In addition, they viewed that the disease is not only affects individual health but also disturbs the networks surrounding the individual, that is, their social and economic setting. The study participants feared that the disease is highly disturbing their economic life. Accordingly, work, time, income and other daily lives were affected. In elaborating the issue, a KII interviewee from Benishangul-gumuz Regional State noted;

“The disease restricted us from performing various economic activities, the disease seriously harms economy, which results in lowering family income with high number of dependents (Community leader, KII, Benishangul Gumuz)

A FGD discussants from Oromia Region raised the seriousness of the pandemic in terms of its transmission, they noted that;

“The economic damage is huge. If you have this disease, if a family member is caught by the virus, you will not be able to get close to treat your family because the disease is contagious and dangerous. So, this is a very serious” (HDA, FGD, Oromia)

However, FGD discussants from Afar Region reflected different views with in the same FGD concerning the seriousness of the pandemic. As understood from the below quotations, some respondents believe that since they didn’t realized death and infected cases in their respective locality, COVID-19 is not a severe problem.

“The virus was highly contagious, but it did not kill anyone here, but we have heard that Djibouti has suffered a lot” Another participant described, “I’m not worried about the disease ... I have never seen anyone with a corona in our town” (HDA, FGD, Afar)

Similarly, the interview transcript from Dire-dawa shows noted he knows no body being infected in his network, thus it’s difficult to argue about the seriousness of the pandemic.

” It’s hard to say for sure, because I have never seen any relative, neighbor or anybody for that matter who have the disease as of yet. We only hear it from abroad. We can only feel and understand about the disease when someone close is having the disease” (KII, Dire-dawa)

It was also reported that the severity of the disease also comes from the fear that it greatly affects their social life. The study participants considered that the disease affects family relations. A FGD participant in Afar Region elaborated the influence of the disease on family, which resulted in the increasing condition of perceived severity.

“COVID-19 is very bad disease that it hurts parents. The person who infected is left alone. He/she is not allowed to stay where he is. He is being kept away from people.

We are being taught not to spread it to human beings. Then it is an evil disease, and according to Allah, we are waiting for it” (HDA, FGD, Afar)

Similarly, other respondents explained the seriousness of the pandemic in terms of the pressure it brings on isolating couples, which may result in loose of relationship and integration. A FGD discussant in SNNP Region said that;

“I felt isolated when my husband has been infected during working in bank. I keep physical distance, and advised to make no contact with him. This made the disease is satanic” (HDA, SNNP, Afar)

Beyond family disintegration, there is also fear of loose of social networks among neighborhood and relatives. FGD held in Gambella Region illustrates how COVID-19 affected social interaction at neighborhood level;

“COVID is fatal. It affects social life, and disturb eddir. It affects relationship with family members. Person who has ever been infected with COVID 19 could not live and eat together with others. People are at risk because it is fatal. Unless GOD protect us, no drug found that cured the virus” (HDA, FGD, Gambella)

Another FGD discussant in Addis Ababa feared that COVID 19 affected other forms of social gathering. To put in their words, participants noted;

“It is a dangerous disease and it affect living together. Wedding, Eddir, baptism is not celebrated due to COVID 19. It leads to disintegration unless we care. COVID 19 is a dangerous and serious disease” (HDA, FGD, Addis Ababa)

1.3.2 Perceived risk of infection by COVID 19

The KII and FGD transcripts show that some of the study participants consider themselves that they are infected by COVID-19. FGD participant from Benishangul Gumuz suspected himself infected by COVID-19 due to the common features of COVID-19 and other diseases such as common cold.

“I think I was infected with COVID-19 because once up on a time when the disease outbreak in Ethiopia, I was sick with severe type of common cold but I took a hot drink and recovered well, I take care of myself, but at that moment I was severely sick with flu symptoms similar with COVID-19” (HDA, FGD, B. gumuz)

Similarly, a FGD participant in Oromia Region described the situation of high level of perceived risk of infection created worry and tensions in relationship as follows:

“In my current residence one of my neighbor went to a bank and became ill when He come back. We were stressed by considering that we exposed to the virus. We reported to concerned body and obtained necessary test/investigation. We hadn’t a pain, but psychologically we were affected and tensioned. Because we worried not only about us but also about our children and family. Around 40 persons in our kebele were tested due to this reason. Until health personnel told us that we were free we considered ourself infected. As a result, we feared and entry to the kebele was restricted” (HDA, FGD, Oromia)

They described that their occupation, mobility, social and economic context in which they are living made them to suspect themselves. The study participants reported that participation in social occasions such as wedding, funeral, church/mosque are mandatory and practically participating, which made them to suspect themselves. A FGD participant in Amhara Region described that;

“I think I am likely to become sick with COVID. I go to where many people are there like weddings, funerals, markets, and I suspect myself, I have a chance of being infected” (HDA, FGD, Amhara)

Practically, in most cases the study participants observed that physical distancing is not practical in places such as public transport and meeting. It was reported that high social mobility and density made urban centers more suspicious of high COVID-19 infection.

“... there is presence of physical close contact with others especially presence of large number of people in public transport, at public meeting and there is no self- protection in town. Therefore, since I live in area with population density and this disease is airborne and I have a close social contact, I feel that I have been infected and recovered” (HDA, FGD, Oromia)

However, there are large number of the study participants who do not perceived themselves infected by COVID-19. Some of them considered that there is no COVID-19 in lowlands. A FGD discussant in Addis Ababa Region described that;

“It’s not as such serious in the lowlands. It doesn’t like hot things. I drink tea again and again. I use diets such as vegetables and eat whole grains, like cabbage, which can avoid it” (HDA, FGD, Addis Ababa)

Moreover, other people do not consider themselves infected due to their firm belief in their own religion. A FGD participant in Dire Dawa recounted,

“I am begging God to eradicate the disease from all people in the country. I am asking forgiveness from the people I had conflict with and I am trying to fix the sins that I committed because I believe that this thing came as a result of my sin and I have to fix what I did wrong. If I do so God will protect me, I have faith in him and I am not suspect myself infected” (HDA, FGD, Dire-dawa)

However, some respondents replied in some complicated manners, though they have a sign of the pandemic they are not in the position to tell the truth due to fear of quarantine and lack of trust.

“Why did I tell you that if I had a cold and a fever? Why do I have to go there (quarantine)? Then we didn’t believe anything, but we were worried that he would catch us” (HDA, FGD, SNNP)

1.3.3 Perception towards COVID-19 prevention

The participants identified two perceived ways of preventing COVID-19, namely, modern/scientific and indigenous mechanisms. The modern mechanisms include wearing face mask, using hand sanitizer, avoiding hand shaking, and maintaining physical distance was mentioned in majority of FGD and KII.

“Corona virus, can be prevented by not too close to each other, it is said, stay away, if you have, face mask or whatever you have to cover your face” (HDA, FGD, Somali)

“... yes, it is possible to prevent by not hand shaking with peoples, by wearing mask, and by washing our hands we can prevent” (HDA, FGD, B. Gumuz)

In some case, though respondents know preventive measures, preventive measures are not practiced due to various factors including physical environment and attitude of the people.

For instance, a youth key informant in Gambella Region described the influence of hot climatic condition on using face mask as follows;

“Using mask is very difficult because of hot environment. I don’t prefer to wear mask instead I prefer to die. Because you can’t wear mask for a minute in this hot environment. In addition, my husband did not wear mask even if I might wear it. So, others might not wear it even you wear. You can’t also stay home because you will not have food in the next day, if you miss one day without job its difficult” (Youth volunteer, FGD, Gambella)

For majority of informant’s indigenous mechanisms are perceived as more preferred as alternative means of preventing COVID-19. Application of indigenous mechanism for COVID prevention was mentioned in majority of FGD and KII. Use indigenous mechanisms mainly for two reasons. First, lack of availability of recommended preventive mechanisms by the government and partners. Second, some of them think that indigenous mechanisms are more reliable and give them comfort. A FGD informant in Sidama Region said;

“We are only blaming the government here. We are the government for ourselves. There are so many types such as traditional remedies. There are flowers, garlic, ginger, and feto (cress). So, we have a lot of self-defense” (HDA, FGD, Sidama)

“You explain that Be careful, use feto, ginger, white onions, hot things ... they have benefit. There was a time when feto is purchased by 50 ETB, the same is true for onion” (HDA, FGD, SNNP)

Similarly, another informant in SNNP also mentioned that;

“We constantly use coffee leave with spice to treat our throats pain. We often treat it with something like garlic, ginger, and coffee it is a common drink in Arba Minch area” (Community leader, KII, SNNP)

In addition, a FGD participants in Addis Ababa listed a number of home-made items, which perceived as COVID-19 prevention mechanisms. They noted;

“... tenadam (fringed rue), half a lemon, sugar and salt together with feto is said to be prevent us from the disease, if it is taken in the morning with a spoonful. And I've done it myself once to tell the truth” (HDA, FGD, Addis Ababa)

In some scenarios, interviewees stressed the need to implement government policies and guidelines, as well protecting oneself as much as possible. In explaining the issue, one noted by using local proverb as;

“... first implementing policy and guidelines transmitted from health posts and government. Second self-protection “yoo abbaan iyyate malee ormi namaa hin dirmatu” “akkuma jedhan” (Community leader, KII, Oromia)

However, few discussants believed that COVID 19 is un-preventable disease. They tried to raise the difficulties faced by developed countries and the experience of infected health professionals in their settings. In explaining this issue, discussants noted;

“We cannot prevent COVID 19. For me, only GOD prevent the disease. The reason why I said that is, even countries that have been living in comfortable way of live could not prevent it. I cannot prevent COVID 19 by mask usage and washing unless GOD give amnesty for us. Doctor who is working in Gambela was infected and cured after quarantine. This indicate that we cannot prevent COVID 19 unless GOD help us” (HDA, FGD, Gambela)

1.3.4 Stigma and discrimination due to COVID 19

Most of the study participants reported the existence of sigma and discrimination due to COVID-19. The stigma and discrimination are mainly due to their perceived severity and lack of knowledge and information about the disease. A FGD informant in Dire Dawa described that;

“There is stigma in a significant manner. Beyond other things, this is a new disease. HIV would also make stigma. If that person is mentioned as infected by the disease, you wouldn’t even pass through the area of that person. Because, you would feel that you would be infected with it. The disease is horrible” Another participant in the same FGD also mentioned that *“there is stigma even on the family of that person. If that person assumed to be infected, there would be stigmatized. As you know, there is no stigma at the level of a country (Ethiopia). But the neighbors and friends would isolate that person” (HDA, FGD, Dure-dawa)*

An informant interviewed in Oromia presented the experience of marginalized person who was once infected with COVID-19.

“There was a 60 years old man here in ... he is a pharmacist he sells sanitizers and met people from the countryside. Finally, he gets infected by corona. After that, they recovered, but no one was going to walk in their door. But they accept the situation and accept the other persons perception because it"s a fact” (HDA, FGD, Oromia)

Another discussant from Amhara Region mentioned that the stigma and discrimination include restriction from getting basic services. To put in their words,

“We stigmatized them and restrict them to share and give materials and services due to fear of the fact of the dangerousness of the disease” (HDA, FGD, Amhara)

“In most cases people coming from cities, foreigners, and mainly those coming from areas where there is high number of reported COVID-19 cases are highly susceptible to stigma and discrimination” (HDA, FGD, Sidama)

“If a person came from another place or from Addis Ababa, we will run away or discriminate them ... they may have been infected. Because there are people who have escaped from quarantine centers there. That is why we discriminated and people runs away from them” (HDA, FGD, Sidama)

The multifaceted consequences of the pandemic were explained by the study participants. Death, chronic illnesses and psychosocial consequences are all expressed. The interview transcripts depict fear of illness, unavailability of vaccine, psychological problems will lead to stigma.

“COVID-19 attacks our internal organs. No vaccine, no treatment, though there are cautionary advices. When we are infected, it could be transmitted to our families, and it may expose us to kidney disease.....it harms the internal organs and, it creates psychological problem. There is stigma because the disease transmitted easily. Therefore, I say that the infected person should openly talk about his illness and be careful as much as possible” (HDA, FGD, Addis Ababa)

"There will be psychological effects, after they recovered from quarantine. Because I know one person infected and as people were isolating him not to meet with any one in a compound he lives, he mainly faced psychological problem" (HDA, FGD, Gambella)

1.3.5 Vulnerable groups to COVID 19

It was reported that COVID-19 affect people differently. The study participants were asked to identify the most vulnerable people to COVID-19. Accordingly, they noted that health professionals were the most susceptible to COVID-19 as compared to other groups. While, other discussants from the same FGD noted that, commercial sex workers and those who live on streets as more vulnerable groups. This is due to the fact that these groups are exposed to addiction, child pregnancy and reported to have been excluded from getting COVID-19 preventive methods.

“According to information I have, a segment of society I consider them as more vulnerable are doctors and nurses ... as information I have, they are highly affected in other countries”. Another discussant from the same FGD noted; “I think highly vulnerable are, for instance sex workers, those live on the street, street children those who are addictive of different drugs, those children have a child, they become pregnant and give a birth, so I think they are more vulnerable “(HDA, FGD, Oromia)

The interview transcripts also depict that, elders are also vulnerable to this disease. The discussants noted;

“.. Those who are elders are vulnerable to this disease. It affects more those above 50 years. Additionally, white people are vulnerable. The death rate is high among whites. They are forced to celebrate their Christmas in their homes. Thanks to God we are not affected” (HDA, FGD, Amhara)

The informants also believed that peoples with disease history, those living in poverty and those living in crowded areas are more vulnerable to the pandemic.

“... I have already told you that it is risky to people who have additional diseases. Along with them, there are other vulnerable groups that live in extreme poverty ... There is a compound ... which is very crowded and has 67 households, If one person is infected, everyone could be infected then. It is very dangerous for them” (Community leader, KII, Sidama)

The study transcripts show that peoples living in the rural areas, and those living far areas are vulnerable due to their limited access to information.

“People at woreda may highly exposed because, they are far to media. There might not be told with health workers and might not have knowledge. If the disease entered once they will be affected as the disease is contagious” (HDA, FGD, Gambella)

It was also reported that many people in the study localities are low income and engaged in small businesses in places such as streets, crowded and sub-standard areas. They also reside in a crowded rental house susceptible to COVID-19 infection and transmission. For instance, a key informant interview in Amhara described as follows:

“Since I am selling drinks and foods, I believe I am vulnerable. Drivers are among my customers. Though they accept and implement my suggestions to wash their hands before they enter my working area, I may be infected while they sneeze/cough. It is also said that it can be transmitted through touching things. Therefore, how Can I say I am not vulnerable? Especially, we whose income is not beyond hand to mouth are 100% vulnerable” (Youth volunteer, KII, Amhara)

The study also reveals some mis-conceptions about the vulnerable groups to the pandemic. The transcripts shows that few interviewees noted are those living in the abroad

“The most vulnerable ... many countries outside, such as the United States, Russia, and China, have been affected more, they are in danger, BUT not Ethiopia (Community leader, KII, Sidama)

In addition to vulnerable people, the study also identified vulnerable places. These include schools, places of worship, and social gathering places. For instance, A KII in SNNP considered that among places of worship “Protestants are more susceptible, because they usually worship in a very crowded hall.” In this case religious people are more susceptible than other segments of the religious members.

1.3.6 Views on COVID 19 laboratory result

There is a public concern regarding laboratory test results with regard to COVID-19. In this regard, the study participants were asked to express their views. Accordingly, although some of them considered the test result is produced through scientific procedures and urged to trust it, some of them suspect the reliability of the test result due to various reasons including the alleged manipulation of COVID-19 laboratory result reports. For instance, a FGD participant in Oromia states that;

“I have a suspicion. All COVID-19 death reports in this town have additional complications like asthma. We know that they relied on artificial breathes and died as a result of this. I don’t understand the relation between Corona and asthma” (HDA, FGD, Oromia)

Moreover, lack of scientifically confirmed information about the virus and the changing symptom of the disease made them to suspect the laboratory test result and its report. An informant in Gambella noted that;

“Never, I do not accept the result. Because the laboratory result showed that COVID 19 has been found in a person, the person who has been infected has no any symptoms of COVID 19 and the person had contact history with infected individual. A person who has been infected with COVID 19 is free from COVID 19 according to laboratory result or no symptoms of COVID 19 are seen (Religious leader, KII, Gambela)

Some respondents also suspect the testing equipment thinking that the machine may might have its own problem. A discussant from Harari Region stated that;

“I partially trust it and partially not trust it. I trust majority of the percent since it was done in laboratory and I think it could be true. On another way I don’t know whether the machine has its own problem, for example, it reported positive those have other disease like diabetes mellitus. Therefore, we were confused since the machine simply reported it positive those who have no symptoms. Suspicion was created in communities and sometimes the it was considered as false report (HDA, FGD, Harari)

Another informant noted some respondents also suspects the testing equipment due to Ethiopia’s low level of economic advancement assuming that the technologies used are backward and errors are common.

“I have some doubts about the laboratory test associated with COVID 19. Sometimes it is said that the person tested was positive and then went somewhere and when came back and tested again it is negative. I believe our country did not reach there; I means the laboratory test” (KII, Sidama)

However, interview transcripts also show some discussants and interviewees are the laboratory result of COVID 19 tests.

“Still, I accept it ... the laboratory result is notified by the professional who has been examined. We are accepting it like what the professionals are examining and treating other diseases” (Youth leader, KII, Amhara)

“... I trust majority of the percent since it was done in laboratory and I think it could be true ...” (HDA, FGD, Harari)

In some scenarios the discussants are complaining about the dalliance of laboratory yest result. The transcripts show there is a time in which the discussants are not informed about their results until a month. The discussants noted;

“Last time they were around here to make laboratory tests and they were taking sample from the throat. They took sample and they also take my phone number. And it's been a month and I haven't received a call yet. I do not know whether I am free or not. And how is this thing? If you are free, then you have to be told, isn't it? I have an old mother who is 90 years old; But I was not told that I would be isolated if I had to” (HDA, FGD, Addis Ababa)

1.3.7 Contact tracing of close contacts

Contact tracing is one of the key measures in controlling the spread of COVID-19. It is believed that this action is a joint effort between health workers and the communities. In this regard, people's social/collective and personal responsibilities take greater share. The respondents were asked whether or not they report close contacts with if they were infected with COVID-19. Accordingly, regardless of geographic differences (rural/urban and regional) almost all of the study participants believed that they report to the concerned bodies.

“Regarding to the reporting, dialing is possible. If dialing is not possible, we would report to health center or to the nearby nurse or doctor as that person had physical contact with me. This is for us. Whatever the person is the closest relative, neighbor or friend. For we know them, we would report them. You can just report only those you know them. Regarding to those we don't know them ... Therefore, yes, we would report (HDA, FGD, Dire-dawa)

An informant in Oromia Region considered this issue in terms of notifying his results to his close friends and relatives if he were infected. He said,

“Not only for the sake of interview, but for me the reason why I report is that I would get solution, service/care, and since you didn’t make it hidden/ you tell them that you infected you wouldn’t be alone. If you tell your brothers, your family, your relatives that you infected, they never ignore you. Personally, I will never hide myself if I infected because my mind believes in take care of others and living by keeping my distance from them” (Religious leader, KII, Oromia)

1.3.8 Views on Quarantine

The practice of quarantine was reported as one of the key challenges in controlling COVID- 19 transmission and spread. The informants identified two types of quarantine: self-isolation and institutional-based, which is mainly executed by government and health professionals. For some of the study participants, however, quarantine is viewed as challenging and painful. The discussants assumed that quarantine leads to isolation from access to basic necessities such as shelter, food, clothing, love and affection. In this regard, it is understood that most of the respondents were not willing to be quarantined. Discussants from Afar Region described it as,

“It's awful. The worst thing about the disease, if a person is sick, he will be taken care of by a family. If he has a relative, they will take care of him. His concern is not the illness. This means that he has corona disease. His ugliness and fear will take you to the quarantine center without being asked what you want” (HDA, FGD, Dire- dawa)

Some discussants mentioned the fear of quarantine since it leads to discrimination once they are released from the quarantine center.

If you are in health care, you will be quarantined in a place in the city ... but you will in fear of discrimination when you get out, yes, the cause of discrimination is quarantine. (HDA, FGD, Somali)

On the other hand, many participants argued that health seeking behavior of the community have not been affected due the fear of quarantine. The transcripts show participants are stay at home and try homemade remedies than attending health facility, though they suspect themselves.

“For instance, in case we suffered from different diseases, if I have sneezing, pain in throat, head ache and runny nose, I wouldn’t go to health facility, since I feel a lot of things I wouldn’t go. Because I fear that they will quarantine me. By staying at my home, I treat myself by home remedies such as [baarzaafii adii, muka michii] etc rather than seeking for health care. Since there is a rumor that there is vertical transmission from mother to fetus, we are not going health facility, we are not receiving immunization services, and we are staying at our home” (HDA, FGD, Harari)

1.3.9 Perception of COVID-19 Vaccine

The introduction of COVID-19 vaccine is also one of the most controversial issues. Although most of study participants believed that they have a positive attitude towards receiving the vaccine, there was a hot debate among the FGD participants regarding the introduction and application of the vaccine. For instance, some of the respondents concerned about who introduces it while others worry about how to access it. FGD discussants from SNNP mentioned lack of mutual trust and a political tension between countries across the world made the respondents to mistrust the introduction and use of the vaccine.

“I will not be vaccinated. Even well-trained people do not believe in the vaccine. If there is such vaccine in our country, I will be vaccinated first. But for my part, I do not believe in the vaccine from the outside” (HDA, FGD, SNNP)

The respondents also mistrust the vaccination due to lack of clear information about the feature and side-effects. An informant from Sidama Region, for instance, described that;

“The answer is that this vaccine has become a little controversial around the world. How true it is? Is it not true? We are hearing that the European and American countries that have received the vaccine, and now it is not 100 percent available. There is a saying that 100% salvation must be saving. We know what they are doing to us. There is speculation that the vaccine may worsen the spread of the disease” (KII, Sidama)

Some informants also suspect the vaccine considering that adequate preparation and trial is not made. Regarding this, an informant in Sidama Region noted;

“... it can't be tested on us like a mouse, but the main thing is that doctors have learned in the field to discuss and say that it is good for the people of Ethiopia, and if they do, I will be vaccinated” (HDA, FGD, Sidama)

Moreover, some respondents also do not trust the vaccine due to religious reasons. They described that there is a widespread public perception that the vaccine is introduced by the “illuminati” group. The informant from Sidama Region again said that;

“... a friend of mine told me COVID-19 vaccine is of the Illuminati, the 666 members, seeing on the Internet. I have information this week that if we take the vaccine, we will belong to them. I have information that these vaccines of the Illuminati have been spread all over the world because of the COVID. That's why I didn't get vaccinated” However, other discussants from the same FGD noted that; *“I don't fully accept what my sister has said now. why? When it came first, it should be discussed with the government, and it didn't just go down and vaccinate. I did not accept the concept of Illuminati. I need information from the government” (HDA, FGD, Sidama)*

Though majority of the study participants was not willing to utilize COVID 19 vaccine, only significant number of them mentioned they are willing to receive the vaccine in case it was available and accessible.

“... Rather than psychologically stressing your mind by saying I will never accept it; it is better to wait for this vaccine with open mind. We are taking drug for tonsil, wound, and different disease ... for instance yesterday I have seen Joe Biden have took it. So, in this world it is better to be a model. I'm 40 years old and personally it gives a pleasure to me to be a model. Receiving this vaccine has a benefit so I will receive it (Religious leader, KII, Oromia)

“Yes, COVID vaccine has been introduced all over the world. If it provided, I would not refuse. and the people were troubled, they say it causes another disease” (HDA, FGD, Somali)

“It is being said that corona virus is a terrible disease. It is being reported in the media in the world ... the vaccine has not started yet, but there are some who have started it. I believe I will be vaccinated” (HDA, FGD, Amhara)

1.3.10 Misconceptions on COVID 19

The transcripts of the study reveal the existence of various types of misconceptions about COVID-19. This misconception and public debate comprise the existence of the disease itself, the context that determine the disease and its prevention mechanisms.

With regard to the existence of the disease, the study participants report that there are people who do not consider the disease really exists. A KII in Oromia Region, for instance, described that;

“it is a lie. We don’t trust the daily reports by Ministry of Health” (KII, Oromia)

Another informant in Dire Dawa perceived that;

“... there are a lot who say that the government is lying to postpone the election. Everywhere you go, you’ll find people asking if you saw anyone die from corona” (HDA, FGD, Dire-dawa)

Similarly, another informant in Sidama Region said,

“There were a lot of people who said that there is no corona, it is a lie, the government is using for its own political use. When you see people getting sick and people are dying, when you hear about how many people have died in the media, how many people have been arrested (quarantined), it is very difficult to accept them now. People say the government is politically motivated and there is no such thing as a corona” (Youth volunteer, KII, Sidama)

Some people also believe that COVID-19 is curable using traditional means such as utilization of leaves used to prevent COVID-19. For instance, discussants noted that;

“According to our culture for instance our village community uses culture than science, like khat chewing. If we develop cough, we don’t ask the community and go to anywhere, we will chew khat it didn’t affect us and we didn’t get soap we will use ash. If soap and ash is not available, we will use sanitizer. Personally, it can be prevented” (HDA, FGD, Harar)

Some respondents also believe that the disease does not survive in lowlands. FGD discussants from Gambella held that,

“There is a conclusion in this area that there is no COVID-19 especially for those native Gambela people. Even when you don’t want to greet by hand shaking, they blame and lough at you. They said there is no COVID-19 here in our area. So, people will hug you with coercion. Because of this we are at risk for COVID-19. Therefore, there is a widespread assumption that COVID-19 will not come to Gambella, because as there is high temperature” (HDA, FGD, Gambela)

There are also other misconceptions which dictated the pandemic attacks more the people living in the highland areas.

” people in the highlands who do not get sun are prone to corona. This disease does not like wet areas. It likes hot weather. It means a sunny country. People in the highlands are vulnerable” (HDA, FGD, SNNP)

Despite the profound understanding about the disease characteristics and consequences, across all regions, there are cultural, religious and social beliefs that resulted misconceptions about the pandemic. According to a respondent from Harari region Covid-19 is a punishment from God and prayers are the only way out.

“God saved us from that, as we all were praying well. Diseases are from God, not from human being. Through strong prayers, God helped us in preventing the disease not to be transmitted throughout the community and saved many from death” (KII, Harari)

Respondents from other regions also supplement this idea as follows;

“.... I would only protect myself by praying to God” (Community leader, KII, Somali)

"The information is as I said before; when we discuss among each other, they say God has protected us and there is no COVID-19 and there was a rumor that it came because of Satan. There is such an information” (Religious Leader, KII, Sidama)

One of the beliefs that result in disregarding of the pandemic is the perception that the disease is that people do not consider themselves infected due to their firm belief in their own religion. There is a belief that the pandemic only affects the followers of certain religion. This belief is highly prevalent in Somali region;

“There is, that non-Muslims can occur. It does not happen to Muslims. there are some those infected. it is the wrath of God” (HDA, FGD, Somali)

“The information I have is that he is killing the non-muslims, But I do not hear of any Muslim who has been affected” (Community leader, KII, Somali)

“though we do not differ in susceptibility by nationality, I think protestant religion followers are more susceptible, because they pray sitting in a single hall. Orthodox followers were sitting outside the church keeping their distance. I believe Protestants will be susceptible because they sit inside” (Youth volunteer, KII, SNNP)

However, the religious leader from the same region noted that though people think the pandemic could not affect the Muslims, the pandemic affects everyone.

“What our people believed was that it would not affect Muslims, but when we looked at it, we found out that the disease can affect anyone” (Religious leader, KII, Somali)

1.4 Behavioral response to the risk of COVID 19

1.4.1 What to do if someone is infected from the family

Majority of the participants reported that they would immediately go to health facility if they or someone from their family got sick with corona virus. This finding appears to be uniform across all regions. While this is the case, some participants have indicated that they would rather isolate the infected person in a separate room and take the necessary precautionary measures such as wearing mask and keeping distance than going to health care facilities. In addition, the finding from the current study revealed that self-reported precautionary measures to contain the spread of COVID -19 while taking care of infected individuals is found to be widespread. All the participants seem to understand that covid-19 is contagious disease that can transmit at a faster rate within a family if one person is infected among them. In this regard, majority of the participants have reported that they will force the whole family, including themselves, to self-quarantine and also get tested if someone gets infected with corona virus

disease. In addition, most said they will call the dedicated hotlines to report to the government if they have come to know someone who is showing symptoms of covid-19.

While the existing behavioral response to covid-19 infection is positive, participants are ready to call and to inform to the health facility.

“If one of my family members is infected, the one I would do is I wear mask and perform the necessary thing for him where he is isolated. If one of my family members is infected, I would wear mask as much as I could. I would wear gloves while providing the necessary things. But I would first make a dial. I shall dial and inform to health center. That’s to let health facility people to come and take care and support the person. As much as that person is with me, for the disease is transmittable by breath, I shall isolate utensils and dedicate them only for that person. When I give the person something, I shall wear mask and glove as well” (HDA, FGD, Diredawa)

“If I am infected, I will use a private room. I will be careful of my children not to infect them. They will follow and give me what I need with caution. I will also restrict them not to get others infected. Since the disease has no curative medications, I prefer staying in a well-organized home than going to institutions. It is better to isolate oneself in the home consuming a healthy diet” (HDA, FGD, Amhara)

“We keep our distance. We keep away from anyone who we suspect has a disease; we will isolate him in one room and prevent the disease. I think I’ll take care of him from a distance” (HDA, FGD, Harar)

“Yes, the first step is to take the persons with corona disease to the hospital immediately, so that he can get treatment. After he is taken there, if the government put him in an isolation center, he would get treatment there, and I would report any other people who had been in contact with him” (Community leader, KII, Afar)

“If one person is infected, it means we are infected. Because we use same material for eating and same glass for drinking. I will isolate infected person and, make others to be tested (HDA, FGD, SNNP)

Some participants have also indicated that the use of homemade remedy to treat someone who exhibits symptoms of corona is a good option. They feel confident and healthy when

they got cultural medicines. However, it appears that participants with such belief are not completely discarding the option for seeking medical attention at health care facilities.

“I think there is a cultural homemade remedy for covid-19, so if we take that I believe we will be fine, until I get to the health institution, I use cultural medication, I will be fine, taking hot drinks is a good option” (KII, Diredewa)

“Before we go to the health center, we start with home remedies such as Ginger, Feto, and Honey. Only then will we go to the health center, but if it gets worse, we will be treated at home. I did it on my own. During the start of Corona, the community took advantage of this. We will give the person hot water and garlic and then we will take the person to health center” (HDA, FGD, Harari)

1.4.2 Experience on attending social events during COVID-19 era

Participants argued differently about the current practice regarding social events such as weddings, mourning and other festivities in the era of covid-19 pandemic. While majority of the participants said such social events are still happening with attendance of fewer people with careful practices such as masking and observing social distancing, some still argue that social events are not happening at all by giving some real-life examples where such event were canceled for fear of the disease-.

“Since corona is said to have arrived, people have stopped visiting women who gave birth” (HDA, FGD, Amhara)

On the contrary, some even said they did not change their practice at all; *“I will go anywhere as before” (KII, Somali)*

Visiting women while they give birth to a child is one of the most important cultural practice that is duly respected across many communities in Ethiopia. This cultural phenomenon is one of the centuries old traditions that have kept the Ethiopian people all together. Most participants have also argued that on many occasions, people tend to be less careful in taking precautionary measures while attending social events. Most preventive measures such as hand washing, masking and keeping social distance are now have become things of the past. People are not as careful as they used to be during the earlier times of covid-19 pandemic. This notion appears to be a wide spread phenomenon across the different region of Ethiopia. Some even reported that they have been mocked by some community members for being so

careful in taking preventive measures such as masking indicating more awareness creation is still needed to tackle such hindering behaviors to circumvent the spread of the pandemic. Overall, the preventive measures are not uniformly implemented across many communities despite some participants reported they practice such measures while attending social events.

“When I went to funerals, I wore a facemask and kept physically distancing. I also recommended others to keep their distance” (KII, Amhara)

“During previous time I used to be afraid to attend funeral because I have problem in health and health workers advise me to take a care and I miss many burials. Previously I did not attend wedding, but recently I attended two wedding with afraid of COVID 19, and I teach people to be careful” (HDA, FGD, Addis Ababa)

“Yes, it is right. At present time, both weeding and other social events are happening as previous. For example, if you wear either mask or other things and go there, people would feel unpleasant or they would say that you yourself got Corona. They would say that why don't we are infected? Or they would insult you, or they don't even care” (HDA, FGD, Diredewa)

“Weddings and mourning are coming to normal. Wedding has just begun; normal wedding has started” (KII, Sidama)

Although the government has previously declared state of emergency to combat the pandemic, that is recently lifted; provisions related to physical distancing, masking and hand washing, especially related to social events, are not being observed. The finding from this study revealed that the current negligence of the community regarding the covid-19 prevention has resulted from three probable sources. The first is that most people believe that covid-19 is nowadays a concern of the past and many people have not died as anticipated most importantly compared to what was evident in most of the western countries. The second reason has to do with the recent uplifting of the state of emergency by the government which appears to send a wrong signal to community that issue of covid-19 is no more important. The third issues, to a lesser extent, is that there are some misconception lingering within the community that the covid-19 does not exist at all. These phenomena in combination with so many other factors might have led the community to believe that the disease is not something that requires due attention by now.

“We are still going to the funeral home. Everything is just as it was before, we are doing right now. In the past, when there was a state of emergency, no one went to the funeral. Even so, there is a limited person. They took the body by car and buried it, and only a few people buried it. It has been like this for a while, but after a while it has been declining and now it is completely stopped” (KII, Hawassa and Gambella)

“There is no precaution. When you go to a place of grief and a wedding, you are not careful because you think that there is no disease” (HDA, FGD, B. Gomuz)

1.4.3 Experience on practice of preventive methods

The finding shows that there are overwhelmingly high level of self-reported practice of hand washing, masking and social distancing reported by the study participants. In addition, there were many participants who questioned this notion by giving their own lived experience regarding the implementation of covid-19 prevention strategies as follows;

“Even we don’t implement it. I do have my own business. One of my customers has requested me to remove the facemask that I put on. He told me, if I don’t, he will not eat the food. What can I do? Therefore, I don’t implement all preventive measures” (HDA, FGD, Amhara)

Those who appears to follow a consistent covid-19 prevention measures on their daily life are individuals with known health conditions.

“Since I am known as asthmatic, I am using a face mask always. Similarly, I don’t have physical contacting and I avoid material sharing. I use sanitizer well. Additionally, I change clothes I put on in the outdoor while I enter my home. I am also good at using water. I took more water which is important” (KII, Addis Ababa)

“My work condition enforces me to wear a mask. I don’t miss a mask from the morning till night. The mask shortens your breath because the work is tedious. The thing that irritates me is that those who use and throw their mask. When you can use a mask or wrap it in a towel, there are some who just throw it away. When you do cleaning, you see it everywhere. I don’t know why, but I don’t know how the public came to be like this. They were careful when COVID first arrived by hand washing, without removing the sanitizer from our bag; But now I don’t know what happened” (HDA, FGD, Addis Ababa)

It was also found that lack of coordination between the different stakeholders makes it difficult for the public at large to follow preventive advices. It was also reported that some of the government offices themselves such as MoH did not adhere to COVID-19 prevention measures. One of the participants argued that,

“Things we see in the media are not good. We were doing many different activities as Addis Ababa youth association like helping persons to wash their hand on the street, keeping distance in taxi area. But there are meetings on media. But there is a rule for this that not more than prohibiting meeting of more than fifty persons at a time. Because of this the community was in confusion and we were in difficulty to defend them. Meetings were obstacles. Even I participated the ministry of health meeting with more than three hundred persons and that made me perplexed. It is difficult to create awareness about COVID-19 when the ministry of health didn’t do it as it is the concerned body. These things create gap and cause people to be careless” (Youth Volunteer, KII, Addis Ababa)

The government’s lifting up of the COVID-19 state of emergency found to influence the practice of preventive measures to decline. Another participant noted;

“We used to wear mask and wash our hands at the start, in collaboration with kebele and health extensions, we were teaching others to wash their hands and wear mask. But now since they are no more news about number of infected, people who die from corona, as the government opens school and work places, the community thinks that there is no more corona so I think that we have to create awareness again” (HDA, FGD, Diredewa)

In addition, the current attitude of the community regarding the use of mask might have also discouraged many people from using masks in public areas. One participant explained how the community behaves with vigilant people as;

“If they see you wearing mask, they think that you are the one who infects them. There is no precaution; they have feared the mask itself. There is no precaution just eating and drinking together in mass gathering” (HDA, FGD, Harari)

In ascertaining that most of the prevention measures are now abandoned one participant goes on to say;

“Yes, I used to do it myself, we used to wash our hands with soap and water at the entrance to our house, we used to put water and soap on in front of my house, other people came and went to the house and washed our hands outside with soap and water. Applying this now seems a bit slow. This is because there is a perception that corona disease has decreased “(Community leader, KII, Afar)

Another participant from a different region also added as, *“at the beginning of covid-19, many people wear mask; there was water and soap everywhere; people used to take sanitizer always, but currently it is totally not practiced or absent” (HDA, FGD, B. Gumuz)*

Overall, all participants mentioned that early campaigns of public movement of hand washing, masking and physical distancing were useful practices. However, these practices have now become a thing of the past. Government’s compromised response especially failing to enforce provision of covid-19 prevention, failure to prevent mass gathering and the relaxation of earlier restrictions might have been the sources of doubts if COVID is indeed a problem. Furthermore, health professionals’ and government authorities’ failure to consistently wear mask in meetings and the limited number of deaths as compared to level of fear could also be the main reasons for the declining realization of the preventive practices.

1.4.4 COVID-19 impact on health seeking behavior

There were mixed ideas entertained by different participants regarding how covid-19 have impacted the health seeking behavior of the community. On one side there were participants who reported that the community is avoiding going to health care facilities for fear of the pandemic. The general notion here is that the community thinks health care facilities are the major source of infection. Pregnant women and people with health conditions were said to have been affected more.

“Yes, it affected the health seeking behavior of the community. Most of the people don’t go to the health facility in fear of being infected by covid-19 assuming the virus is in the health care facility” (KII, B. Gumuz)

“Pregnant women were not also using the institutions with the assumptions most institutions were used for quarantine and fear of infection. They preferred private institutions as well as giving birth at their home” (KII, Amhara)

“In the beginning everyone was afraid to go to health centers specially for those who are more vulnerable such as HIV/AIDS patients and diabetic patients since they often go for checkup and for medication but now due to the fear have stopped going. Sometimes they send another person to bring medication” (HDA, FGD Dire-dawa)

Similarly, study transcripts shows that people with chronic diseases miss their regular follow-ups in fear of contracting the virus at health facilities. FGD participant in Addis Ababa described;

“The main risk is going to health institution for patients who have other illness. For example, my mother has been chronically ill, has diabetic mellitus, eye disease and asthma. Mother did not go to health facility to receive drug and follow up but others receive the drug, because there is a fear of getting COVID 19 is at the health facility. It is better to miss the follow up session and skip receiving the drugs than contracting COVID 19. Due to risk of COVID 19 it is difficult to return everything in economy and education to normal” (HDA, FGD, Addis Ababa)

Another group of participants also shared the notion that covid-19 have impacted health seeking behavior but this was very common only at the beginning of the pandemic and now things have returned back to normal.

“Early on, it was difficult to go to the health center. But now there is nothing to fear. They said, "Come on". The nurses said there was nothing to fear. One day I went to buy medicine for my son and no one was there, it was empty. It did not take me even two minutes for the service. That health facility was empty by then but now it is crowded” (HDA, FGD, Addis Ababa)

“Seeking for health care has decreased because people think of health professionals having corona virus so they will infect them as they have contacts with many sick people” (HDA, FGD, Assosa)

In general, majority of the participants have mentioned that covid-19 has indeed affected the community health seeking behavior. However, the few participants who reported covid-19 did not affect the health seeking behavior in their community might be due the difference in the level of community awareness which has to do with how well risk communication interventions have been conducted in those areas.

1.5 Facilitators and barriers towards COVID-19 risk perceptions and practices

1.5.1 Facilitators

Regarding the facilitators for the prevention of COVID-19 risk perceptions and practices in the community, a lot of activities were done, for example keeping hygiene, drinking of hot drinks and majority of the community had awareness from community gathering which helped for the spread of information in the community. The role of community gathering and associations in disseminating information was found immense. Religious leaders, community volunteers, youth leaders and elders, were the main actors disseminating information pertaining COVID-19. Moreover, formal institutions such as kebele and health facilities were played a great role in community awareness creation towards COVID-19. A FGD discussant elaborates;

“.... Your speech for the sake of increasing awareness and understanding of the society were mostly done at health centers, religious institutions and if told by elder, communities accept them, at kebeles is not accepted. Thus, such places and villages, you shall assemble and teach key individuals. There are some individuals who wouldn't accept your teachings. But such persons don't accept does not means that all would not accept. By making that person understand as you can; all have uniquely distinctive character. Therefore, you can't make all to accept you at once. We have many assignments left to be performed. There are many works that are not done. I think that if it is focused on this area and performed, I think it is accepted” (HDA, FGD, Harari)

Institutions such as government and nongovernmental organizations were distributing hygienic materials such as food, drinks, soap sanitizers and water supply and charity of volunteer groups using Radio, Tv, Mobile. This collective effort made all people access to COVID-19 information regardless of socio-economic status and geographic difference.

“... individually, socially and governmentally there was a great support, those who are in need of help, NGOs were helping as by distributing supportive materials such as sanitizer, government were distributed masks, food and other materials for those with economically unstable. These initiate our peoples; they were very volunteered while you gather them for awareness creation. But by now this all facilitators are not present, to my opinion it should have continuity (HDA, FGD, Oromia)

“ the government create public meeting by gathering „hadha sinqe”, „Abba Gaada” (community leaders) and provide us awareness in detail regarding how to prevent it, what should we do and also, they did the same thing on the street where peoples found in large numbers (KII, Oromia)

1.5.2 Barriers

Considering to the barrier in the participants mentioned that joblessness, low income and livelihood insecurity enforced people not to realize COVID-19 prevention mechanisms.

“... there are some daily laborers who have to work and eat. We can close our houses and eat. There are so many who do not have any. As she (another discussant) says there are so many on the street, they bothered. We lock down and eat, what about them? If the disease is in the air, they are the ones who are the first to be infected. I don’t think they will be take-care of themselves” (KII, Amhara)

The majority of the study participants relate COVID-19 with political issues. A FGD discussants elaborated as follows:

“There is one belief among our society. This has been told as there is no COVID, we never seen anyone sick and died yet, it’s a lie, it is a false issue used by the government for political purpose. This is clear and known for everybody. Even on behalf of me, for I never seen person who died by this disease, I said the same to the health extension worker. Formerly, there was cough with a feeling on the throat but without death except sickness for some time and disappears. Therefore, for we never witnessed a person dead by Corona, the awareness of the people is changed” (HDA, FGD, Harari)

“.... yes, we face obstacles, because our people are pastoralists and it is their culture to shake hands and kiss on the lips. So, when they tell us not to do this, they tell us that we can never get sick. Since they are doing this out of ignorance, more work needs to be done to overcome such obstacles. Since these problems cannot be solved by a health professional alone, hard work must be done by involving the community (KII, Afar)

It was also found that COVID-19 was politicized and was used as tool by the ruling and opposition parties. In a similar vein, businessmen also manipulating the disease to make a business. A key informant in Oromia stated as:

“..... the thing I consider as a barrier is things being happen between governing and opposition parties. A governing party was announced through media and health professionals about the entry of dangerous disease that can affect a person in our country, and opposition party were advising a peoples hiddenly that it is a matter of government, there is no disease rather it"s for the sake of staying in power by avoiding election. That was resulted a disaster. it was put peoples in great impact. Our communities were passed through all of this with wisdom, but afterwards whether the government or opposition parties unless they pay an attention towards this issue, unless they care about the health of peoples, this will end up with a great crisis (HDA, FGD, Oromia)

The study informants also mentioned that poor supply of hygienic materials like water, lack of sanitizer and poor supervision from governmental bodies and there was also a different government bodies and opposition parties which hinders the intervention activities by confusing the severity of the disease and its outcome.

“There are those who say, where can we get soap? We were registering under the guise of giving you soap, so he didn't say anything. That is to say, there are things that have been promised to the community that will be done by the government but have not been implemented. Now, for example, there are some people who can't afford to buy a mask. So, there are times when we buy soap as much as we can afford; When we told him to wash their hands, they said, "Where did you get the soap?" These are the things that are uncomfortable” (HDA, FGD, Sidama)

Moreover, it was found that lack of strict supervision and lifting up of the state of emergency significantly made the preventive measures to be unrealistic.

“.... on the side of government, facilitating the means of returning peoples to their regular activity is good. But there is poor supervision by government regarding whether the prevention mechanism is implemented or not among community, this is great barrier. This makes our community to consider COVID as un existed disease. The government allowed peoples to be returned to their work with precaution but

Hand washing facilities are not functional/not existing, this affects the mentality of peoples. This is great weakness (HDA, FGD, Oromia)

3.5.3 Compliance with COVID 19 preventive measures

Majority of the individual and communities comply to the government intervention ways at the start of the pandemic but the awareness creation slows down, complying to the intervention is seen in schools now a day rather the community at large.

“... people comply to measures if education is given. Because they know that they will not be infected with COVID 19 and cannot be transmitting to another person. If not-educated people do not comply with measures. People who are living in rural are not keep physical distance and they are not using facemask, because they are not aware about COVID 19 and think as no COVID19 (HDA, FGD, Gambela)

The transcripts of the study show, complying to the preventive measures were seen in schools. In explaining the issue, one interviewee noted;

“.... only done (applied) in school; the rest of the community does not do this because our community lives in a rural area and is a herdsman and does not have the knowledge or desire to do so. So only our students make it when they go to school. It is because the teachers have told their students that it is a must. Therefore, it is rarely applied in rural areas (KII, Afar)

As part of complying to the intervention, gaps are being seen at the government level especially low enforcement bodies easing the follow up in the communities, the community at large shifts their idea towards a day-to-day activity and some mentioned that government medias slow down the way of disseminating true information.

“The community already forgot about corona because government allows different things due to the economic issues and since everyone couldn't survive with staying at home. The government has come to allow things that weren't allowed before. So, the people think that the government is lying to them. Also, medias these days are not same like before they have to work more on creating awareness again, providing training and Media's air time should focus teaching. But now we are more focused on politics than corona” (HDA, FGD, Dire-dawa)

1.5.4 The importance of the action taken by government to prevent the spread of COVID 19

Government level

Majority of the participants mentioned that the action taken by the government to prevent COVID-19 at the beginning was good that is dissemination of information via mass media, social media and the announcement of command post predominately helped the communities to keep them from infected by COVID -19.

“Closing schools is appropriate action. Since 3-4 students were sit densely in a chair and if one student is infected with COVID 19 all student of schools will be infected. Re-opening schools is also appropriate action. Now density of student is decreased and up to 25 students are learning with physical distance in one class. Stay at home is appropriate action (HDA, FGD, Gambela)

Though coverage, sustainability and consistency were raised as an issue, restrictions put by the government on various day to day activities have been appreciated in controlling the pandemic.

“ COVID 19 cannot be prevented with a single person, it affects the economic, social and religious interaction. And it is a fatal disease. Unless we take care and comply with measures recommended by the government, we will be affected. Government minimized COVID transmission by apply actions in closing schools, limiting number of people in transportations, decreasing social, religious, and edir interactions” (HDA, FGD, Addis Ababa)

Beside the sociocultural reasoning for not complying with the preventive rules, many agree that government’s measure in lifting restrictions put on certain activities led people to question the occurrence of the disease. There are also people who perceive the situation as political.

“.....in the old days, I use my face mask whenever I leave my house, I did not forget. Now, I have begun to forget. Why doesn't everyone I see on the street wear masks? What is wrong with the young people? People are refusing to comply, they believe that it's just a lie, that it is just political. In the initial stage, anyone who did not wear a mask was punished. But now drivers will

not be punished, and the passengers will not be punished in transportation. I want to tell you that the whole government has stopped controlling” (HDA, FGD, SNNP)

1.6 Social and economic effects of COVID 19

1.6.1 Economic impact of the pandemic

This study addresses whether the pandemic has brought socio-economic impact. Accordingly, majority of the study participants mentioned that COVID-19 has brought great economic crisis. The study participants explained the impact of the pandemic on economy in such a way that; high cost of living, closing of business and schools, as well as enforcing individuals to stay at home with out work are some of the issues noted.

“... there were so many problems; everything became expensive because of COVID. There were times when you would buy something for 10 birr - up to 100 birrs, because there is no transportation, the price was elevated. The cost of living was high and there were people who depend on daily incomes, how did these people could live? ... people could not able to raise their children and it has a lot of pressure. There is pressure on everyone, and the cost of living is very high” (HDA, FGD, Sidama)

“Yes; no doubt about this. Many people were forced to stay at home leaving work. Businesses were closed; schools were also closed. This in turn caused huge economic and social problems ... many have starved. I heard there are countries that are hit by famine due to the outbreak of covid-19. As far as our country is concerned, those with better economic position joined hands with the government and provided various assistances to the needy. Overall, it has an impact on socio-economic life” (KII, Oromia)

“Yes, it has affected our economic sphere because during corona time most of the time we were staying at home, we have stopped working and if you didn”t work how is we going to buy the food? We used our saving but it won”t last long” (HDA, FGD, Dire Dawa)

1.6.2 Social impact of the pandemic

Regarding the social impact of the pandemic, majority of study participants mentioned that they lost social life during COVID era, losing of culture of greeting, eating and drinking together, celebrating holiday together with the family members, attending weeding and funnel together.

“... COVID-19 affects our culture. Eating together, drinking together, burying together, and partly reducing the culture of sharing...” (HDA, FGD, SNNP)

“Yes, it has impact. It was an Easter at that time. There were festivals. Do not attend it in contact with relatives. Family cannot connect to family. Elsewhere, we do not meet with grief or tears ... there is a completely a canceled wedding program ... there were also a few people who were bothering to go to church” (HDA, FGD, Amhara)

“... Yes, it also affected the social life. According to our culture, the best and honest relationships is tested and assured during funerals. For this, as much as possible all attend it. But when someone had a funeral alone, he/she will be affected. More than I can explain the disease affected such events. I believe it endangered the social life” (KII, Amhara)

The transcripts of the study also show the effect of the pandemic on the daily laborer“s, as well as peoples who supports their family by working in the business areas.

“... COVID problem is that most of us in the country are daily laborers. There is a time when difficult to work in the city ... putting pressure on the family. And it was a very difficult time” (HDA, FGD, Oromia)

“Yes, it affects, many people are poor, it affects the daily activity of them. For example, the great market merkato serves for many people, but it was not good. So, it causes high risk even as country level cause loss of many things” (HDA, FGD, Addis Ababa)

1.6.1 Experience of disabled individuals during pandemic era

Considering the experience of disabled individual during COVID era were another focus of the study, majority of the study participants mentioned that disables individuals faced the challenges due to their disability condition; people with disabilities may face challenges to keep themselves clean. Participants also explained challenges blind people are facing during the pandemic, especially they noted, those who can see and people who are deaf have better understanding because they can see and use sign language but, the blinds are not. So, the family members and the communities tried to help those disable individual who are in need.

“... those people with disabilities cannot keep themselves clean unless their families support them. If they are not able to move, they must be cared for by their families. Their families need to help them with any hygiene; they need to do everything they want to do if they want to take a shower. Eee... If they want to wash their cloth, you have to do everything” (HDA, FGD, Afar)

“For those with disabilities: The blind does nothing; If you tell them, they will do nothing ... people with disabilities but those who can see and people who are deaf have better understanding because they can see and use sign language. Only blind people do not know” (HDA, FGD, Addis Ababa)

1.6.2 Experience of gender-based violence during COVID era

Regarding the experience of gender-based violence during COVID-19 era, majority of the participants mentioned the existence of gender violence practices in their area, the noted children’s are raped by their own close relatives.

“During this time gender-based violence has increased, last time in our town we heard twelve years girl was a victim of raped and we also report to police. Also, early age marriage has increased during this time” (HDA, FGD, Dire Dawa)

“I hear here at Harar a father rapes his 8 years old daughter. So, I feel bad. Beyond the rape, she witnessed that he had been doing the same always on the day time. Her mother investigates this when the mother took her to medical center. But the father escaped instead of being arrested. His address is lost. So, the police could do nothing. But I heard that is he escaped by bribing” (HDA, FGD, Harari)

“I have never encountered it as a nephew, but I have not heard of it. I do not think there is much of it. The issue of vulnerability is not necessarily sexual assault. The wife is beaten by her husband ...” (HDA, FGD, Amhara)

In some scenarios the discussants noted that they heard the existence of rape on the medias, however, noted that such practice doesn’t avail in their context.

“... when you hear it in the media, because of COVID, Children are raped by their fathers, brothers, uncles. In the past, when our fathers took off Their belts and beat us, we did not know how to rape a child. There is nothing around us, Thank God” (HDA, FGD, Addis Ababa)

1.7 Gaps to be filled/request for further information

Most participants are interested in knowing more about the pandemic, most identified issues that participants were concerned about the virus was; transmission, diagnosis and testing, vaccine and treatment. Most people are confused about where the disease originated the initiation of the disease, the transmission route, the weather influence on the disease transmission, the effect on babies. One of the participants describes its fear and concern about the origin of the disease.

“There is a rumor claiming that COVID-19 has come from insects that live in water and there are a lot of people around us who eat fish, Is this probably transmitted by fish? It is said that it is transmitted through meat and that fishes live in water, so it is confusing to me, could you clarify this to me (Youth volunteer, KII, Sidama)

Most people are confused about the mechanism of transmission from one person to another, why only one person getting infected from family.

“I received information from my family about my relative and he was caught by covid-19... His wife, who was sleeping with him, was not infected by corona. I want to know how this happened” (KII, Addis Ababa)

“ It is said that if corona catches a baby, he will not affect the bay, is that right?” (KII Afar)

Ambiguities about the pandemic symptoms comes from failure to identify it clearly and its similarity with other common diseases like common cold. The fact that the disease has a lot of symptoms and it's changed from time to time is making it difficult to understand.

"...there are no typical symptoms that tell us what exactly COVID-19 is, they are confusing almost similar to other disease like common cold ...there is no fixed symptoms. So, this is not clear for me" (KII, B. Gumuz)

"I now have a severe headache and I took paracetamol three times a week. How can I identify Coronas at that time? If it's just a headache, I want to ask this question, how can I differentiate if the symptoms are corona fever and headaches" (HDA, FGD, Amhara)

Other key issues that were raised by most of the participants were to have updated information on treatment and development of medicine. They want to know more of the progress made towards the treatment and trial made.

"... I have no information on trial of medicine to be discovered. So, I want to say I need information on these issues (HDA, FGD, Oromia)

".... why not there is medication haven't founded till now? these are the things that I would like to know. Also, if medication founded, is there any means that our country can access the medication (KII, Diredawa)

Participants the presence of ambiguities and fear towards the vaccine. And most of them raised similar concerns across regions; one of the of the FGD discussants stated;

".... is the currently invented covid-19 vaccine really effective? Have those who took the vaccine really recovered from the virus?" (HDA, FGD, Oromia)

Some people raised their concern about the safety of the vaccine and wondered if people who took the vaccine can share their experience, one of the study participants quoted the following;

"It is better if case story of a person who took the vaccine and cured from corona virus is publicized before rolling out of the vaccine (Youth volunteer, KII, Oromia)

Furthermore, participants are keen to know who is legible to take the vaccine, from where and when the vaccine will reach to our country. Moreover, the transcripts of the study show, some of the participants are keen to know more on when the vaccine will be available to

them, and most of them raised the question related to the fact vaccine already started in developed countries and they have worries weather developing country like Ethiopia will get the vaccine.

“China has begun, the United States has begun. When will the vaccine reach to our continent of Africa? Where does it come from? When will the vaccine reach to our continent of Africa (Community leader, KII, SNNP)

“It is said that vaccine is found for developed countries. Do Poor country like us get the vaccine? (HDA, FGD, SNNP)

“Why person without disease take this vaccine? many people ask this (Community leader, KII, Gambela)

Moreover, some participants mentioned they want to know where to get reliable and abundant information about the pandemic. Most people claim they got their information from media but they cannot be sure if the information is true. In this regard, discussants noted;

“.... I am getting information personally from the media. I wish if it is given in different tangible ways...there should be strong mechanism to transfer the reliable information to the public (HDA, FGD, Amhara)

1.8 Participants recommendations on the ongoing efforts to tackle the pandemic

Most people mentioned complying with protective measures is the way forward. Wearing mask, washing hands, and keeping social distances are most frequently mentioned points. These measures are believed to be responsibility of the individual itself and a reflective of the society in general.

“We must wear masks, wash our hands periodically, and avoid hand shaking and hugging, keeping social distance” (Youth volunteer, KII, Oromia)

“First of all, I can only control or prevent my family when I prevent myself. You need to teach them how to use masks, use different sanitizers, use water and soap, keep their distance I mean when they attend weddings to protect themselves” (Youth volunteer, KII, Sidama)

Few people mentioned beyond protecting their selves it's important to visit health center if you suspect themselves and also reporting suspected person in the community also individual responsibility

“Individual must report peoples who are suspected for covid 19 in the community before they spread the disease” (HDA, FGD, B. Gumuz)

Most of the expectation from the community depends on the media and health workers efforts to educate the community on prevention methods and severity of the disease.

“... it's very important to invite these university and college students to do a campaign on COVID. What I want to say is those who are health in professional should go down to the district, street, and to the rural kebeles. Because if you go down to the home level for campaign people may give value” (Youth volunteer, KII, Oromia)

Study participants noted the need to focus on the media coverage concerning the pandemic, they mentioned the media coverage were decreased in the country, while in other country media it's a priority, which strengthen the attention given to the disease.

“... if you take foreign countries media pandemic issue is highly dominate. And also, they distribute different paper wise information regarding COVID but this is not experienced in our country, to me it's not well done on this” (Religious leader, KII, Oromia)

“I want to say that our media should not be slowed down by the fact that our situation has reached a certain level. We must pay attention ... everything that has been overlooked should be carefully restored (HDA, FGD, Harari)

Most people believe the federal and regional government should work collaboratively to fight the pandemic. Participants noted, the federal government is expected to assess the performance of the regions as well as the status of the community.

“Professionals from federal government have to see the situation from federal to region with report asses” people for use of preventive methods and have to ask the community about the awareness of COVID-19” (Religious leader, KII, Gambela)

“I want to say more, everything comes from the federal government. Therefore, regions should implement the federal directive, and the regions should go down to the woreda, the woreda to the kebele, the kebele to the village, and the village to one to five groups. I think we need to apply this entire message” (Community leader, KII, Sidama)

Some of the study participants noted, combating the pandemic was not the government responsibility alone, individuals and community should discharge their responsibility.

“The city government does nothing alone. This community must be prepared and thought to be its own. If he wants to live for his family, the community must be careful. I think the people should be careful to keep their masks and sanitizers in their hands. We must not neglect working to live, so be careful while working; I urge you to wash your hands with soap, put on a mask, and take care of yourself” (KII, Addis Ababa)

Most of the participants expect the federal government to develop strict guideline than can be followed by regional level.

“The government must develop strict guide lines or proclamations as the other health policies. The woredas, kebeles and individuals must practice the guidelines told by the government” (Religious leader, KII, Sidama)

Most of them believe the community would compile to preventive measures better if the command post re-initiated again. And they have a positive attitude toward the command post. They mentioned masks are not used during transportation anymore. Government should strengthen monitoring in sanitizer utilization, availability of water and soap and physical distance.

“It is better if the government strengthen the previous rules on COVID 19 control. Face mask is not utilized during transportation. Government should strengthen monitoring, sanitizer utilization and physical distance. Individuals should avoid negligence and strengthen monitoring of action that were applied in previous time. Environmental health workers should strengthen monitoring on availability of water and soap” (HDA, FGD, Addis Ababa)

People expect protective materials like masks and sanitizers to be aided from the government, and they also addressed the importance of the having adequate water source to fight the virus. The supplies are expected from the governments specially related to the starting of school.

“.... the government promised to send Sanitizer and facemask when school starts. However, you will not find students who took and use it, nothing was given. You can check it. Teachers even. are not using it. If a student is infected, everyone is infected”
(HDA, FGD, Amhara)

Table Qualitative 1. Socio-demographic characteristics of study participants (Qualitative study), COVID 19 survey, Ethiopia 2021

	Background Variables	Number (N)	Percentage (%)
Sex	Male	122	26.8
	Female	333	73.2
Age	18-24	40	8.8
	25-34	193	42.4
	35-44	145	31.9
	45-54	54	11.9
	55-64	20	4.4
	65 & above	3	0.6
Marital Status	Single	62	13.6
	Married	373	81.9
	Divorced	11	2.4
	Widowed	1	0.2
	Cohabited	8	1.7
Educational level	Illiterate	82	18
	Grade 1-8	153	33.6
	Grade 9-12	126	27.7
	TVET/Diploma	69	15.2
	Degree	27	5.9
Religion	Orthodox	159	34.9
	Muslim	194	42.6
	Protestant	102	22.4

