

COVID-19 Prevention Practices and Associated Factors among Chronic Disease Follow-Up Patients in Jimma University Medical Center, Jimma Ethiopia: Health Belief Model Perspective



By:
Endale Liben (BSc)

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By:

Endale Liben (BSc)

Advisors:

Yohanes Kebede (MPH, PhD, Associate professor)

Mohamed Jemal (MPH, Lecturer)

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Abstract

Background: COVID-19 is the major public health problem of the century for human beings and it is becoming more serious on individuals with chronic medical conditions. Individual's risk perception of COVID-19 is crucial and it will contribute to taking the required action to prevent the health problem. Therefore, this study aims to assess COVID-19 preventive practices and associated factors among chronic disease follow-up clients using the health belief model in Jimma University Medical Center (JUMC), Jimma, Ethiopia.

Methods: An institution-based cross-sectional study design was employed from June 04 to July 03, 2021. An interviewer-administered structured questionnaire was used to collect data on socio-demographic, knowledge, and risk perception of COVID-19 using the health belief model with a five-scale measurement. The data were entered into Epi-data and exported to SPSS version 20.0 for Windows for analysis. Multivariable logistic regression analysis was conducted to identify the significantly associated factors with the prevention practice of COVID-19. The level of significance was reported at $p < 0.05$.

Results: A total of 395 chronic disease patients with clinical follow-up in JUMC were included in this study (response rate=99.5%). The prevalence of COVID-19 protective practice was 39.5%. The overall standardized mean and standard deviation score of perceived susceptibility, perceived severity, perceived benefit, self-efficacy, perceived barrier, and cues to action of COVID-19 disease was $82.17(\pm 5.25)$, $83.81(\pm 6.59)$, $82.97(\pm 5.93)$, $70.91(\pm 12.54)$, $65.26(\pm 11.67)$ and $41.48(\pm 8.35)$ respectively. The respondent's knowledge had a standardized mean score of $88.42(\pm 5.39)$. On multivariable analysis the study showed that urban dwellers (AOR=2.790(1.118-6.963)), earning greater than 4800 ETB per month (AOR=2.705(1.493-4.899)), education level 7-12 grades (AOR=2.400(1.092-5.278)), knowledge about COVID-19 (AOR=1.455(1.076-1.968)), perceived susceptibility (AOR=1.328(1.042-1.692)), perceived severity (AOR=1.207(1.033-1.410)), and perceived benefit (AOR=1.237(1.043-1.468)) were significantly associated with COVID-19 preventive behavior.

Conclusion and recommendation: The patients' actual practice of preventing COVID-19 was low compared to studies conducted among chronic disease patients. This indicates that chronic disease patients at JUMC are at higher risk of contracting COVID-19 illness, and maybe seriously affected by the wave of the pandemic. Health education on prevention measures must be provided focusing on individuals with low economic status and less knowledge, based on their perceived susceptibility and severity.

Keywords: COVID-19, Chronic Disease Patients, Health Belief Model, Ethiopia

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Abbreviations and acronyms

AOR-----	Adjusted Odds Ratio
ARDS-----	Acute Respiratory Syndrome
CDC-----	Centre for Disease Control
CKD-----	Chronic Kidney Diseases
COPD-----	Chronic Obstructive Pulmonary Disease
COR-----	Crude Odds Ratio
CVD-----	Cardio Vascular Disease
DM-----	Diabetes Mellitus
DRC-----	Democratic Republic of Congo
ETB-----	Ethiopian Birr
FMOH-----	Federal Ministry of Health
HBM-----	Health Belief Model
HTN-----	Hypertension
ICU-----	Intensive Care Unit
IQR-----	Inter Quartile Range
JUMC-----	Jimma University Medical Center
LRT-----	Lower Respiratory Tract
MERS-----	Middle East Respiratory Syndrome
NCDs-----	Non-Communicable Diseases
PBC-----	Perceived Behavioral Control
PPMs-----	Personal Protective Measures
RNA-----	Ribonucleic Acid
SARS-----	Severe Acute Respiratory Syndrome
SN-----	Subjective Norm
SSA-----	Sub-Saharan Africa

Chapter 1 Introduction

1.1. Background

Coronaviruses are a type of virus that causes respiratory tract infection in humans from a mild case to death. Other varieties which are more lethal can cause Severe Acute Respiratory Syndrome (SARS) and Middle East Respiratory Syndrome (MERS) [1]. The new coronavirus that is originated in China was identified as the cause of a disease outbreak in 2019 and this virus is currently known as the severe acute respiratory syndrome coronavirus 2 (SARS-COV-2). The disease that is caused by this virus is named coronavirus disease 2019 (COVID-19) was declared a pandemic by the World Health Organization (WHO), in March 2020 [2].

After exposure to the virus between 2-14 days, the sign and symptoms of COVID-19 will appear. The common sign and symptoms are cough, fever, and shortness of breathing, loss of taste, chest pain, and chills. The severity of symptoms ranges from mild to severe; some others may suffer from severe complications [3, 4]. The transmission is mostly through respiratory droplets, during individual coughs, sneezes, or talks; Another way of viral transmission is when a person touches the surface contaminated with the virus and touches the nose, mouth, and eyes [5, 6].

The prevention practice is based on the recommendation of WHO and the Center for Disease Control (CDC) and these are: avoiding close contact with anyone who is sick or has symptoms, keeping distance, avoiding crowding, washing hands often for at least 20 seconds with soap and water or using alcohol-based sanitizer, using a face mask in public places, covering mouth and nose with an elbow during cough or sneeze and wash hands immediately, avoiding touching eyes nose and mouth. Patients with comorbidities should take all precautions to prevent contracting COVID-19, as their prognosis is usually the worst [4, 7].

People who are aged and those with existing chronic medical conditions are at greater risk of becoming seriously ill with COVID-19, and have an increasingly rapid and severe progression, often leading to death. Heart disease, coronary artery disease, heart failure, cancer, chronic obstructive pulmonary disease, diabetes, asthma, hypertension (HTN), and chronic kidney diseases (CKD) are the underlying chronic disease conditions that exacerbate the serious of COVID-19. Older patients those 65 years old and above with chronic diseases are infected and

will have an increased admission rate into the intensive care unit (ICU) and death from the COVID-19 disease [4, 8].

Risk perception is important in determining health-protective behavior, higher perceived risk can increase an individual's adherence to preventive measures and control. According to health behavior models, individual risk perception influences the propagation of the outbreak and adherence to suggested safety procedures. People will take action to prevent or control ill-health conditions if they take themselves as susceptible and believe the disease has potentially serious and consequences. Individual behavior and risk perception are two key aspects of a disease outbreak that are interconnected [9].

Cognitive to the complication and consequences of COVID-19, there is still a paucity of study on prevention practice among chronic disease patients. In addition, since behavioral change activities begin with the individual's perceived risk regarding the particular disease, it is important to identify the level of perceived risk using behavioral models like the Health Belief Model (HBM). Given that risk perception is its central focus, the HBM has been one of the most widely used conceptual frameworks in health behavior. It has been used both to explain change and maintenance of health-related behaviors and as a guiding framework for health behavior intervention [10].

1.2. Statement of problems

Globally, COVID-19 has continued to spread rapidly and is the major problem of the century to human beings. As of 1 March 2021, since the outbreak began in December 2019 close to 113.5 million people have been confirmed positive were reported worldwide [11]. An estimated 1.7 billion individuals, comprising 22% of the global population, have at least one underlying condition that could increase their risk of severe COVID-19. The prevalence of one or more conditions was approximately 10% by age 25 years, 33% by 50 years, and 66% by 70 years, and similar for males and females. Chronic kidney illness, cardiovascular disease, chronic respiratory disease, and diabetes were the most common conditions among people aged 50 and up. An estimated 349 million people 4% of the global population are at high risk of severe COVID-19 and would require hospital admission if infected [12].

In Africa, out of the global 1.7 billion, the share of the population at high risk was 2.2% (30 million) without adjustment, 2.7% (36 million) with adjustment for underlying conditions, and 3.1% (42 million) with adjustment for both age-based frailty and underlying conditions [12]. In Ethiopia, 11.4% of the patients had a history of pre-existing co-morbid illness. The commonest co-morbid illness history was hypertension (5%) followed by type 2 diabetes mellitus (2.2%), HIV (1.9%), bronchial asthma (1.1%), chronic liver disease (0.3%) [13].

Worldwide as of 1 March 2021, since the outbreak began in December 2019 over 2.5 million deaths were reported [11]. In France, Spain, England, and several U.S. states, COVID-19 was the main cause of mortality. In better-income countries, people over 70, who are at a higher risk of COVID-19 mortality, make up a larger proportion of the population. In addition, those countries have a higher prevalence of chronic health disorders that worsen with age, such as obesity, high blood pressure, diabetes, chronic renal disease, and respiratory sickness, all of which contribute to higher COVID-19 mortality rates [14].

In South Africa, half of cases and deaths on the continent, 61% of the COVID-19 patients in hospitals are with hypertension, 52% had diabetes. And 45% of people 60–69 years who died from COVID-19 also had hypertension. In Kenya, half of the COVID-19 deaths occurred in people with Non-communicable Diseases (NCDs), while in the Democratic Republic of the Congo, NCDs patients accounted for 85% of all COVID-19 deaths [15]. In Ethiopia among admitted patients majority of the deceased had comorbidities where diabetes mellitus and respiratory illness were the commonest complications [16].

The COVID-19 pandemic poses major challenges worldwide. NCDs treatment and prevention services have been interrupted due to the COVID-19 pandemic. The impact is higher in low and middle-income countries; health services have been completely or partially interrupted in many countries. People with NCDs, who are at a higher risk of severe COVID-19-related disease and mortality, should be concerned about the situation. According to a study of 155 countries, 53% of the country, more than half (53%) of the countries surveyed have partially or completely disrupted services. Ministry of health professionals working on NCDs were partially or

completely reallocated to support COVID-19 in the majority (94 percent) of countries that responded [17].

Sub-Sahara Africa (SSA) countries being together under the control of African CDC created different task forces to improve and strengthen responses against covid-19, The shortage of medical supplies and personal protective equipment is created by the SSA countries to adopt innovative countermeasure countries that have never produce masks gloves, ventilators and sanitizer before have turned to domestic production long-term sustainability of all efforts underway [18].

Pieces of evidence indicate that the COVID-19 response in Ethiopia is hardly impaired due to contextual factors such as “a weak health system, poor nutritional status, lack of access to proper hygiene and sanitation, and urban areas densely populated” [19]. The Ethiopian government has been taking several measures; these include preparation of full service providing health institutions that will serve the COVID-19, patients, declaring the state of emergency, preparing quarantine centers and isolation, resource mobilization from different sources to support vulnerable groups and others [20-22] and the government has decided on periods for all travelers, restrictions on public gatherings like meetings, religious ceremonies.

However, in developing countries like Ethiopia these public health interventions are often difficult to implement where people often live in a crowded situation. They may not have ready access to food in the home, requiring daily food shopping and they sometimes lack access to water for handwashing and difficult to have adequate sanitation [23]. Even basic supplies like soap, are likely subject to shortages in developing countries. The risk of infection of people living in poverty and vulnerability is increasing due to the inability of working from the home, overcrowded conditions, and lack of access to water and sanitation. In spite these situations and lack of access to adequate medical care the risk of death is very high among individuals with chronic health conditions such as lung disease, cardiovascular disease, and diabetes [24].

Instead of a national lockdown, the government has decided on several essential measures including mandatory quarantine periods for all travelers, restrictions on public gatherings, using

face masks in public places, and fixing on public transport number of passengers. Physical distancing and handwashing practice using media and cell phone ring tone reminders are also critical interventions and daily briefings on COVID-19 are provided by the ministry of health [25].

People who perceive, themselves to be susceptible to disease would more likely to protect themselves from the disease. Currently, COVID-19 is becoming a deadly disease in individuals with chronic diseases. In this circumstance, basic hygiene principles and aggressive public health preventive measures are practically important in preventing the spread of the disease and hence reducing its impact on the vulnerable segment of the community. Therefore, this study aims to assess COVID-19 prevention practices and associated factors among chronic disease follow-up patients using the HBM in Jimma University Medical Center (JUMC), Jimma, Ethiopia.

1.3. Significance of the study

The study will help policymakers to include prevention strategies especially for chronic disease patients based on their risk perception in existing national comprehensive COVID-19 management. The finding of this study will be used as an input to health service providers to give health information based on recommended COVID-19 preventive measures and to give emphasis on the prevention of COVID-19 transmission among chronic disease follow-up patients. The result will provide new insight and fill the research gap on the prevention practice of COVID-19 among chronic disease patients using risk perceptions. This study will also serve as a baseline for other further studies.

Chapter 2 Literature Review

2.1. Overview

The presence of one or more coexisting comorbidities in severe COVID-19 patients has been identified in early and current scientific reports [26-28]. CVD, HTN, Diabetes, CKD, Chronic Obstructive Pulmonary Disease (COPD), and Cancer are the common comorbidities. The WHO statistics on those chronic conditions account for the most common and leading cause of mortality worldwide [29] and in the context of the current COVID-19 pandemic; it is believed by health experts that the presence of any coexisting comorbidity puts an individual with COVID-19 at higher risk for severe clinical outcome, including death [30].

2.2. Level of COVID-19 prevention practice

The global and national expectation of COVID-19 prevention practice bases the assumption, when 50% of the population practices covering their mouth and nose, the disease transmission will decrease by 92% [31]. Systematic review studies result pooled from the general population indicate the global preventive practice of 70% [32] and 52.83% in Ethiopia [33].

Cross-sectional studies conducted in different parts of the World showed that the prevalence of good COVID-19 preventive practice range from 36.5% in Lahore, Pakistan [34], 72.2% of Ho Chi Minh City of Vietnam [35], 68.6% in Shiraz, Iran [36] and to as high as 92.5% in Saudi Arabia [37]. On the other hand, an African study report conducted among patients in Uganda showed that half (52%) of the participants have good COVID-19 prevention practices [38]. Whereas, cross-sectional studies conducted in different parts of Ethiopia showed that prevalence of good COVID-19 the preventive practice range from 10.4% in Ambo [39] to as high as 63% in the North Shoa Zone [40].

The studies conducted in Ethiopia on chronic disease patients indicates COVID-19 preventive practice of 10.4% among HPN and DM patients in Ambo [39], 52.7% among chronic disease patients in the Hospital of Addis Zemen [41], 63% among chronic disease patients in the North Shoa Zone [40], 40.7% among residents in Dire Dawa city [42], 40.7% among chronic disease patients in Dessie town hospitals [43], among chronic disease patients at Aksum hospital (51.2%) [44] and 49% among high-risk groups in Addis Ababa [45]. On the other hand, studies

conducted based on HBM in Ethiopia towards COVID-19 preventive practice was 44.1% among communities in North Shoa zone [46] and 31.2% among employees in Addis Ababa [47].

2.3. Factors associated with COVID-19 prevention practice

2.3.1. Socio-demographic

The result from a study carried out in Ho Chi Minh City, Vietnam revealed that the rate of good practices in males was lower than that of females [35]. Similarly, a study conducted in Shiraz, Iran indicates the prevention practices of COVID-19 were also poorer in the males, in the people with up to 12 years of education, and the retired ones [36]. A study conducted in Northern Iran result showed that COVID-19 preventive behavior was higher in urban dwellers than rural dwellers [48]. A findings from the study on individuals aged over 15 years living in Saudi Arabia revealed a significant association between preventive practice of COVID-19 pandemic and demographic variables, being female, 35–50 years of age, married, having bachelor's degree, and employee non-a-health-practitioner [37].

A study carried out among Egyptians based on HBM showed that age, high education, being a healthcare worker [49]. Another study conducted in Africa on COVID-19 Perception, Knowledge, and Preventive Practice: Comparison between South Korea, Ethiopia, and Democratic Republic of Congo (DRC) showed that gender, age, number of family members were significant variables in determining preventive practice against COVID-19 [50]. Similarly, a study conducted among patients in Uganda showed that female patients were more likely to have good COVID-19 prevention practices compared to males [38].

Finding from the study conducted in Southern Ethiopia among adults with chronic conditions using the theory of planned behavior showed that the odds of practicing PPMs (Personal Protective Measures) against COVID-19 were higher among those less than 60 years old compared with those greater than or equal to 60 years. Likewise, the odds of practicing the PPMs were higher for those from households with low, medium, high, and highest wealth quintiles compared with those from the least wealth quintile. Educational status has also shown an association with PPMs against COVID-19. The odds of practicing personal preventive measures towards COVID-19 were higher among participants who attended primary, secondary, and

tertiary educations, compared with those who were not able to read and write, respectively. Compared with rural residence, being in an urban area has increased the odds of practicing PPMs [51].

Another finding from a study conducted among chronic disease patients at Addis Zemen Hospital, Northwest Ethiopia also indicated the odds of poor practice in unmarried study participants were higher than married participants. Study participants who cannot read and write, and who can read and write were more likely to practice poorly compared to secondary and above. Chronic disease patients from rural area had a higher likelihood of poor practice. The odds of poor practice in the study participants with an income of less than the mean were higher than their counterparts [41].

A multicenter study conducted among employees in Addis Ababa using the health belief model showed that employees with a monthly low income were more likely to practice the prevention of COVID-19 compared to employees with a monthly high income [47]. In addition, a study done among patients living with hypertension and diabetes at Ambo University Referral Hospital and Ambo General Hospital has shown that those patients with no formal education are more likely to have poor COVID-19 prevention practice than those who are with first degree and above [39]. The study finding conducted among adults in Sidama regional state showed that occupation had a significant association with COVID-19 prevention practice. In this study, employees were more likely to good prevention practice of COVID-19 as compared to housewife [52].

Whereas, a survey conducted within high-risk groups in Addis Ababa indicated that health care workers were more than two times more likely to implement the precautionary measures of COVID-19 than other occupants. Also, drivers and guards had higher odds of implementing the precautionary measures of COVID-19, respectively. Implementation of precautionary measures against COVID-19 was found to be low among grocery store workers and students compared to other occupants. The implementation of precautionary measures against COVID-19 was found to be lower among higher-income groups. Those who earned high monthly income had lower odds of practicing the precautionary measures against COVID-19 than those with lower income [45].

2.3.2. Knowledge

The result of Ho Chi Minh City, Vietnam study revealed that participants with sufficient knowledge were had a high rate of good practice of COVID-19 than that with insufficient knowledge [35]. Additionally, the finding among Romanian adults with active cancer during the COVID-19 outbreak indicated that application of the right preventive methods proved to be positively statistically associated with having good knowledge about COVID-19 [53].

The finding of the study conducted in Southern Ethiopia among adults with chronic conditions using the theory of planned behavior showed that while having good knowledge increased the actual preventive practice of COVID-19 among people with chronic medical conditions [51]. A finding from a study conducted among chronic disease patients at Addis Zemen Hospital, Northwest Ethiopia also indicated participants with poor knowledge about COVID-19 were more likely to have poor practice [41].

Similarly, a study done among patients living with hypertension and diabetes at Ambo University Referral Hospital and Ambo General Hospital has shown that those patients who have poor knowledge about COVID-19 are more likely to have poor COVID-19 prevention practice than those who have knowledge level of moderate and above [39].

Whereas, a survey conducted within high-risk groups in Addis Ababa indicated that participants who had good knowledge of the mode of transmission and prevention mechanisms of COVID-19 were more likely to implement the precautionary measures of COVID-19 [45]. Similarly, a study conducted on Jimma University Medical Center Visitors, Southwest Ethiopia, showed that socio-demographic characteristics and knowledge were significant factors that predicted the adaptation of measures that protect from COVID-19 [54].

2.3.3. HBM constructs

A study done in China among Chinese older adults indicated that perceived susceptibility and perceived benefit were found to be significantly associated with COVID-19 preventive behaviors [55]. The study conducted in Korea showed that health belief factors perceived severity and perceived benefit were significantly associated with COVID-19 preventive behaviors [56]. A

study conducted in the Philippines result showed that cues to action, self-efficacy, and perceived barrier had a significant association with COVID-19 preventive behavior [57].

The study conducted among Iranian adults showed that the perceived benefits, perceived barriers, and self-efficacy significantly predicted the preventive behaviors, whereas the perceived susceptibility and perceived severity were not significant in the regression model [58]. On the other hand, a study carried out among Egyptians based on HBM showed that perceived susceptibility, benefits, and barriers; and ability to follow the preventive measures against the disease were associated with COVID-19 preventive behaviors, perceived susceptibility and perceived benefits had positive relationships [49].

A multicenter study conducted among employees in Addis Ababa using the health belief model showed that employees with the low level of perceived barriers were less likely to have a poor practice of COVID-19 prevention compared to employees with a high level of the perceived barrier. Similarly, employees with low cues to action and employees with a low level of self-efficacy were practiced COVID-19 prevention measures to a lesser extent compared to those with high cues to action and high level of self-efficacy respectively [47].

In another study conducted in North Shoa Zone based on HBM indicated that the odds of adherence to safety measures of COVID-19 were 1.60 times higher among communities who perceived that they were not susceptible to COVID-19 than their counterparts. Members of the community who did not have a perception of barriers of COVID-19 measures were higher on poor adherence of COVID-19 recommended preventive measures as compared to those who had a perception of barriers of COVID-19 measures. Those participants who had self-efficacy were more likely to apply preventive measures of COVID-19 infections [46]. Similarly, a study conducted on JUMC visitors of Southwest Ethiopia showed that self-efficacy was important factor that predicted the adaptation of measures that protect from COVID-19 [54].

To put it in a nutshell, studies conducted in middle and high-income countries have a better preventive practice of COVID-19 which is more than 50%, while most of the studies conducted in Ethiopia were below 50%. Perceptions, knowledge, and socioeconomic conditions of

participants were significantly associated with individuals' COVID-19 preventive practice. There were studies conducted on COVID-19 using HBM on healthy individuals and also there are studies conducted among chronic disease patients on the preventive practice of COVID-19. However, there was paucity of study conducted on chronic disease patients using HBM, specifically in Ethiopia.

2.4. Conceptual framework

The HBM is constructed based on concepts of perceived susceptibility, seriousness of the disease, perceived benefit, perceived barrier, cues to action, and self-efficacy [59]. However, HBM has some limitations which limit its utility in public health. These include: It does not account for a person's attitudes, beliefs, or other individual determinants that dictate a person's acceptance of health behavior. It assumes that everyone has access to equal amounts of information on the illness or disease. It assumes that cues to action are widely prevalent in encouraging people to act and that "health" actions are the main goal in the decision-making process [60].

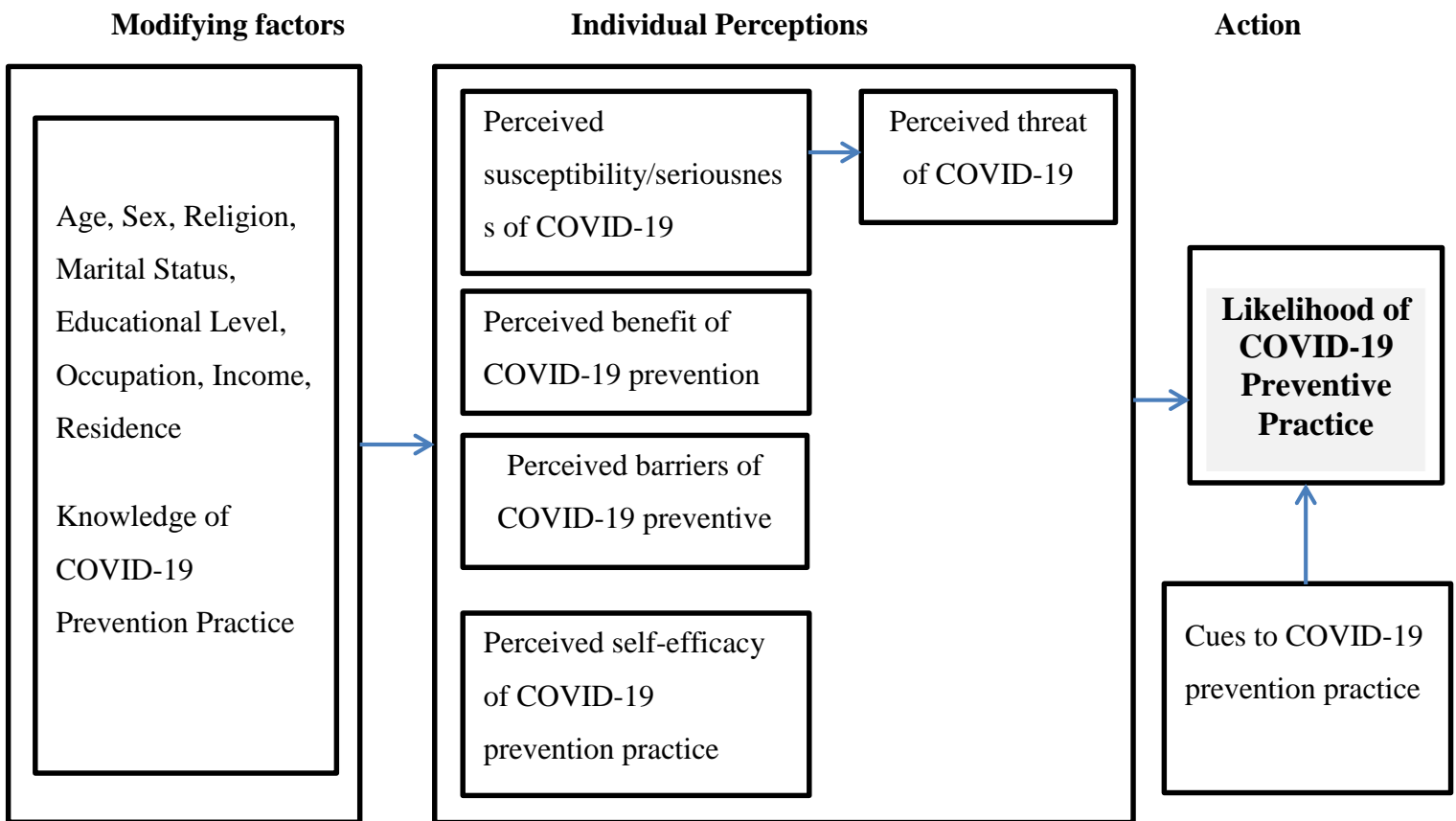


Figure 1: Conceptual framework adapted from Hochbaum and Rosen stock for assessing factors determining preventive practice of COVID-19, synthesized by investigator based on literature review, 2021 [61-63].

Chapter 3 Objectives

3.1. General objective

- Assessment of COVID-19 prevention practices and associated factors among chronic disease follow up patients in JUMC: Using Health Belief Model, 2021.

3.2. Specific objectives

- To determine status of COVID-19 preventive practice among chronic disease follow-up patients in JUMC
- To describe the perceptions about COVID-19 preventive practice among chronic disease follow up patients in JUMC
- To identify factors associated with COVID-19 preventive practice among chronic disease follow-up patients in JUMC

Chapter 4 Methods and materials

4.1. Study area

The study was conducted in Jimma University Medical Center, Jimma, Ethiopia. JUMC is found in Jimma town, which is 352km from the capital city Addis Ababa in the Southwest of Ethiopia. It was established in 1937 E.C. It is the only teaching and referral hospital in the Southwestern part of the country serving more than 15 million people. It provides service for approximately 18,000 inpatients, 160,000 outpatient attendants, 11,000 emergency cases, and 4500 deliveries per year. One of the outpatient services in the JUMC is the chronic non-communicable disease follow-up clinic that gives service for both pediatric and adult patients. The chronic disease patient clinic runs from Monday to Friday during working hours. The clinic has assigned the weekdays for the different chronic disease patients.

4.2. Study design

An institution-based cross-sectional study was employed.

4.3. Study period

This study was conducted from June 04 to July 03, 2021.

4.4. Population

4.4.1. Source population

The source population was all high-risk patients attending chronic disease follow-up clinic in JUMC.

4.4.2. Study population

All randomly selected chronic disease patients who have a follow-up in JUMC chronic disease clinic

4.5. Inclusion and exclusion criteria

4.5.1. Inclusion criteria

All chronic disease patients having a follow-up at the hospital during the study period were included in the study.

4.5.2 Exclusion criteria

Patients less than 18 years, seriously ill and unable to communicate, patients with unable to hear and see were excluded from the study.

4.6. Sampling size and sampling technique

4.6.1. Sampling size determination

To determine the sample size a single population proportion formula was used:

$$n = \frac{(Z \alpha/2)^2 * (p) (q)}{d^2}$$

Where, d = Acceptable margin of error (precision of measurement) = 5%

z = Standard normal variable corresponding to 95% confidence level (1.96)

p = Prevalence of poor prevention practice of COVID-19 among chronic disease patients to be 47.3% [41].

$$q = 1-p$$

$$n = \frac{(1.96)^2 * (0.473) * (0.527)}{(0.05)^2} = 383$$

The total chronic disease patients on JUMC follow up clinic were ($N = 6901$). Since, this is less than 10,000; population correction formula was used.

$$n_f = \frac{n}{1 + \frac{n}{N}} = \frac{383}{1 + \frac{383}{6901}} = 363$$

Finally, 10% was added for non-responders the final sample size became **399**.

4.6.2. Sampling technique and procedure

A proportionally allocated systematic random sampling method was used to select the study participants in each type of chronic diseases. The first person was selected randomly after calculating the interval ($K=6$) which was determined as N/n ($2467/397$), where (N) is the average monthly chronic disease patients on follow-up taken from the registration book with the same period of the previous year and (n) is the calculated sample size. Then participants were selected every K until an adequate sample size was obtained.

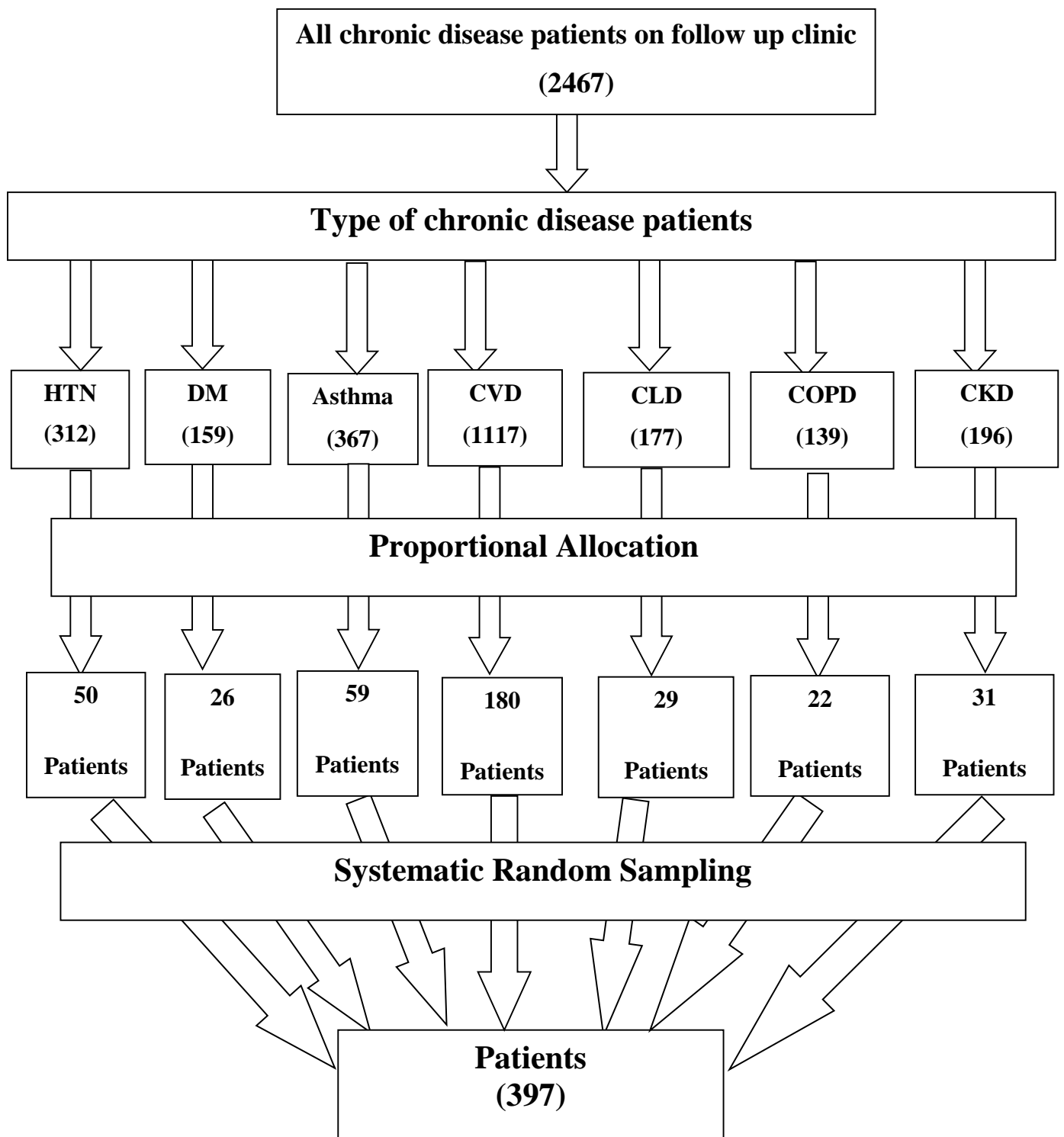


Figure 2: Schematic representation of sampling procedure of study to assess prevention practice of COVID-19 among chronic disease patients, 2021.

4.7. Variables

The dependent variables were: prevention practice of COVID-19. The independent variables include: socio-demographic (age, sex, marital status, educational level, residence, occupation, and income), HBM constructs (perceived susceptibility, perceived serious, perceived benefit, perceived barriers, cues action, self-efficacy) and knowledge.

4.8. Data collection tool and technique

An interviewer-administered structured questionnaire was adopted by reviewing different literature related to the study objective. The questionnaire was used to gather patients socio-demographic data, knowledge about COVID-19 and its prevention practice, Health Belief Model constructs (perceived susceptibility, perceived severity, perceived benefit, perceived barrier, and cues to action self-efficacy), and practice of COVID-19 prevention.

4.9. Data quality control

The questionnaire was prepared in English and translated to the Afaan Oromo and Amharic local languages then retranslated back to English by two different individuals to check the consistency. The data collection tools were pretested on 20(5%) of the sample size on Shenengibe primary hospital before the commencement of the actual data collection. Based on the pretest result, some ambiguous words and sentences were corrected and modified. Questions having similar ideas in HBM constructs were merged. One-day training was provided for six data collectors and two supervisors who have experience in collecting data in health science fields. The internal consistency and reliability of the questionnaire were also analyzed using SPSS scale measurement.

4.10. Operational definitions and measurements

Practice: is strictly following the recommended COVID-19 prevention methods. The questions assessing practice have 10 questions adapted from similar studies conducted in different places [39, 54] that will be answered by yes or no, the correct answer was assigned 1 point and an incorrect answer was assigned 0 point. For each correct answer how often the practice performed was asked as occasionally, sometimes, most of the time, and always questions having values from 1 to 4. Subscale scores were obtained by summing item scores. The overall practice score

was categorized using Bloom's cut-off point [64]. Preventive practice was considered when the score is between 80 and 100%, and the score less than 80% were considered as non-preventive practice [41].

Knowledge: is having a basic insight on the method of COVID-19 transmission and prevention methods. The questions assessing knowledge include 17 questions adapted from similar studies conducted in different places which were answered on a true/false basis and an additional "I don't know" option. A correct answer was assigned 1 point and an incorrect/unknown answer was assigned 0 point. The responses were summed and treated as a continuous variable [39, 54].

Perceived susceptibility: is a belief about the chances of experiencing a risk or getting COVID-19 [65]. To measure perceived susceptibility respondents were asked 4 questions to describe their level of agreement in a five-scale response format from "strongly disagree" to "strongly agree". The 5-point Likert scale response options, scored from 1 to 5, are strongly disagree, disagree, neutral, agree, and strongly agree. Subscale scores were obtained by summing item scores and the scores were treated as a continuous variable.

Perceived severity: is a belief about how serious a COVID -19 and its sequel are [66]. To measure perceived severity respondents were asked 5 questions to describe their level of agreement in a five scale response format from "The problem is not serious at all" to "extremely serious". The 5-point Likert scale response options, scored from 1 to 5, are the problem is not serious at all, not serious enough to be worrying moderately serious, very serious, and extremely serious. Subscale scores were obtained by summing item scores and the scores were treated as a continuous variable.

Perceived benefit: is a belief in efficacy of COVID-19 preventive practice to reduce risk or seriousness of the impact [67]. To measure perceived benefit respondents were asked 5 questions to describe their level of agreement in a five-scale response format from "strongly disagree" to "strongly agree". The 5-point Likert scale response options, scored from 1 to 5, are strongly disagree, disagree, neutral, agree, and strongly agree. Subscale scores were obtained by summing item scores and the scores were treated as a continuous variable.

Perceived barrier: is a belief about the tangible and psychological costs of undertaking COVID-19 preventive practice [46]. To measure perceived barrier respondents were asked 5

questions to describe their level of agreement in a five-scale response format from “strongly disagree” to “strongly agree”. The 5-point Likert scale response options, scored from 1 to 5, are from strongly disagree, disagree, neutral, agree, and strongly agree. Subscale scores were obtained by summing item scores and the scores were treated as a continuous variable.

Cues to action: is the strategy to activate “readiness” [48, 68]. To measure cues to action respondents were asked 5 questions to assess their exposure to cues that could influence them to engage in COVID-19 prevention practice. To describe their levels of agreement in a 5 scale response format from strongly disagree to strongly disagree. The 5-point Likert scale response options scored from 1-5 are strongly disagree, disagree, neutral, agree, and strongly agree. Subscale scores were obtained by summing item scores and the scores were treated as a continuous variable.

Self-efficacy: is a confidence in one’s ability to take COVID-19 preventive practice [46, 68]. To measure self-efficacy respondents were asked 5 questions to describe their level of agreement in a five-scale response format from “strongly disagree” to “strongly agree”. The 5-point Likert scale response options, scored from 1 to 5, as strongly disagree, disagree, neutral, agree, and strongly agree. Subscale scores were obtained by summing item scores and the scores were treated as a continuous variable.

4.11. Data processing and analyses

The data were checked, coded, and entered into EPI-data version 3.1 and exported to SPSS version 20.0 for analysis. Descriptive statistics (mean, standard deviation, percentage, and frequency distribution) were computed and presented using tables and figures. Bivariate analyses was done and candidate variables having $p\text{-value} < 0.25$ was identified and multivariable logistic regression analysis was conducted to identify the factors associated with the prevention practice of COVID-19. Variables having $p\text{-value} < 0.05$ was considered as significantly associated variables.

The Hosmer and Lemeshow’s goodness-of fit test was considered to check model fitness. Multicollinearity was also checked whether the standard error was < 2 , $VIF < 5$, tolerance > 0.1 matrix.

4.12. Ethical consideration

Ethical approval was obtained from the Research and Ethics Committee of Jimma University Institute of Health Ethical Review Board. The necessary permission was obtained from the Jimma University Medical Centre. Data were collected in line with the Federal Ministry of Health (FMOH) national ethical guideline of personal protection practice of COVID-19. Informed verbal consent was obtained from all participants before the interview. Participants were assured that they have the full right to participate or withdraw at any time during the study.

4.13. Dissemination plan

The findings of this study will be submitted to Jimma University, Jimma University Medical Centre, Jimma zone health bureau, and Jimma town health bureau and health institutions in Jimma town. The findings will be disseminated to different stakeholders that have a contribution to improve the prevention practices of COVID-19. Finally, an effort will be made to present the result in various seminars and workshops and publish it in scientific journals.

Chapter 5 Results

5.1. Socio-demographic characteristics of the respondents

A total of 395 chronic disease patients with clinical follow-up in JUMC were included in this study with a response rate of 98.9%. More than half of the study subjects 214(54.2%) were in the age category of 30–49 years with a mean \pm SD of 43.23 \pm 12.93 years. Out of the total participants, 151(38.2%) the respondent had no formal education. Regarding the residence 209(52.9%) of the participants were living in urban (Table 1).

Table 1: Socio-demographic characteristics of the respondents among chronic disease patients in JUMC, 2021 (n=395)

Variables		N	%
Age	18-29	60	15.2%
	30-49	214	54.2%
	50-64	93	23.5%
	>=65	28	7.1%
Sex	Male	236	59.7%
	Female	159	40.3%
Residence	Urban	209	52.9%
	Rural	186	47.1%
Occupation	Farmer	148	37.5%
	Merchant	72	18.2%
	Government employee	65	16.5%
	Private employee	50	12.7%
	House wife	41	10.4%
	Others ^s	19	4.8%
Marital status	Married	334	84.6%
	Single	41	10.4%
	Widowed	17	4.3%
	Divorced	3	0.8%
Educational level	No formal education	151	38.2%
	Grade 1-6	71	18.0%
	Grade 7-12	117	29.6%

	Diploma	23	5.8%
	First degree and above	33	8.4%
Family size	>=5	228	57.7%
	<5	167	42.3%
Monthly income (ETB)	<4800	224	56.7%
	>=4800	171	43.3%
Chronic disease type	Heart disease	178	45.1%
	Asthma	59	14.9%
	Hypertension	50	12.7%
	Chronic kidney disease	31	7.8%
	Chronic liver disease	29	7.3%
	Diabetes mellitus	26	6.6%
	Chronic lung disease	22	5.6%

§=Student, ETB=Ethiopian birr

5.2. Knowledge of the respondents about COVID-19

The respondent's knowledge about COVID-19 had a standardized mean and standard deviation (SD) score value of 88.42(±5.39) (Table 2).

Table 2: Knowledge of COVID-19 among chronic disease patients in JUMC, 2021

Variables	Response	
	Yes	No
	N (%)	N (%)
COVID-19 is a dangerous disease and can affect any one	393(99.5)	2(0.5)
The risks of getting COVID-19 is higher in crowded and inadequately ventilated spaces	394(99.7)	1(0.3)
Not all persons with COVID-19 will develop severe cases except who are elderly and have chronic disease illness.	263(66.6)	132(33.4)
Main clinical symptoms of COVID-19 are fever, dry cough, body muscle cramp, fatigue.	392(99.2)	3(0.8)
Currently there is vaccine for COVID-19.	388(98.2)	7(1.8)
COVID-19 disease is transmitted through contacts with infected surface	392(99.2)	3(0.8)
COVID-19 virus transmits from infected person to uninfected Via respiratory droplets of infected individuals during sneezing or coughing	391(99.0)	4(1.0)
COVID-19 is transmitted directly through kissing and shaking hands of infected person	391(99.0)	4(1.0)
Persons with COVID-19 cannot transmit the virus to others where symptoms is not	177(44.8)	218(55.2)

present		
Touching nose, eyes and mouth with unwashed hand expose to COVID-19 infection	387(98.0)	8(2.0)
COVID-19 is transmitted directly through shaking hands of infected person	395(100.0)	0(0)
COVID-19 disease is transmitted directly when talking closely with infected individuals	394(99.7)	1(0.3)
Proper hand washing with soap thoroughly is one method of prevention of COVID-19 infection	392(99.2)	3(0.8)
Keeping 2m distance from others is not method of prevention of COVID-19	13(3.3)	382(96.7)
Wearing mask is one of the prevention method of COVID-19	392(99.2)	3(0.8)
Utilization of sanitizer prevents COVID-19 infection	392(99.2)	3(0.8)
Cleaning and disinfecting contaminated surface prevents COVID-19 transmission	392(99.2)	3(0.8)
Standardized Mean=88.42, SD=±5.39		

5.3. Perceptions on COVID-19

The overall standardized mean (SD) score of perceived susceptibility, perceived severity, perceived benefit, self-efficacy, perceived barrier, and cues to action of COVID-19 infection was calculated. The mean (SD) score of the perceived susceptibility of the respondents was 82.17(±5.25). Regarding the mean score of perceived severity of COVID-19 response of the respondents was 83.81(±6.59). For the perceived benefit questions of the COVID-19 disease, the participant's mean score was 82.97(±5.93). The respondent's mean score of self-efficacy, perceived barrier, and cues to action was 70.91(±12.54), 65.26(±11.67), and 41.48(±8.35) respectively (Table 3).

Table 3: Frequency distribution of answers to questions of perception belief of COVID-19 among chronic disease patients in JUMC, 2021

Constructs	Disagree	Neutral	Agree
Perceived Susceptibility (Standardized Mean=82.17, SD= ±5.25)			
As a chronic disease patient, I think I am susceptible/at risk to COVID-19.	0(0%)	1(0.3%)	394(99.7%)
As a chronic disease patient I have a chance of getting COVID-19	1(0.3%)	1(0.3%)	393(99.4%)
As a chronic disease patient I think it is possible that I will get/experience COVID-19	0(0%)	1(0.3%)	394(99.7%)
As a chronic disease patient I think I am more likely to get COVID-19	0(0%)	1(0.3%)	394(99.7%)
Perceived Severity (Standardized Mean=83.81, SD= ±6.59)			
Experiencing/getting COVID-19 is life threatening to chronic disease patients	0(0%)	0(0%)	395(100%)
Getting COVID-19 is a serious problem to chronic disease patient	0(0%)	0(0%)	395(100%)
Getting COVID-19 leads to loss of life to chronic disease patients	1(0.3%)	1(0.3%)	393(99.4%)
Experiencing COVID-19 is not dangerous to chronic disease patient	383(97%)	6(1.5%)	6(1.5%)
As a chronic disease I think If I got COVID-19 disease it would be more serious than other diseases to me	0(0%)	0(0%)	395(100%)

Perceived Benefit (Standardized Mean=82.97, SD= ±5.93)			
For a chronic disease patients washing hand with soap thoroughly for 20 seconds prevents from risk of COVID-19 infection	0(0%)	4(1.0%)	391(99.0%)
For chronic disease patients keeping 2meters physical distance prevents from COVID-19	0(0%)	4(1.0%)	391(99.0%)
For chronic disease patient wearing face mask prevents COVID-19 infection	0(0%)	3(0.8%)	392(99.2%)
For chronic disease patients using sanitizer prevents COVID-19 infection	0(0%)	7(1.8%)	388(98.2%)
I wouldn't be so anxious about covid-19 if I perform COVID-19 prevention practice.	0(0%)	3(0.8%)	392(73.2%)
Self-efficacy (Standardized Mean=70.91, SD= ±12.54)			
As a chronic disease patient it is easy for me to use face mask to prevent risk of COVID-19	18(4.6)	1(0.3)	376(95.1)
As a chronic disease patient I am able to keep 2m physical distance from others to prevent risk of COVID-19	144(36.5)	101(25.6)	150(37.9)
As a chronic disease patient I am confident to wash my hand thoroughly for 20 seconds to prevent risk of COVID-19	56(14.2)	24(6.1)	315(79.7)
As a chronic disease patient it easy for me to use sanitizer to prevent risk of COVID-19	143(36.2)	1(0.3)	251(63.5)
As a chronic disease patient I can avoid going crowded places	72(18.2)	90(22.8)	233(59.0)
Percived Barrier (Standardized Mean=65.26, SD= ±11.67)			
As a chronic disease patient I think it is difficult to find water and soap any place	71(18.0)	2(0.5)	322(81.5)
As a chronic disease patient it is difficult to keep 2m physical distance	28(7.1)	26(6.6)	341(86.3)
I think face mask is scarce in the market and thus I don't wear mask as a chronic disease patient	335(84.8)	33(8.4)	27(6.8)
I think sanitizer is expensive in the market, thus I don't use sanitizer as a chronic disease patient	227(57.5)	24(6.1)	144(36.4)
I think performing COVID-19 prevention practice would require new habit (which is difficult)	67(17.0)	68(17.2)	260(65.8)
Cues to action (Standardized Mean=41.48, SD= ±8.35)			
I look for new information related to COVID-19	371(93.9)	23(5.8)	1(0.3)
I get advice from health workers on COVID-19	386(97.7)	5(1.3)	4(1.0)
I read health messages on COVID-19 from poster	176(44.6)	91(23.0)	128(32.4)
I get health information on COVID-19 from public education	387(98.0)	6(1.5)	2(0.5)
I get health information on COVID-19 from radio or television	389(98.5)	5(1.3)	1(0.3)

SD=Standard Diviation

The questionnaire was assessed for its internal consistency using Cronbach's alpha and the total value was 0.715, indicating acceptable internal consistency [69]. Whereas, the individual reliability result of the HBM constructs perceived susceptibility, perceived severity, perceived benefit, perceived barrier, self-efficacy, and cues to action were 0.830, 0.838, 0.837, 0.708, 0.751, and 0.763.

5.4. Level of COVID-19 preventive practice among chronic disease patients

The prevalence of the preventive practice of COVID-19 among chronic disease patients was 39.5% (Figure 3).

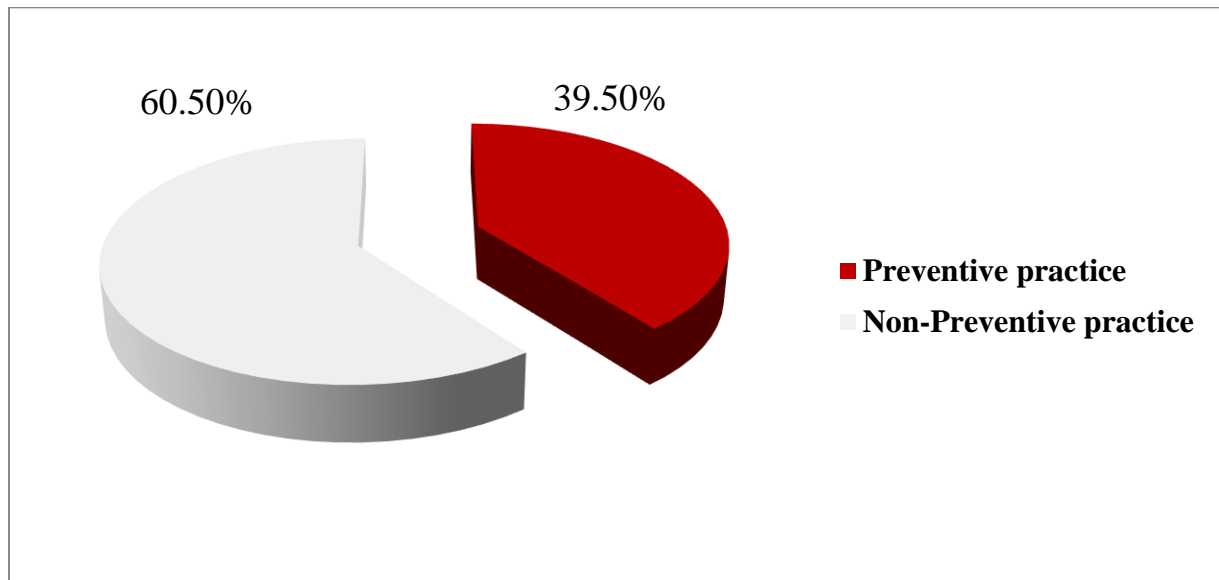


Figure 3: Level of COVID-19 preventive practice among chronic disease patients in JUMC, 2021

5.5. Factors associated with COVID-19 preventive practice

On bivariate logistic regression analysis residence, sex, age, occupation, knowledge, family size, education, income, perceived susceptibility, perceived severity, perceived benefit, self-efficacy, and cues to action were became a candidate for multivariate analysis (Table 4).

Table 4: Binary logistic regression model predicting the likelihood of COVID-19 preventive practice among chronic disease patients in JUMC, 2021

Variables		COVID-19 Preventive Practice				COR	P-value
		Preventive Practice		Non-Preventive Practice			
		N	%	N	%		
Sex	Female	69	43.4%	90	56.6%	1.313(.871-1.979)	.193
	Male	87	36.9%	149	63.1%	1	1
Residence	Urban	106	50.7%	103	49.3%	2.799(1.834-4.272)	.000

	Rural	50	26.9%	136	73.1%	1	1
Occupation	Merchant	40	55.6%	32	44.4%	1	1
	Government employee	36	55.4%	29	44.6%	.993(.506-1.950)	.984
	Private employee	21	42.0%	29	58.0%	.579(.279-1.201)	.142
	Farmer	47	31.8%	101	68.2%	.372(.209-.665)	.001
	House wife	8	19.5%	33	80.5%	.194(.079-.478)	.000
	Others ^s	4	21.1%	15	78.9%	.213(.064-1.706)	.011
Age	18-29	24	40.0%	36	60.0%	1	1
	30-49	94	43.9%	120	56.1%	1.175(.656-2.104)	.588
	50-64	28	30.1%	65	69.9%	.646(.327-1.276)	.208
	>=65	10	35.7%	18	64.3%	833(.329-2.111)	.701
Family size	<5	75	44.9%	92	55.1%	1.479(.984-2.225)	.060
	>=5	81	35.5%	147	64.5%	1	1
Monthly income (ETB)	<4800	68	30.4%	156	69.6%	1	1
	>=4800	88	51.5%	83	48.5%	2.432(1.608-3.678)	.000
Educational level	No formal education	40	26.5%	111	73.5%	1	1
	Grade 1-6	26	36.6%	45	63.4%	1.603(.877-2.931)	.125
	Grade 7-12	56	47.9%	61	52.1%	2.548(1.527-4.251)	.000
	Diploma	13	56.5%	10	43.5%	3.607(1.466-8.874)	.005
	First degree and above	21	63.6%	12	36.4%	4.856(2.191-10.765)	.000
Knowledge						1.296(1.031-1.629)	.026
Perceived susceptibility						1.501(1.222-1.843)	.000
Perceived severity						1.285(1.134-1.457)	.000
Perceived benefit						1.388(1.198-1.608)	.000
Perceived barrier						1.042(.972-1.118)	.245
Self-efficacy						1.085(1.016-1.158)	.015
Cues to action						.982(.891-1.081)	.205

^s= Students, COR= Crude odds ratio

Keeping other variables constant, the study shows that urban dwellers were 2.8 times more likely to have COVID-19 preventive practice than rural dwellers (AOR=2.790(1.118-6.963)), respondents earning greater than 4800 Ethiopian birr (ETB) per month had 2.7 times more likely to have COVID-19 preventive practice than those who earn less than 4800 ETB per month (AOR=2.705(1.493-4.899)), respondents with educational level of 7-12 grade were 2.4 times more likely to have COVID-19 preventive practice than who have no formal education (AOR=2.400(1.092-5.278)), As knowledge increases with one unit the likelihood of COVID-19 preventive practice increase by 1.45 times (AOR=1.455(1.076-1.968)), As perceived susceptibility increases with one unit the likelihood of COVID-19 preventive practice increase by 1.3 times (AOR=1.328(1.042-1.692)), As perceived severity increases with one unit the likelihood of good COVID-19 preventive practice increase by 1.2 times (AOR=1.207(1.033-1.410)), As perceived benefit increases with one unit the likelihood of COVID-19 preventive practice increase by 1.2 times (AOR=1.237(1.043-1.468)) (Table 5).

Table 5: Multivariable logistic regression model predicting the likelihood of COVID-19 preventive practice among chronic disease patients in JUMC, 2021

Variables		COVID-19 Preventive Practice				COR	AOR	P-value
		Preventive Practice		Non-Preventive Practice				
		N	%	N	%			
Sex	Female	69	43.4%	90	56.6%	1.313(.871-1.979)	1.548(.897-2.672)	.116
	Male	87	36.9%	149	63.1%	1	1	1
Residence	Urban	106	50.7%	103	49.3%	2.799(1.834-4.272)	2.790(1.118-6.963)*	.028
	Rural	50	26.9%	136	73.1%	1	1	1
Occupation	Merchant	40	55.6%	32	44.4%	1	1	1
	Government employee	36	55.4%	29	44.6%	.993(.506-1.950)	.770(.253-2.344)	.646
	Private employee	21	42.0%	29	58.0%	.579(.279-1.201)	.712(.290-1.749)	.459
	Farmer	47	31.8%	101	68.2%	.372(.209-.665)	1.178(.421-3.295)	.756
	House wife	8	19.5%	33	80.5%	.194(.079-.478)	.358(.115-1.111)	.076
	Others ^s	4	21.1%	15	78.9%	.213(.064-1.706)	.317(.077-1.311)	.113

Age	18-29	24	40.0%	36	60.0%	1	1	1
	30-49	94	43.9%	120	56.1%	1.175(.656-2.104)	.717(.316-1.628)	.427
	50-64	28	30.1%	65	69.9%	.646(.327-1.276)	.526(.194-1.429)	.208
	>=65	10	35.7%	18	64.3%	833(.329-2.111)	.882(.257-3.020)	.841
Family size	<5	75	44.9%	92	55.1%	1.479(.984-2.225)	1.480(.858-2.554)	.158
	>=5	81	35.5%	147	64.5%	1	1	1
Monthly income (ETB)	<4800	68	30.4%	156	69.6%	1	1	1
	>=4800	88	51.5%	83	48.5%	2.432(1.608-3.678)	2.705(1.493-4.899)*	.001
Educational level	No formal education	40	26.5%	111	73.5%	1	1	1
	Grade 1-6	26	36.6%	45	63.4%	1.603(.877-2.931)	1.399(.661-2.960)	.381
	Grade 7-12	56	47.9%	61	52.1%	2.548(1.527-4.251)	2.400(1.092-5.278)*	.029
	Diploma	13	56.5%	10	43.5%	3.607(1.466-8.874)	1.401(.303-6.477)	.666
	First degree and above	21	63.6%	12	36.4%	4.856(2.191-10.765)	1.637(.406-6.604)	.488
Knowledge						1.296(1.031-1.629)	1.455(1.076-1.968)*	.015
Perceived susceptibility						1.501(1.222-1.843)	1.328(1.042-1.692)*	.022
Perceived severity						1.285(1.134-1.457)	1.207(1.033-1.410)*	.018
Perceived benefit						1.388(1.198-1.608)	1.237(1.043-1.468)*	.015
Self-efficacy						1.085(1.016-1.158)	1.034(.957-1.118)	.391
Cues to action						.982(.891-1.081)	1.111(.973-1.268)	.119

* = Variables having statistically significant association (p-value <0.05), 1= reference group, COR=

Crude odds ratio, AOR=Adjusted odds ratio, \$=Students

NB: Hosmer and Lemeshow's goodness-of-fit test has p-value of 0.59.

Chapter 6 Discussion

COVID-19 has a significant threat to public health. The current new emergence strain of the virus continued to worsen the condition and threaten human life. These conditions indicate the importance of effective prevention and control measures. Since chronic disease patients are vulnerable to COVID-19 and had an increased risk of seriousness, the health belief on the risk perception gap is potentially dangerous and should be addressed to mitigate the spread and fatality of the disease. The achievement of the World's combat against COVID-19 depends upon people's adherence to the preventive practices [9]. The HBM contains several primary concepts that predict why people will take action to prevent, or to control illness conditions through the key constructs [59]. Therefore, this study assessed COVID-19 preventive practice and associated factors among chronic disease patients using HBM in Jimma University Specialized Hospital, Jimma, Ethiopia.

The result of this study showed the prevalence of the preventive practice of COVID-19 among chronic disease patients was 39.5%. This finding is nearly similar with the study done among chronic disease patients in Dessie town hospitals 40.7% [43] and among residents in Dire Dawa city preventive practice was 40.7% [42]. However, the finding is below the national and global expectation of COVID-19 prevention practice, considered as when 50% of the population practices covering their mouth and nose, the disease transmission will decrease by 92% [31]. It is also below the systematic review study result conducted in Ethiopia 52.83% [33] and global preventive practice 70% [32]. The preventive practice of COVID-19 result is also lower than the studies done among chronic disease patients at Aksum hospital 51.2% [44], Addis Zemen hospital 52.7% [41], North Shoa study 62.4% [40] and, the study done in Vietnam 77.2% [35].

The observed discrepancy for being low COVID-19 preventive practice might be due to the difference in their population and socio-demographic characters. For instance, in the current study majority of respondents were chronic disease patients while that of North Shoa reponents were healthy individuals. The study participants in Addis zemen and Aksum were more urban dwellers, 62% and 78.7% respectively, while in the current study 52.9% of the participants were urban dwellers. On the other hand, the study done in Vietnam has no participant with non-formal education. The phase of the pandemic wave in the study area might be also the reason for the

variation in the practice of recommended actions and behaviors to prevent COVID-19. Almost all of the studies were conducted in the early months of the first wave of the pandemic when the disease was new and deemed to be fatal, participants were eager to get information and practice preventive behaviors. While the current study was conducted after one year of the pandemic and the people may not hear or observe a significant number of deaths in the study area through the Medias. Therefore, they may become reluctant to practice the preventive behaviors of COVID-19.

Another probable distinction is may be due to the extent of the government's action taken to prevent COVID-19 transmission. In the first phase of the pandemic, strict measures were taken to halt the spread of the disease that could make individuals stick with the preventive practices. Moreover, the disparity may also be due to the differences in questions used to assess preventive practice. In the present study frequency of preventive practice was also measured along with the yes or no question and high performs was considered as having a preventive practice based on blooms criteria. While on most of the studies practices were directly asked with yes or no questions only.

Whereas in contrast, the present study is higher than the studies conducted among HTN and DM patients in Ambo health facilities 10.4% [39] and 31.2% in Addis Ababa conducted using HBM among employees [47]. The difference could be because of the study population and knowledge about COVID-19 which may help to understand well the seriousness of the disease and follow the preventive practices of COVID-19 strictly. For instance, the study done in Addis Ababa was conducted among apparently healthy individuals, while the present study was conducted on chronic disease patients.

In this study chronic patients perceived susceptibility increase the likelihood of performing COVID-19 preventive practice. This is in line with the concepts of HBM and similar with studies done in North Shoa Zone and China [46, 55]. According to HBM Individuals who have a high perception of susceptibility are more inclined to take steps to lower their risk of contracting diseases an individual's perception of susceptibility to a disease, along with his or her perception that the sickness could have major consequences leads the individual to the recommended

behavior [62], which in this study increased COVID-19 preventive practice. Nevertheless, the result was different from a study done among a sample of the Iranian adult population on COVID-19 preventive behaviors [58]. The difference might be due to the study population that the Iranian study was conducted on the community and healthy individuals, while the current study was done on chronic disease patients and which may have a difference in their perceived susceptibility.

The finding of this study revealed that, as the chronic disease patients perceived severity increases the likelihood of the participants to have a preventive practice of COVID-19 increases. This result is in line with the concept of HBM and the result of a study conducted in Korea [56]. According to HBM the more seriously one takes a given health problem, the more one tries to reduce its likelihood of occurrence. Perceived severity broadly includes beliefs about the disease itself as well as beliefs about its impact on the work and social roles relevant to the individual [62], and in the current study, the perceived severity of participants leads to COVID-19 preventive behavior. However, this study was different from the studies conducted in North Shoa and Addis Ababa [46, 47].

The discrepancy can be due to the difference in the study population; both studies were conducted on the community and apparently healthy individuals. Whereas, the present study was conducted on chronic health disease individuals who can perceive the seriousness of COVID-19 on them compared to apparently healthy individuals [70]. In addition, the participant's socio-demographic characteristics might be the other reason. For example, the mean age of the participants in the present study was higher than those studies. This age disparity may result in perception differences on the disease and on the practice of prevention methods. This can be explained based on the fact that COVID-19 was more serious on old individuals than the young ones [8].

In the present study perceived benefit was increased the preventive behaviors of COVID-19. This is similar with the concept of HBM and the study conducted in North Shoa of Ethiopia, China, and Korea [46, 55, 56]. The HBM perceived benefits indicate the evaluative value or sense of efficacy that arises when engaging in health-promoting behaviors to reduce disease risk

[71]. In this study perceived benefits of participants indicated the preventive behavior of COVID-19. In contrast, this study was different from the study conducted among employees in Addis Ababa, Ethiopia [47]. The reason for the variation could majorly be the difference in study participants and socio-demographic characteristics. The level of risk perception difference in perceived susceptibility and severity of the disease among the respondents may also be the other possible reason in perceiving the benefit from adherence to the preventive practice of COVID-19. This was also because the compared study participants were healthy individuals, and yet the current study participants were chronic disease patients who may understand the perceived benefit of preventive actions.

The study indicated that people living in urban were more likely to have a preventive practice of COVID-19 than those living in rural. This finding is similar with the study done in Ambo, Southern Ethiopia, and Northern Iran [39, 48, 51]. This might be living in urban area give more opportunity for education and exposure to knowledge and practice preventive measure.

In this study participants earning a monthly income more than 4800 ETB were more likely to have preventive practice than those earning less. The finding was similar to the study done in Addis Zemen Hospital and Dire Dawa city [41, 42]. This might be sufficient income to support individuals to care for themselves and improve their living standards and when their income increases they will be motivated to practice prevention measures. In addition, individuals with high income can afford to buy personal protective equipment like face masks, disinfectants/sanitizers, and other materials necessary to halt the COVID-19 transmission and use them as necessary [72].

In contrast, the result is different from the two studies conducted in Addis Ababa as indicated those who earned high monthly income had lower odds of practicing the precautionary measures against COVID-19 than those with lower income [45, 47]. This difference might be that individuals with high income were from the higher job level and could think that they have less contact with other people and may not strictly perform the prevention practices. The knowledge and perception difference might be the other reason for the disparity since the studies reported lower than this study.

Regarding education level, respondents with 7-12 complete grades were more likely to have a preventive practice of COVID-19 as compared to those with non-formal education. The study is similar with the study done in Ambo public health facilities and Addis Zemen Hospital [39, 41]. This indicates that as the education level increases prevention practice would also increase. This could be explained as access to information through reading can increase the knowledge of respondents on the transmission methods of COVID-19 that in turn led to an increase in preventive practice. Additionally, when someone becomes more educated, they will have a greater awareness of COVID-19 control measures and prevention efforts, as well as the capacity to put practice methods in place to avoid COVID-19 spread. Furthermore, education leads to better information-gathering habits and efficient use of health inputs for COVID-19 prevention [41].

The study indicated a significant association between knowledge and COVID-19 preventive practice. This result is similar with the studies done in Ho Chi Minh City Vietnam, Ambo referral hospital, and Addis Zemen hospital [35, 39, 41]. As knowledge increases good prevention practice of COVID-19 increases. This can be explained based on the basic fact that when individuals have knowledge on the method of transmission of the COVID-19 disease they tend to practice the prevention methods. Basically, COVID-19 preventive practices are implemented after being having knowledge about the disease and the activities used to prevent themselves [73].

In this study cues to action was not significantly associated with COVID-19 preventive practices. This result was similar to the study done in North Shoa Zone, Ethiopia [46]. In the present study, almost all respondents disagree with cues to action questions. This might be due to one of the limitations of the HBM assumption that everyone has access to equal amounts of information on the illness or disease [60]. However, an individual's access to information may depend on the socio-demographic characteristics of the respondents. For instance, the educational status of respondents where (38.2%) of the respondents were with no formal education, (47.1%) being rural residents, and more than half of the respondents (56.7%) had an income less than 4800 ETB.

Limitations

Since the data collection method was self-report rather than direct observation of patients COVID-19 preventive practice the response could be prone to social desirability biases but efforts have been made to minimize the bias by recruiting data collectors from other department of the hospital and by ensuring respondents about the anonymity of the data.

Chapter 7 Conclusion and recommendation

7.1. Conclusions

The patients' actual practice of preventing COVID-19 was low (39.5%) when compared to other COVID-19 studies conducted among chronic disease patients. This indicates that chronic disease patients at JUMC are at higher risk of contracting COVID-19 and face serious illness by the wave of the pandemic. Urban dwellers, earning greater than 4800 ETB per month, educational level 7-12 grade, perceived susceptibility, perceived severity, and perceived benefit were predictors of COVID-19 preventive practice. The study implied individuals with low economic status and less knowledge were the ones who less performed the recommended COVID-19 preventive practices.

7.2. Recommendations

- Policymakers needs to include prevention strategies especially for chronic disease patients based on their risk perception in existing National comprehensive COVID-19 management
- Federal ministry of health and Oromia regional health offices have to include, produce and distribute health learning materials on COVID-19 prevention based on risk perception of chronic disease patients in current health learning materials for COVID-19 prevention
- JUMC and health facilities should utilize the risk perceptions based produced health learning materials when providing health information for chronic disease patients
- The health information should be given for chronic disease patients on COVID-19 prevention practice should focus and be based on individual's economic status, educational level, rural residents, level of knowledge, perceived susceptibility and perceived severity, and perceived benefit.
- Further studies are recommended in assessing chronic disease patient's COVID-19 preventive practices by including observation to measure the preventive practice, qualitative aspect, access factors.

Chapter 8 References

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Annex

Questionnaire

Jimma University, Institution of Health, Faculty of Public Health

Department of Behavioral Health and Society

Verbal Consent

Hello, my name is _____ I am working as data collector in a study conducted by Jimma University post graduate student on assessment of COVID-19 Prevention Practices and Associated Factors among Chronic Disease Follow up Patients in Jimma University Medical Center, Using Health Belief Model, 2021. I want to interview you about different questions in order to collect information necessary for developing appropriate strategies of COVID-19 prevention practice. To attain this purpose, your honest and genuine participation by responding to the forwarded questions is very important and highly appreciable. I expect the interview may take about 15-30 minutes. You do not need to provide your name. Please be assured that all the information gathered will be kept strictly confidential. You can prefer not to respond to all or some of the questions and you can stop the interview at any time.

Are you willing to participate in our study? Yes No

Thank you for your cooperation!!!

Interview date _____

Questionnaire code _____ Name of data collector _____ Sign _____

Name of supervisor _____ Sign _____

I. Socio-demographic characteristics of respondents

Instructions: Interviewer will ask the socio-demographic questions and the respondent answers then recorded accordingly by encircling on the answer.

S.No	Variables	Category
1	Sex	1. Male
		2. Female
2	Age in years	
3	Residence	1. Urban
		2. Rural
4	Educational level	1. Cannot read and write
		2. Read and write
		3. Grade 1-6
		4. Grade 7-12
		5. Diploma
		6. First degree and above
5	Marital status	1. Single
		2. Married
		3. Divorce
		4. Widowed
6	Family size	
7	Monthly income (ETB)	
8	Occupation	1. Merchant
		2. Government employee
		3. Private employee
		4. Farmer
		5. House wife
		6. Others (specify)-----
9	Type of chronic disease	1. Hypertension
		2. Diabetes mellitus
		3. Asthma
		4. Heart disease
		5. Chronic liver disease

		6. Chronic lung disease
		7. Chronic kidney disease

II. Practice-Related Questions

Instructions: The interviewer will ask the preventive practice question and frequency of prevention practice if the answer is yes for the practice and record by making X mark on the space provided when answered by the respondent.

S.N	Questions	Response				
		Yes (1)				No (0)
		Occasionally (1)	Sometimes (2)	Most of the time (3)	Always (4)	
1	I wear face mask when going out of my home to prevent spreading COVID-19					
2	I keep 2 meter physical distances to prevent COVID-19 infection					
3	I wash my hands using soap for at least 20 seconds thoroughly					
4	I avoid touching my nose, eyes, and mouth with hand ahead of washing					
5	I cover my mouth and nose when coughing/sneezing and washing hands					
6	I avoid close contact with anyone with flu or cold symptoms such as cough, fever, or sneezing					
7	I dispose used mask in proper place.					
8	I stay at home if I am sick, except to get medical care					
9	I avoid large gatherings and crowded places					
10	I avoid shaking hands of others to prevent COVID-19, infection					

III. Knowledge-Related Questions

Instructions: The following questions will be asked by the interviewer and the respondent's answers by saying true or false or I don't know.

S/No	Questions	Response		
		True (1)	False (0)	Idon't know (2)
1	COVID-19 is a dangerous disease and can affect any one			
2	The risks of getting COVID-19 is higher in crowded and inadequately ventilated spaces			
3	Not all persons with covid-19 will develop severe cases except who are elderly and have chronic disease illness.			
4	Main clinical symptoms of covid-19 are fever, dry cough, body muscle cramp, fatigue.			
5	Currently there is vaccine for covid-19.			
6	COVID-19 disease is transmitted through contacts with infected surface			
7	COVID-19 virus transmits from infected person to uninfected Via respiratory droplets of infected individuals during sneezing or coughing			
8	COVID-19 is transmitted directly through kissing and shaking hands of infected person			
9	Persons with covid-19 cannot transmit the virus to others where symptoms is not present			
10	Touching nose, eyes and mouth with unwashed hand expose to covid-19 infection			
11	COVID-19 is transmitted directly through shaking hands of infected person			
12	COVID-19 disease is transmitted directly when talking closely with infected individuals			
13	Proper hand washing with soap thoroughly is one method of prevention of covid-19 infection			
14	Keeping 2m distance from others is not method of prevention of covid-19			
15	Wearing mask is one of the prevention method of covid-19			
16	Utilization of sanitizer prevents covid-19 infection			
17	Cleaning and disinfecting contaminated surface prevents covid-19 transmission			

IV. Health belief model construct questions

Instructions: The interviewer will read each question and possible responses for the respondent and the respondent will chose from possible responses then recorded by interviewer by making circle (O) on numbers given for each response.

Perceived Susceptibility		
01	As a chronic disease patient, I think I am susceptible/at risk to COVID-19. (HTN, DM, Asthma, CVD, CLD, COPD, CKD)	1. Strongly disagree; 2. Disagree; 3. Neutral; 4. Agree; 5. Strongly agree
02	As a chronic disease patient I have a chance of getting COVID-19 (HTN, DM, Asthma, CVD, CLD, COPD, CKD)	1. Strongly disagree; 2. Disagree; 3. Neutral; 4. Agree; 5. Strongly agree
03	As a chronic disease patient I think it is possible that I will get/experience COVID-19 (HTN, DM, Asthma, CVD, CLD, COPD, CKD)	1. Strongly disagree; 2. Disagree; 3. Neutral; 4. Agree; 5. Strongly agree
04	As a chronic disease patient I think I am more likely to get covid-19 (HTN, DM, Asthma, CVD, CLD, COPD, CKD)	1. Strongly disagree 2. Disagree; 3. Neutral 4. Agree 5. Strongly Agree
Perceived severity		
05	Experiencing/getting covid-19 is life threatening to chronic disease patients (HTN, DM, Asthma, CVD, CLD, COPD, CKD)	1. Strongly disagree 2. Disagree; 3. Neutral 4. Agree 5. Strongly agree
06	Getting covid-19 is a serious problem to chronic disease patient (HTN, DM, Asthma, CVD, CLD, COPD, CKD)	1. Strongly disagree 2. Disagree; 3. Neutral 4. Agree 5. Strongly agree
07	Getting Covid-19 leads to loss of life to chronic disease patients (HTN, DM, Asthma, CVD, CLD, COPD, CKD)	1. Strongly disagree 2. Disagree; 3. Neutral 4. Agree 5. Strongly agree
08	Experiencing COVID-19 is not dangerous to chronic disease patient. (HTN, DM, Asthma, CVD, CLD, COPD, CKD)	1. Strongly disagree 2. Disagree; 3. Neutral 4. Agree 5. Strongly agree
09	As a chronic disease I think If I got covid-19 disease it would be more serious than other diseases to me (HTN, DM, Asthma, CVD, CLD, COPD, CKD)	1. Strongly disagree 2. Disagree; 3. Neutral 4. Agree 5. Strongly agree
Perceived benefit		
10	For a chronic disease patients washing hand with soap thoroughly for 20 seconds prevents from risk of Covid-19 infection (HTN, DM, Asthma, CVD, CLD, COPD, CKD)	1. Strongly disagree; 2. Disagree; 3. Neutral; 4. Agree; 5. Strongly agree
11	For chronic disease patients keeping 2meters physical distance prevents from covid-19 (HTN, DM, Asthma, CVD, CLD, COPD, CKD)	1. Strongly disagree; 2. Disagree; 3. Neutral; 4. Agree; 5. Strongly agree

12	For chronic disease patient wearing face mask prevents covid-19 infection (HTN, DM, Asthma, CVD, CLD, COPD, CKD)	1. Strongly disagree; 2. Disagree; 3. Neutral; 4. Agree; 5. Strongly agree
13	For chronic disease patients using sanitizer prevents covid-19 infection (HTN, DM, Asthma, CVD, CLD, COPD, CKD)	1. Strongly disagree; 2. Disagree; 3. Neutral; 4. Agree; 5. Strongly agree
14	I wouldn't be so anxious about covid-19 if I perform covid-19 prevention practice. (HTN, DM, Asthma, CVD, CLD, COPD, CKD)	1. Strongly disagree; 2. Disagree; 3. Neutral; 4. Agree; 5. Strongly agree
Perceived Barriers		
15	As a chronic disease patient I think it is difficult to find water and soap any place (HTN, DM, Asthma, CVD, CLD, COPD, CKD)	1. Strongly disagree; 2. Disagree; 3. Neutral; 4. Agree; 5. Strongly agree
16	As a chronic disease patient it is difficult to keep 2m physical distance. (HTN, DM, Asthma, CVD, CLD, COPD, CKD)	1. Strongly disagree; 2. Disagree; 3. Neutral; 4. Agree; 5. Strongly agree
17	I think face mask is scarce in the market and thus I don't wear mask as a chronic disease patient (HTN, DM, Asthma, CVD, CLD, COPD, CKD)	1. Strongly disagree; 2. Disagree; 3. Neutral; 4. Agree; 5. Strongly agree
18	I think sanitizer is expensive in the market, thus I don't use sanitizer as a chronic disease patient. (HTN, DM, Asthma, CVD, CLD, COPD, CKD)	1. Strongly disagree; 2. Disagree; 3. Neutral; 4. Agree; 5. Strongly agree
19	I think performing covid-19 prevention practice would require new habit (which is difficult) (HTN, DM, Asthma, CVD, CLD, COPD, CKD)	1. Strongly disagree, 2. Disagree; 3. Neutral; 4. Agree; 5. Strongly agree
Self-efficacy		
20	As a chronic disease patient it is easy for me to use face mask to prevent risk of covid-19 (HTN, DM, Asthma, CVD, CLD, COPD, CKD)	1. Strongly disagree; 2. Disagree; 3. Neutral; 4. Agree; 5. Strongly agree
21	As a chronic disease patient I am able to keep 2m physical distance from others to prevent risk of covid-19 (HTN, DM, Asthma, CVD, CLD, COPD, CKD)	1. Strongly disagree; 2. Disagree; 3. Neutral; 4. Agree; 5. Strongly agree
22	As a chronic disease patient I am confident to wash my hand thoroughly for 20 seconds to prevent risk of covid-19 (HTN, DM, Asthma, CVD, CLD, COPD, CKD)	1. Strongly disagree; 2. Disagree; 3. Neutral; 4. Agree; 5. Strongly agree

23	As a chronic disease patient it easy for me to use sanitizer to prevent risk of covid-19. (HTN, DM, Asthma, CVD, CLD, COPD, CKD)	1. Strongly disagree; 2. Disagree; 3. Neutral; 4. Agree; 5. Strongly agree
24	As a chronic disease patient I can avoid going crowded places. (HTN, DM, Asthma, CVD, CLD, COPD, CKD)	1. Strongly disagree 2. Disagree 3. Neutral 3. Agree. 5. Strongly agree
Cues to action		
25	I look for new information related to covid-19 (HTN, DM, Asthma, CVD, CLD, COPD, CKD)	1. Strongly disagree; 2. Disagree; 3. Neutral; 4. Agree; 5. Strongly agree
26	I get advice from health workers on covid-19 (HTN, DM, Asthma, CVD, CLD, COPD, CKD)	1. Strongly disagree; 2. Disagree; 3. Neutral; 4. Agree; 5. Strongly agree
27	I read health messages on covid-19 from poster (HTN, DM, Asthma, CVD, CLD, COPD, CKD)	1. Strongly disagree; 2. Disagree; 3. Neutral; 4. Agree; 5. Strongly agree
28	I get health information on covid-19 from public education (HTN, DM, Asthma, CVD, CLD, COPD, CKD)	1. Strongly disagree; 2. Disagree; 3. Neutral; 4. Agree; 5. Strongly agree
29	I get health information on covid-19 from radio or television (HTN, DM, Asthma, CVD, CLD, COPD, CKD)	1. Strongly disagree; 2. Disagree; 3. Neutral; 4. Agree; 5. Strongly agree

GAAFANNOO

AFAAN OROMOO VERSION

Yuuniversiitii Jimmaatti

Inistituushinii fayyaa, Faacaltii Saayinsii Hawaasaatti

Damee Amala Fayyaa fi Hawaasaa

Gaafannoon kun waa'ee shaakala ittisa KOOVID-19 fi waantota isaan walitti dhufeenya qaban dhukkubsatoota dhibee daddarboo hin taanee yeroo dheeraaf dhukkubsatanii fi Giddugala Yuuniversiitii Jimmaa, Kibba Dhiha Itiyoophiyaatti hordoffii irra jiran qorachuuf qophaa'e, 2021.

Walii Galtee Afaanii

Akkam jirtu, ani maqaan koo _____ kan jedhamu qorannoo barataa digrii 2ffaa Jimmaa Yuuniversiitiitti baratuun mata duree shaakala ittisaa KOOVID-19 fi isaan walitti dhufeenya qaban namoota dhibee daddarboo hintaanee yeroo dheeraaf dhukkubsatanii fi Giddugaleessa yaalaa Yuuniversiitii Jimmaatti hordooffi irraa jiran irraatti taasifamuu irraatti ragaa sassabaadha. Kanaaf qorannoo kanaaf ragaalee barbaachsoo ta'an argachuuf akkasumas tooftaalee ittisa KOOVID-19 illaalchisee isaaniif isa sirrii ta'e qopheessuuf gargaaran irraatti gaaffilee adda addaa isinan gaafadha. Kaayyoo kana dhugoomsuuf, hirmaannaan kee fi deebii amanamummaan ati gaaffilee anaaf kennitu baay'ee murteessaa fi kan jajjabeeffamudha. Afgaaffiin kun daqiiqaa 15-30 fudhachuu ni danda'a. maqaa kee himachuun si hin barbaachisu. Akkasumas ragaaleen sassabaman hundi icciitiin akka qabaman waadaan siif gala. Gaaffiin sitti hin tollee yoo jiraatan sa'a barbaadetti afgaaffi kana addaan kutuu ni dandeessa.

Qorannoo kana keessaatti hirmaachuuf fedha ni qabdaa? Eeyyee

Lakki

Hirmaannaa keef siin galateeffadha!!!

Guyyaa afgaaffiin itti gaafatame _____

Lakk. Gaaffii _____ Maqaa raga sassabaa _____ Mallattoo _____

Maqaa to'ataa _____ Mallattoo _____

I. Gaaffilee Ragaa Waa'ee Hirmaattootaa Argachuuf Gaafatamu		
Qajeelfama: gaaffilee armaan gadii gaafachuun deebii isaan siif kennan itti mari.		
Lak.	Kan gaafatamu	Kan deebifamu
1	Saala	1. Dhiira 2. Dhalaa
2	Umurii waggaadhaan	_____
3	Bakka jireenyaa	1.Magaalaa 2. Baadiyyaa
4	Sadarkaa Barnootaa	1.Barumsaa kan hin barannee 2.Bareesuf dubissuu qoffa 3.Kutaa 1-6 4.Kutaa 7-12 5.Dipiloomaa 6.Digrii jalqabaa fi isaa ol
5	Haala Gaa'ilaa	1.Kan hinfuune/kan hin heerumne 2.Kan heerumte/fuudhe 3.Kan wal hiikan 4.Kan abbaan mana irraa du'e/kan haati manaa jalaa duute
6	Hamma miseensota maaatii	_____
7	Galii ji'aa (Qarshiidhaan)	
8	Hojii	1.Daldalaa/tu 2.Hojjataa mootummaa 3.Kan hojii dhuunfaa hojjatu/ttu 4.Qonnaan Bulaa 5.Haadha manaa 6.Kan biroo (adda baasii)-----
9	Gosa dhibee daddarbaa hin taane fi kan ture	1. Dhiibbaa Dhiigaa 2. Dhukkuba Sukkaraa 3. Dhukkuba laphee 4. Dhukkuba Onnee 5. Dhukkuba Tiruu 6. Dhukkuba Sombaa 7. Dhukkuba Kalee
II. Gaaffilee Shaakala Ittisa KOOVID-19 ilaalchisee Gaafataman		

Qajeelfama: shaakala ittisa fi turtii shaakala ittisa KOOVID -19 ilaalchisee gaaffillee armaan gadii gaafachuun deebii isaanii irraatti hundaa'uun 'Eyyee' yoo ta'e filannolee kennaman kessaa bakka kenname irratti mallattoo 'X' barreessi.

Lak.	Gaaffilee	Deebii				
		Eyyee (1)				Lakkii(0)
		Darbee darbee (1)	Yeroo tokko tokko (2)	Yeroo baay'ee (3)	Yeroo hunda (4)	
1.	Ani yeroon mana kootii ala bahu faffaca'insa koovid-19 ittisuuf haguuggii afaanii nan godhadha.					
2.	Ani dhibee koovid-19 hirdhisuuf faageenya koo meetra 2m. nan eeggadha.					
3.	Ani harka koo yoo xiqqate sekondii 20f samunaadhaan siriitti nan dhiqadha.					
4.	Ani osoo harka koo hin dhiqatiin funyaan koo, ija koo, fi afaan koo hin tuttuqu.					
5.	Yeroon qufa'uu fi haxxifadhu afaanii fi funyaan koo nan haguugadhaa, harkakoos nan dhiqadha.					
6.	Ani namoota mallattoo qufaa, ho'insa qamaa fi haxxifannaa qaban irraa wal akka hin xuxxuqqneef ofan eeggadha.					
7.	Haguuggii afaanii itti fayyadame bakka sirritaan gata.					
8.	Ani yeroo na dhukkubu manan tura, yoo yaalaf ta'e malee manaa hin bahu.					
9.	Bakka namootni walitti sassabamanii fi itti baay'atan irraa ofan eega.					
10.	Ani dhibee koovid-19 ittisuuf namoota faana harka wal hin fuudhu.					

III. Gaaffilee Beekumsa ilaallatan

Qajeelfama: gaaffileen armaan gadii nama gaaffii gaafatuun yommuu gaafatamu, namni deebii deebisu immoo eyyee ykn lakkii ykn immoo hin beeku jechuun deebisa.

Lak.	Gaaffilee	Deebii kennamu		
		Dhuggaa	Sobbaa	Hin beeku
1	koovid-19 dhukkubba hammataa fi nama kamuu miidhudha			
2	carraan dhibee koovid-19n qabamuu bakka namootni itti heddumataniitti fi qilleensa gahaan hin jirreetti ni baay'ata.			
3	namootni vaayirasii koovid-19n qabaman hundumaa irraatti dhukkubbiin hin hammattu namoota umuriin isaanii deemanii fi dhukkuba hin daddarbine dhukkubsachaa jiran irraatti malee.			
4	ho'insii qaamaa dabaluu, gogaa qufa'uun, maashaan qaamaa nama dhukkubuni, fi dadhabbiin namatti dhagahamuun mallattooleen gurguddoo koovid-19ti.			
5	yeroo ammaa talaaliin koovid-19 ni jira.			
6	dhukkubni koovid-19 waantota vaayirasii kooviidin faalame tuxxuquun namatti daddarba.			
7	vaayirasiin koovid-19 nama vaayirasicha qabu irraa gara nama fayyaatti yeroo inni haxxifatuu fi qufa'u itti ni daddarba.			

8	koovid-19 nama vayirachaan qabame dhungachuu fi harka fuudhuun nama fayyaatti ni daddarba.			
9	namootni koovid-19 qabamanii jirani yeroo mallattoo dhukkubaa hin qabnetti vaayiracha namatti daddabarsuu hin danda'ani.			
10	harka ofii osoo hin dhiqatiin funyaan, ijaa fi afaan ofii tuxxuquun dhibee koovid-19 ni nama saaxila.			
11	koovid-19 harka nama dhibichaan qabame fuudhuun namatti daddarba.			
12	dhukkubni koovid-19 namoota vayirasichaan qabaman wajjiin odeessuun namatti daddabarba.			
13	harka ofii saamunaadhaan sirritti dhiqachuun tooftaa ittiin koovid-19 ittiin of-irraa ittisan keessaa isa tokko.			
14	fageenya ofii hanga meetira 2 wal irraa fagachuun tooftaa ittisaa koovid-19 miti.			
15	haguuggii afaanii (maaskii afaanii) godhachuun tooftaa ittin koovid-19 ittin of-irraa ittisan keessaa isa tokko.			
16	sanitizerii harkaa fayyadamuun koovid-19 ni ittisa.			
17	waantota vaayirasii koovid-19n falaman qulqulleessuunii fi disinfect gochuun daddarbuu koovid-19 ni ittisa.			

I. Gaaffilee Modeela Amantii Fayyaa (Health belief model construct questions)

Qajeelfama: Gaaffiilee armaan gadii gaafachuun waantota deebii ta'uu danda'an keessaa kan gaafataman deebise itti maruun deebisa.

Sodaa saaxilamummaa (Perceived Susceptibility)

01	Ani akka dhukkubsataa dhukkuba hin daddarbine yeroo dheeraaf dhukkubsatuutti, koovid-19f saaxilamaadha jedheen yaad/ carraa koovid-19n qabamuu nan qaba (Dhiibba dhiigaa, Dhukkuba sukkaaraa, Asmii, dhukkuba laphee, dhukkuba tiruu, dhukkuba sombaa, dhukkuba kalee)	1. baay'ee itti walii hin galu; 2. Walii hin galu; 3. Yaada hin qabu; 4. Ittaan walii gala; 5. Baay'een itti walii gala
02	Ani akka dhukkubsataa dhukkuba hin daddarbine yeroo dheeraaf dhukkubsatuutti, carra koovid-19n qabamuu nan qaba. (Dhiibba dhiigaa, Dhukkuba sukkaaraa, Asmii, dhukkuba laphee, dhukkuba tiruu, dhukkuba sombaa, dhukkuba kalee)	1. baay'ee itti walii hin galu; 2. Walii hin galu; 3. Yaada hin qabu; 4. Ittaan walii gala; 5. Baay'een itti walii gala
03	Ani akka dhukkubsataa dhukkuba hin daddarbine yeroo dheeraaf dhukkubsatuutti, koovid-19n qabamuu nan danda'a. (Dhiibba dhiigaa, Dhukkuba sukkaaraa, Asmii, dhukkuba laphee, dhukkuba tiruu, dhukkuba sombaa, dhukkuba kalee)	1. baay'ee itti walii hin galu; 2. Walii hin galu; 3. Yaada hin qabu; 4. Ittaan walii gala; 5. Baay'een itti walii gala
04	Ani akka dhukkubsataa dhukkuba hin daddarbine yeroo dheeraaf dhukkubsatuutti, koovid-19n qabamuuf carraa guddaan qaba. (Dhiibba dhiigaa, Dhukkuba sukkaaraa, Asmii, dhukkuba laphee, dhukkuba tiruu, dhukkuba sombaa, dhukkuba kalee)	1. baay'ee itti walii hin galu; 2. Walii hin galu; 3. Yaada hin qabu; 4. Ittaan walii gala; 5. Baay'een itti walii gala

Sodaa itti hammachuu (Perceived severity)

05	Koovid-19n qabamuun namoota dhukkuba hin daddarbine yeroo dheeraaf dhukkubsataniif lubbuu isaaniif sodaachisaadha (Dhiibba dhiigaa, Dhukkuba sukkaaraa, Asmii, dhukkuba laphee, dhukkuba tiruu, dhukkuba sombaa, dhukkuba kalee)	1. baay'ee itti walii hin galu; 2. Walii hin galu; 3. Yaada hin qabu; 4. Ittaan walii gala; 5. Baay'een itti walii gala
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06	Koovid-19n qabamuun namoota dhibee hin daddarbine yeroo dheeraaf dhukkubsataniif rakkoo hamaadha. (Dhiibba dhiigaa, Dhukkuba sukkaaraa, Asmii, dhukkuba laphee, dhukkuba tiruu, dhukkuba sombaa, dhukkuba kalee)	1. baay'ee itti walii hin galu; 2. Walii hin galu; 3. Yaada hin qabu; 4. Ittaan walii gala; 5. Baay'een itti walii gala
07	Koovid-19 namoota dhibee daddarbaa hin taane yeroo dheeraaf dhukkubsatan ajjeesuu ni danda'a. (Dhiibba dhiigaa, Dhukkuba sukkaaraa, Asmii, dhukkuba laphee, dhukkuba tiruu, dhukkuba sombaa, dhukkuba kalee)	1. baay'ee itti walii hin galu; 2. Walii hin galu; 3. Yaada hin qabu; 4. Ittaan walii gala; 5. Baay'een itti walii gala
08	Koovid-19 dhukkubsachuun namoota koovid-19 dhukkubsataniif hammataa miti. (Dhiibba dhiigaa, Dhukkuba sukkaaraa, Asmii, dhukkuba laphee, dhukkuba tiruu, dhukkuba sombaa, dhukkuba kalee)	1. baay'ee itti walii hin galu; 2. Walii hin galu; 3. Yaada hin qabu; 4. Ittaan walii gala; 5. Baay'een itti walii gala
09	Akka nama dhibee daddarbaa hin taane yeroo dheeraaf dhukkubsatu tokkotti, yoon koronaan qabame dhukkuba isa kaan irra natti hammachuu ni mala. (Dhiibba dhiigaa, Dhukkuba sukkaaraa, Asmii, dhukkuba laphee, dhukkuba tiruu, dhukkuba sombaa, dhukkuba kalee)	1. baay'ee itti walii hin galu; 2. Walii hin galu; 3. Yaada hin qabu; 4. Ittaan walii gala; 5. Baay'een itti walii gala
Bu'aa argamuu malu (Perceived benefit)		
10	Namoota dhukkuba hin daddarbine dhukkubsataniif harka ofii saamunaadhaan sekondii 20f sirritti dhiqachuun koovid-19n qabamu ni ittisaa. (Dhiibba dhiigaa, Dhukkuba sukkaaraa, Asmii, dhukkuba laphee, dhukkuba tiruu, dhukkuba sombaa, dhukkuba kalee)	1. baay'ee itti walii hin galu; 2. Walii hin galu; 3. Yaada hin qabu; 4. Ittaan walii gala; 5. Baay'een itti walii gala
11	Namoota dhukkuba hin daddarbine dhukkubsataniif, fageenya ofii hanga meetra 2 eeggachuun dhibee koronaan irraa ni ittisa. (Dhiibba dhiigaa, Dhukkuba sukkaaraa, Asmii, dhukkuba laphee, dhukkuba tiruu, dhukkuba sombaa, dhukkuba kalee)	1. baay'ee itti walii hin galu; 2. Walii hin galu; 3. Yaada hin qabu; 4. Ittaan walii gala; 5. Baay'een itti walii gala
12	Namoota dhukkuba hin daddarbine dhukkubsataniif, haguuggii afaanii godhachuun dhibee koronaan irraa ni ittisa. (Dhiibba dhiigaa, Dhukkuba sukkaaraa, Asmii, dhukkuba laphee, dhukkuba tiruu, dhukkuba sombaa, dhukkuba kalee)	1. baay'ee itti walii hin galu; 2. Walii hin galu; 3. Yaada hin qabu; 4. Ittaan walii gala; 5. Baay'een itti walii gala
13	Namoota dhukkuba hin daddarbine dhukkubsataniif, sanitaayizarii harkaa fayyadamuun dhibee koronaan irraa ni ittisa. (Dhiibba dhiigaa, Dhukkuba sukkaaraa, Asmii, dhukkuba laphee, dhukkuba tiruu, dhukkuba sombaa, dhukkuba kalee)	1. baay'ee itti walii hin galu; 2. Walii hin galu; 3. Yaada hin qabu; 4. Ittaan walii gala; 5. Baay'een itti walii gala
14	Ani yoon shaakala ittisa koovid-19 sirritti hojjiirra oolche, koronaan ni na qaba jedhee hin yaadda'u. (Dhiibba dhiigaa, Dhukkuba sukkaaraa, Asmii, dhukkuba laphee, dhukkuba tiruu, dhukkuba sombaa, dhukkuba kalee)	1. baay'ee itti walii hin galu; 2. Walii hin galu; 3. Yaada hin qabu; 4. Ittaan walii gala; 5. Baay'een itti walii gala
Danqaa ta'uu kan malu (Perceived Barriers)		
15	Ani akka nama dhukkuba hin daddarbine dhukkubsatu tokkotti, bishaanii fi samunaa argachuun natti ulfaata. (Dhiibba dhiigaa, Dhukkuba sukkaaraa, Asmii, dhukkuba laphee, dhukkuba tiruu, dhukkuba sombaa, dhukkuba kalee)	1. baay'ee itti walii hin galu; 2. Walii hin galu; 3. Yaada hin qabu; 4. Ittaan walii gala; 5. Baay'een itti walii gala

	dhukkuba tiruu, dhukkuba sombaa, dhukkuba kalee)	
16	Ani akka nama dhukkuba hin daddarbine dhukkubsatu tokkotti, fageenya koo hanga 2m eeggachuun ni natti ulfaata. (Dhiibba dhiigaa, Dhukkuba sukkaaraa, Asmii, dhukkuba laphee, dhukkuba tiruu, dhukkuba sombaa, dhukkuba kalee)	1. baay'ee itti walii hin galu; 2. Walii hin galu; 3. Yaada hin qabu; 4. Ittaan walii gala; 5. Baay'een itti walii gala
17	Hirdhinni haguuggii afaanii gabaa irra jira jedhee waanan yaaduuf, ani akka nama dhukkuba hin daddarbine dhukkubsatu tokkotti haguuggii afaanii hin fayyadamu. (Dhiibba dhiigaa, Dhukkuba sukkaaraa, Asmii, dhukkuba laphee, dhukkuba tiruu, dhukkuba sombaa, dhukkuba kalee)	1. baay'ee itti walii hin galu; 2. Walii hin galu; 3. Yaada hin qabu; 4. Ittaan walii gala; 5. Baay'een itti walii gala
18	Gatiin sanitayizariin qaalii waan ta'eef, ani akka nama dhukkuba hin daddarbine dhukkubsatu tokkotti itti hinngargaaramu. (Dhiibba dhiigaa, Dhukkuba sukkaaraa, Asmii, dhukkuba laphee, dhukkuba tiruu, dhukkuba sombaa, dhukkuba kalee)	1. baay'ee itti walii hin galu; 2. Walii hin galu; 3. Yaada hin qabu; 4. Ittaan walii gala; 5. Baay'een itti walii gala
19	Ittisa koovid-19 hojiirra oolchuun amala haaraadha waan ta'eef hojiirra oolchuun ni natti ulfaata (Dhiibba dhiigaa, Dhukkuba sukkaaraa, Asmii, dhukkuba laphee, dhukkuba tiruu, dhukkuba sombaa, dhukkuba kalee)	1. baay'ee itti walii hin galu; 2. Walii hin galu; 3. Yaada hin qabu; 4. Ittaan walii gala; 5. Baay'een itti walii gala
Gochuu dandahuu (Self-efficacy)		
20	Akka dhukkubsataa dhibee hin daddarbine yeroo dheeraaf dhukkubsatutti, koovid-19 ittisuuf haguuggi afaanii godhachuun naaf salphaadha. (Dhiibba dhiigaa, Dhukkuba sukkaaraa, Asmii, dhukkuba laphee, dhukkuba tiruu, dhukkuba sombaa, dhukkuba kalee)	1. baay'ee itti walii hin galu; 2. Walii hin galu; 3. Yaada hin qabu; 4. Ittaan walii gala; 5. Baay'een itti walii gala
21	Akka dhukkubsataa dhibee hin daddarbine yeroo dheeraaf dhukkubsatutti koovid-19 ittisuuf fageenya koo meetira 2 namoota kan irraa eeggachuu nan danda'a. (Dhiibba dhiigaa, Dhukkuba sukkaaraa, Asmii, dhukkuba laphee, dhukkuba tiruu, dhukkuba sombaa, dhukkuba kalee)	1. baay'ee itti walii hin galu; 2. Walii hin galu; 3. Yaada hin qabu; 4. Ittaan walii gala; 5. Baay'een itti walii gala
22	Akka dhukkubsataa dhibee hin daddarbine yeroo dheeraaf dhukkubsatutti koovid-19 ittisuuf harka koo samunaadhaan secondi 20f sirritti dhiqachuuf ofitti amanamummaa nan qaba. (Dhiibba dhiigaa, Dhukkuba sukkaaraa, Asmii, dhukkuba laphee, dhukkuba tiruu, dhukkuba sombaa, dhukkuba kalee)	1. baay'ee itti walii hin galu; 2. Walii hin galu; 3. Yaada hin qabu; 4. Ittaan walii gala; 5. Baay'een itti walii gala
23	Akka dhukkubsataa dhibee hin daddarbine yeroo dheeraaf dhukkubsatutti koovid-19 ittisuuf sanitayizarii harkaa fayyadamuun naaf salphaadha. (Dhiibba dhiigaa, Dhukkuba sukkaaraa, Asmii, dhukkuba laphee, dhukkuba tiruu, dhukkuba sombaa, dhukkuba kalee)	1. baay'ee itti walii hin galu; 2. Walii hin galu; 3. Yaada hin qabu; 4. Ittaan walii gala; 5. Baay'een itti walii gala
24	Akka dhukkubsataa dhibee hin daddarbine yeroo dheeraaf dhukkubsatutti koovid-19 ittisuuf bakka namootni itti baay'atan deemuu irraa of dhorkuu nan danda'a. (Dhiibba dhiigaa, Dhukkuba sukkaaraa, Asmii, dhukkuba laphee, dhukkuba tiruu, dhukkuba sombaa, dhukkuba kalee)	1. baay'ee itti walii hin galu; 2. Walii hin galu; 3. Yaada hin qabu; 4. Ittaan walii gala; 5. Baay'eenitti walii gala

Waantota gochuu malu (Cues to action)		
25	Ani odeeffannoo haaraa koovid-19 faana wal qabatan argachuu nan barbaada. (Dhiibba dhiigaa, Dhukkuba sukkaaraa, Asmii, dhukkuba laphee, dhukkuba tiruu, dhukkuba sombaa, dhukkuba kalee)	1. baay'ee itti walii hin galu; 2. Walii hin galu; 3. Yaada hin qabu; 4. Ittaan walii gala; 5. Baay'een itti walii gala
26	Ani koovid-19 ilaalchisee gorsa ogeessa fayya argadheraa. (Dhiibba dhiigaa, Dhukkuba sukkaaraa, Asmii, dhukkuba laphee, dhukkuba tiruu, dhukkuba sombaa, dhukkuba kalee)	1. baay'ee itti walii hin galu; 2. Walii hin galu; 3. Yaada hin qabu; 4. Ittaan walii gala; 5. Baay'een itti walii gala
27	Ani waa'ee koovid-19 ilaalchisee ergaa fayyaa argachuuf poosterii nan dubbisa. (Dhiibba dhiigaa, Dhukkuba sukkaaraa, Asmii, dhukkuba laphee, dhukkuba tiruu, dhukkuba sombaa, dhukkuba kalee)	1. baay'ee itti walii hin galu; 2. Walii hin galu; 3. Yaada hin qabu; 4. Ittaan walii gala; 5. Baay'een itti walii gala
28	Ani koovid -19 irraatti odeeffannoo fayyaa barumsaa hawwasaa kennamu irraa argadheera. (Dhiibba dhiigaa, Dhukkuba sukkaaraa, Asmii, dhukkuba laphee, dhukkuba tiruu, dhukkuba sombaa, dhukkuba kalee)	1. baay'ee itti walii hin galu; 2. Walii hin galu; 3. Yaada hin qabu; 4. Ittaan walii gala; 5. Baay'een itti walii gala
29	Ani koovid-19 irraatti odeeffannoo fayyaa raadiyoo fi televiziyinii irraa argadheera. (Dhiibba dhiigaa, Dhukkuba sukkaaraa, Asmii, dhukkuba laphee, dhukkuba tiruu, dhukkuba sombaa, dhukkuba kalee)	1. baay'ee itti walii hin galu; 2. Walii hin galu; 3. Yaada hin qabu; 4. Ittaan walii gala; 5. Baay'een itti walii gala

ቃለመጠይቅ

ጂማ ዩኒቨርሲቲ

ጤና ተቋም

የጤና፣ ሥነ-ባህሪ እና ማህበረሰብ ትምህርት ክፍል

በጂማ ዩኒቨርሲቲ የሕክምና ማዕከል የቆየ በሽታ ህክምና ተከታታዮች ላይ ስለ ኮቪድ መከላከያ ተግባር ቃለመጠይቅ.

የቃል ስምምነት

ሰላም!

እኔ _____ እባላለሁ

በጂማ ዩኒቨርሲቲ የድህረምረቃ ተማሪዎች የቆየ ህመም ያለባቸውና በዩኒቨርሲቲው የሕክምና ማዕከል ከትትል በሚያደርጉ ተመላላሽ በሽተኞች ላይ የኮቪድ-19 በሽታን ለመከላከል ያላቸውን ተግባር ለማወቅ በሚደረገው ጥናት የመረጃ ሰብሳቢ ሆኜ እሳራለሁ።

ስለሆነም አሁን በሽታውን ለመከላከል አስፈላጊውን መረጃ ለማግኘት ይህንን ቃለ መጠይቅ ላደርግ ስለሆነ ይህንን ለማሳካት ለሚጠየቁ ቃለ መጠይቆች መልስ በመስጠት የናንተ ትብብርና ተሳትፎ እጅግ በጣም አስፈላጊ ነው። ይህ ቃለ መጠይቅ ከ15 አስከ 30 ደቂቃ ሊወስድ ይችላል ብዬ እገምታለሁ፣ ስማችሁን መስጠት አስፈላጊ አይደለም፣ በእርግጠኝነት ይህ የሚሰበሰበው መረጃ በምስጢርና በጥንቃቄ ይቀመጣል።ስለሆነም ጥያቄዎቼን በከፊልም ሆነ በሙሉ ወይም አንዳንዶቼን ላለመመለስ፣ እንዲሁም ቃለመጠይቁን በማንኛውም ሰዓት ማቋረጥ ይችላሉ።

በኛ ጥናት ለመሳተፍ ፈቃደኛ ነዎት አዎን አይደለሁም

ስለ ትብብርዎ እናመሰግናለን!

የቃለ መጠይቅ ቀን _____

የመጠይቁ ቁጥር _____ የመረጃ ሰብሳቢ ስም _____ ፊርማ _____

የሱፐርቪይደር ስም _____ ፊርማ _____

I. የጥናቱ ተሳታፊዎች ሥርዓተ እዝብና ማህበራዊ ጉዳዮች
መመሪያ: ቃለ መጠይቅ አድራጊው ስለ ስርዓተ-ህዝብና ማህበራዊ ጉዳዮችን ይጠይቃል ተጠያቂው መልስ ሲሰጥ መልሱ በቁጥሮች ላይ በመክበብ በ
 ምልክት በማድረግና ክፍት ቦታዎች ላይ የተጠየቀውን በመሙላት ይመዘገባል።

ተ.ቁ	ተለዋዋጭ	ክፍል
1	ጾታ	1 ወንድ
		2 ሴት
2	ዕድሜ	_____
3	መኖሪያ	1. ከተማ
		2. ገጠር
4	የትምህርት ደረጃ	1. ያልተማረ
		2. መጽሐፍና ማንበብ
		3. ክፍል 1-6
		4. ክፍል 7-12
		5. ዲፕሎማ
		6. የመጀመሪያ ድግሪና ከዚያ በላይ
5	የጋብቻ ሁኔታ	1. ያላገባ
		2. ያገባ
		3. አግብቶ የፈታ
		4. ሚስት የሞተችበት ወይም ባል የሞተባት
6	የቤተሰብ ብዛት	
7	የወር ገቢ (በብር)	_____
8	ሥራ	1. ነጋዴ
		2. የመንግስት ሠራተኛ
		3. የግል ተቀጣሪ
		4. ገበሬ
		5. የቤት እመቤት
		6. ሌሎች (ለይ)
9	የቆየ በሽታ ዓይነት	1. የደም ግፊት
		2. የስኳር በሽታ
		3. የአስም በሽታ
		4. የልብ በሽታ
		5. የጉበት በሽታ
		6. የሳንባ በሽታ
		7. የኩላሊት በሽታ

II. የመከላከል ተግባርን የተመለከቱ ጥያቄዎች
መመሪያ: ቃለ መጠይቅ አድራጊው ኮቪድ-19 ን ለመከላከል የሚደረጉ ተግባራትንና የሚደረጉበትን ጊዜ በመጠየቅ በተሰጠው ክፍት ቦታ ላይ X ምልክት በማድረግ በተጠያቂው የተሰጠውን መልስ ይመዘገባል

ተ.ቁ	ጥያቄዎች	መልስ				አይደለም (0)
		አዎን (1)				
		አልፎ አልፎ (1)	አንዳንድ ዴ (2)	አብዛኛውን ጊዜ (3)	ሁል ጊዜ (4)	

1	የኮቪድ-19 በሽታን ስርጭትን ለመከላከል ከቤት ስወጣ የፊት መሸፈኛ (ማስክ) አደርጋለሁ				
2	የኮቪድ-19 በሽታን ለመከላከል በጌና ሌላ ሰው መካከል የ2 ሜትር ርቀትን እጠብቃለሁ				
3	የኮቪድ-19 በሽታን ለመከላከል እጄን በሰሙና ቢያነስ ለ20 ሰከንድ በደንብ እታጠባለሁ				
4	እጄን ሳልታጠብ አፍንጫ፣ ዐይንና አፊን አልነካም				
5	በማስልበት ወይም በማስነጥስበት ጊዜ አፈንጫና አፊን እሸፍናለሁ ከዚያም እጄን እታጠባለሁ				
6	ማንኛውም የጉንፋንና የብርድ ምልክት እንደ ሳል ትኩሳትና ማሰነጠስ ካለው ሰው ጋር አልቀርብም				
7	የአፍንጫና የአፍ መሸፈኛ(ማስክ) ከተጠቀምኩ በኋላ በተገቢ ቦታ እጥላለሁ				
8	ስታመም የሕክምና እርዳታ ለማግኘት ካልሆነ በቀር ከቤት አልወጣም				
9	ብዙ ሕዝብ በተሰበሰበበትና በተጨማሪ ቦታ አልሄድም				
10	የኮቪድ-19 በሽታን ለመከላከል የሌሎች ሰዎችን እጅ አልጨብጥም				

III. ስለኮቪድ-19 ዕውቀት የተመለከቱ ጥያቄዎች

መመሪያ: የሚከተሉት ጥያቄዎች በቃለመጠይቅ አድራጊው ከተጠየቁ በኋላ ተጠያቂው የሚሰጠው መልስ በተሰጠው ክፍት ቦታ ላይ X ምልክት በማድረግ በጠያቂው ይመዘገባል።

ተ.ቁ	ጥያቄዎች	መልስ		
		እውነት (1)	ውሸት (0)	አላውቅም (2)
1	የኮቪድ-19 በሽታ አደገኛና ማንኛውንም ሰው ሊያጠቃ የሚችል ነው			
2	በኮቪድ-19 በሽታ የመጠቃት ዕድል በሕዝብ በተጨማሪና በቂ አየር በማይገኝበት ቦታ በጣም ከፍተኛ ነው			
3	በዕድሜ የገፋና የቆየ በሽታ ታሪክ ያላቸው ሰዎች በስተቀር ሁሉም ሰው ከባድ የኮቪድ-19 ሕመም አይታይበትም			
4	የኮቪድ-19 ዋና ዋና ምልክቶች ደረቅ ሳል ትኩሳት ድካምና የሰውነት ጡንቻ መቆረጣጠም ናቸው			
5	በአሁኑ ጊዜ ለኮቪድ-19 ክትባት አለ			
6	ኮቪድ-19 በሽታ የተጠቃውን ሰው በመሰማና እጄን በመጨበጥ በቀጥታ ይተላለፋል			
7	የኮቪድ-19 በሽታ ሻይረስ ከተጠቃ ሰው ወደ ጤናማ ሰው ከበሽተኛው መተንፈሻ አካል በሚወጣው ፈሳሽ አማካኝነት በሚሰጠውና በሚያስነጥበት ጊዜ የተላለፋል			
8	ኮቪድ-19 በበሽታው የተጠቃውን ሰው በመሰማና እጄን በመጨበጥ በቀጥታ ይተላለፋል			
9	በኮቪድ-19 በሽታ የተጠቃ ሰዎች የበሽታው ምልክቶች ካልታዩ በቀር ቫረሱን ወደ ሌሎች ሰዎች አያስተላልፉም			
10	እጅን ሳይታጠብ አፍጫን ዐይንና አፍን መንካት ለኮቪድ-19 በሽታ ያጋልጣል			
11	የኮቪድ-19 በሽታ በበሽታው የተጠቃውን ሰው እጅ በመጨበጥ ይተላለፋል			
12	የኮቪድ-19 በሽታ በበሽታው ከታመመ ሰው ጋር ቀርቦ በመነጋገር በቀጥታ የተላለፋል			
13	እጅን በሰሙና ቢያነስ ለ20 ሰከንድ በደንብ መታጠብ አንዱ የኮቪድ-19 መከላከያ ዘዴ ነው			
14	ከሌላ ሰው የ2 ሜትር ርቀት ጠብቆ መንቀሳቀስ የኮቪድ-19 መከላከያ ዘዴ አይደለም			
15	የፊት መሸፈኛ ወይም ማስክ ማድረግ አንዱ የኮቪድ መከላከያ ዘዴ ነው			
16	የእጅ ማጽጃ (ሳኒታይዘር) መጠቀም በኮቪድ-19 በሽታ ከመያዝ ይከላከላል			

17	የተበከሉ ቦታዎችንና ዕቃዎችን በማጸዳትና በአልኮል በመሰላሰብ መጥረግ የኮቪድ-19 በሽታ እንደይተላለፍ ያደርጋል			
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IV. የጤና ስነ-ባህሪ ጥያቄዎች

መመሪያ: ቃለ መጠይቅ አድራጊው እያንዳንዱን ጥያቄና የመልሱን አማራጮች ያነባል፤ ተጠያቂው ከተቀመጡት አማራጮች መልስ የሚሆነውን መርጦ ሲመልስ ጠያቂው በመልሱ ቁጥር ላይ በመክበብ **0** ምልክት በማድረግ የእያንዳንዱን መልስ ይመዘግባል።

ተጋላጭነትን መገንዘብ

01	የቆየ በሽታ ታማሚ እንደሆነ፣ ይመስለኛል እኔ የኮቪድ-19 በሽታ ተጋላጭ ነኝ/የመያዝ አደጋ ያጋጥመኛል ። (የደም ግፊት፣ የስኳር፣ የአስም፣ የልብ፣ የጉበት፣ የሳንባ፣ የኩላሊት)	1. በጣም አልስማማም; 2. አልስማማም; 3. ገለልተኛ; 4. እስማማለሁ; 5. በጣም እስማማለሁ
02	ይመስለኛል፣ እኔ እንደ ቆየ በሽታ ታማሚ በመሆኔ በኮቪድ19 የመያዝ ዕድል አለኝ። (የደም ግፊት፣ የስኳር፣ የአስም፣ የልብ፣ የጉበት፣ የሳንባ፣ የኩላሊት)	1. በጣም አልስማማም; 2. አልስማማም; 3. ገለልተኛ; 4. እስማማለሁ; 5. በጣም እስማማለሁ
03	እንደቆየ በሽታ ታማሚ ኮቪድ-19 በሽታ ሊይዘኝ የሚችል ይመስለኛል ። (የደም ግፊት፣ የስኳር፣ የአስም፣ የልብ፣ የጉበት፣ የሳንባ፣ የኩላሊት)	1. በጣም አልስማማም; 2. አልስማማም; 3. ገለልተኛ; 4. እስማማለሁ; 5. በጣም እስማማለሁ
04	እንደ የቆየ በሽታ ህመምተኛ ይመስለኛል፣ የኮቪድ-19 በሽታ በጣም እንደሚያዝ ነው። (የደም ግፊት፣ የስኳር፣ የአስም፣ የልብ፣ የጉበት፣ የሳንባ፣ የኩላሊት)	1. በጣም አልስማማም; 2. አልስማማም; 3. ገለልተኛ; 4. እስማማለሁ; 5. በጣም እስማማለሁ

ከባድነትን መገንዘብ

05	በኮቪድ 19 በሽታ መያዝ ለቆየ በሽታ ታማሚ ሕይወት ያሰጋል። (የደም ግፊት፣ የስኳር፣ የአስም፣ የልብ፣ የጉበት፣ የሳንባ፣ የኩላሊት)	1. በጣም አልስማማም; 2. አልስማማም; 3. ገለልተኛ; 4. እስማማለሁ; 5. በጣም እስማማለሁ
06	በኮቪድ 19 በሽታ መያዝ ለቆየ በሽታ ታማሚ ከባድ ችግር ነው ። (የደም ግፊት፣ የስኳር፣ የአስም፣ የልብ፣ የጉበት፣ የሳንባ፣ የኩላሊት)	1. በጣም አልስማማም; 2. አልስማማም; 3. ገለልተኛ; 4. እስማማለሁ; 5. በጣም እስማማለሁ
07	በኮቪድ-19 በሽታ መያዝ የቆየ በሽታ ታማሚዎችን ሕይወት ወደ ማጥፋት ይደርሳል። (የደም ግፊት፣ የስኳር፣ የአስም፣ የልብ፣ የጉበት፣ የሳንባ፣ የኩላሊት)	1. በጣም አልስማማም; 2. አልስማማም; 3. ገለልተኛ; 4. እስማማለሁ; 5. በጣም እስማማለሁ
08	በኮቪድ 19 በሽታ መያዝ ለቆየ በሽታ ታማሚዎች አደገኛ አይደለም። (የደም ግፊት፣ የስኳር፣ የአስም፣ የልብ፣ የጉበት፣ የሳንባ፣ የኩላሊት)	1. በጣም አልስማማም; 2. አልስማማም; 3. ገለልተኛ; 4. እስማማለሁ; 5. በጣም እስማማለሁ
09	እንደ የቆየ በሽታ ሕመምተኛ ይመስለኛል፣ የኮቪድ-19 በሽታ ከያዘኝ ለኔ ከሌሎች በሽታዎች የበለጠ አደገኛ ነው። (የደም ግፊት፣ የስኳር፣ የአስም፣ የልብ፣ የጉበት፣ የሳንባ፣ የኩላሊት)	1. በጣም አልስማማም; 2. አልስማማም; 3. ገለልተኛ; 4. እስማማለሁ; 5. በጣም እስማማለሁ

ጥቅምን መገንዘብ

10	ለቆየ በሽታ ታማሚ እጅን በሰሙና ለ20 ሰዓት በደምብ አድርጎ መታጠብ ከኮቪድ-19 በሽታ ይከላከላል። (የደም ግፊት፣ የስኳር፣ የአስም፣ የልብ፣ የጉበት፣ የሳንባ፣ የኩላሊት)	1. በጣም አልስማማም; 2. አልስማማም; 3. ገለልተኛ; 4. እስማማለሁ; 5. በጣም እስማማለሁ
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11	ለቆዩ በሽታ ታማሚ ከሌሎች ሰዎች የ2ሜትር ርቀት መጠበቅ የኮቪድ-19 በሽታን ይከላከላል። (የደም ግፊት፣ የስኳር፣ የአስም፣ የልብ፣ የጉበት፣ የሳንባ፣ የኩላሊት)	1. በጣም አልስማማም; 2. አልስማማም; 3. ገለልተኛ; 4. እስማማለሁ; 5. በጣም እስማማለሁ
12	ለቆዩ በሽታ ታማሚ የፊት መሸፈኛ (ማስክ) ማድረግ የኮቪድ-19 በሽታን ይከላከላል ። (የደም ግፊት፣ የስኳር፣ የአስም፣ የልብ፣ የጉበት፣ የሳንባ፣ የኩላሊት)	1. በጣም አልስማማም; 2. አልስማማም; 3. ገለልተኛ; 4. እስማማለሁ; 5. በጣም እስማማለሁ
13	ለቆዩ በሽታ ታማሚ የእጅ ማጽጃ (ሳኒታይዘር) መጠቀም ከኮቪድ-19 በሽታ ይከላከላል ። (የደም ግፊት፣ የስኳር፣ የአስም፣ የልብ፣ የጉበት፣ የሳንባ፣ የኩላሊት)	1. በጣም አልስማማም; 2. አልስማማም; 3. ገለልተኛ; 4. እስማማለሁ; 5. በጣም እስማማለሁ
14	የኮቪድ-19 መከላከያ ዘዴን በአግባቡ ከተገበርኩ አልሸበርም/አልጨነቅም። (የደም ግፊት፣ የስኳር፣ የአስም፣ የልብ፣ የጉበት፣ የሳንባ፣ የኩላሊት)	1. በጣም አልስማማም; 2. አልስማማም; 3. ገለልተኛ; 4. እስማማለሁ; 5. በጣም እስማማለሁ

መሰናክልን መገንዘብ

15	እንደ የቆዩ በሽታ ታማሚ ይመስለኛል ውሀና ሳሙና የትም ቦታ ማግኘት አስቸጋሪ ነው ። (የደም ግፊት፣ የስኳር፣ የአስም፣ የልብ፣ የጉበት፣ የሳንባ፣ የኩላሊት)	1. በጣም አልስማማም; 2. አልስማማም; 3. ገለልተኛ; 4. እስማማለሁ; 5. በጣም እስማማለሁ
16	እንደ የቆዩ በሽታ ታማሚ ከሰዎች 2ሜትር ርቀት መጠበቅ ያሰቸግራል። (የደም ግፊት፣ የስኳር፣ የአስም፣ የልብ፣ የጉበት፣ የሳንባ፣ የኩላሊት)	1. በጣም አልስማማም; 2. አልስማማም; 3. ገለልተኛ; 4. እስማማለሁ; 5. በጣም እስማማለሁ
17	እኔ እንደማምነው የፊት መሸፈኛ (ማስክ) ገበያ ውስጥ እጥረት አለ ስለዚህ እንደ የቆዩ በሽታ ታማሚ እኔ የፊት መሸፈኛ አላደርግም ። (የደም ግፊት፣ የስኳር፣ የአስም፣ የልብ፣ የጉበት፣ የሳንባ፣ የኩላሊት)	1. በጣም አልስማማም; 2. አልስማማም; 3. ገለልተኛ; 4. እስማማለሁ; 5. በጣም እስማማለሁ
18	አምናለሁ፣ ሳኒታይዘር ገበያ ላይ ውድ ነው ስለዚህ እኔ እንደ የቆዩ በሽታ ታማሚ ሳኒታይዘር አልጠቀምም። (የደም ግፊት፣ የስኳር፣ የአስም፣ የልብ፣ የጉበት፣ የሳንባ፣ የኩላሊት)	1. በጣም አልስማማም; 2. አልስማማም; 3. ገለልተኛ; 4. እስማማለሁ; 5. በጣም እስማማለሁ
19	የኮቪድ-19 መከላከያን ለመተግበር አዲስ ልማድ (አስቸጋሪ) ያስፈልጋል። (የደም ግፊት፣ የስኳር፣ የአስም፣ የልብ፣ የጉበት፣ የሳንባ፣ የኩላሊት)	1. በጣም አልስማማም; 2. አልስማማም; 3. ገለልተኛ; 4. እስማማለሁ; 5. በጣም እስማማለሁ

ውጤታማነትን መገንዘብ

20	እንደ የቆዩ በሽታ ታማሚ የኮቪድ በሽታን ለመከላከል የፊት መሸፈኛን መጠቀም ለኔ ቀላል ነው ። (የደም ግፊት፣ የስኳር፣ የአስም፣ የልብ፣ የጉበት፣ የሳንባ፣ የኩላሊት)	1. በጣም አልስማማም; 2. አልስማማም; 3. ገለልተኛ; 4. እስማማለሁ; 5. በጣም እስማማለሁ
21	እንደ የቆዩ በሽታ ታማሚ የኮሮና በሽታን ለመከላከል ከሰዎች የ 2ሜትር ርቀት መጠበቅ እችላለሁ ። (የደም ግፊት፣ የስኳር፣ የአስም፣ የልብ፣ የጉበት፣ የሳንባ፣ የኩላሊት)	1. በጣም አልስማማም; 2. አልስማማም; 3. ገለልተኛ; 4. እስማማለሁ; 5. በጣም እስማማለሁ
22	እንደ የቆዩ በሽታ ታማሚ የኮሮና በሽታን ለመከላከል እጄን ለ20 ሰከንድ በሳሙና በደንብ እንደምታጠብ እርግጠኛ ነኝ ። (የደም ግፊት፣ የስኳር፣ የአስም፣ የልብ፣ የጉበት፣ የሳንባ፣ የኩላሊት)	1. በጣም አልስማማም; 2. አልስማማም; 3. ገለልተኛ; 4. እስማማለሁ; 5. በጣም እስማማለሁ
23	እንደ የቆዩ በሽታ ታማሚ ኮሮና በሽታን ለመከላከል ለኔ ሳኒታይዘር መጠቀም ቀላል ነው ። (የደም ግፊት፣ የስኳር፣ የአስም፣ የልብ፣ የጉበት፣ የሳንባ፣ የኩላሊት)	1. በጣም አልስማማም; 2. አልስማማም; 3. ገለልተኛ; 4. እስማማለሁ; 5. በጣም እስማማለሁ

	(የደም ግፊት፣ የስኳር፣ የአስም፣ የልብ፣ የጉባት፣ የሳንባ፣ የኩላሊት)	
24	እንደ የቆየ በሽታ ሕመምተኛ ሕዝብ በብዛት በተሰበሰበበት ቦታ መሄድን ማቆም እችላለሁ ። (የደም ግፊት፣ የስኳር፣ የአስም፣ የልብ፣ የጉባት፣ የሳንባ፣ የኩላሊት)	1. በጣም አልስማማም; 2. አልስማማም; 3. ገለልተኛ; 4. እስማማለሁ; 5. በጣም እስማማለሁ
የተግባር ፍንጮች		
25	ለኮቪድ-19 በሽታ የሚቀርቡ አዳዲስ መረጃዎችን እፈልጋለሁ። (የደም ግፊት፣ የስኳር፣ የአስም፣ የልብ፣ የጉባት፣ የሳንባ፣ የኩላሊት)	1. በጣም አልስማማም; 2. አልስማማም; 3. ገለልተኛ; 4. እስማማለሁ; 5. በጣም እስማማለሁ
26	ከጤና ባለሙያዎች ምክር አግኝቻለሁ። (የደም ግፊት፣ የስኳር፣ የአስም፣ የልብ፣ የጉባት፣ የሳንባ፣ የኩላሊት)	1. በጣም አልስማማም; 2. አልስማማም; 3. ገለልተኛ; 4. እስማማለሁ; 5. በጣም እስማማለሁ
27	ስለ ኮቪድ-19 የጤና መልዕክት ከፖስተር ላይ አነባለሁ። (የደም ግፊት፣ የስኳር፣ የአስም፣ የልብ፣ የጉባት፣ የሳንባ፣ የኩላሊት)	1. በጣም አልስማማም; 2. አልስማማም; 3. ገለልተኛ; 4. እስማማለሁ; 5. በጣም እስማማለሁ
28	በኮቪድ 19 ላይ የጤና መረጃ ለሕዝብ ከሚሰጠው ትምህርት አግኝቻለሁ ። (የደም ግፊት፣ የስኳር፣ የአስም፣ የልብ፣ የጉባት፣ የሳንባ፣ የኩላሊት)	1. በጣም አልስማማም; 2. አልስማማም; 3. ገለልተኛ; 4. እስማማለሁ; 5. በጣም እስማማለሁ
29	ስለኮቪድ-19 የጤና መረጃ ከረድድ/ ቴሌ አግኝቻለሁ። (የደም ግፊት፣ የስኳር፣ የአስም፣ የልብ፣ የጉባት፣ የሳንባ፣ የኩላሊት)	1. በጣም አልስማማም; 2. አልስማማም; 3. ገለልተኛ; 4. እስማማለሁ; 5. በጣም እስማማለሁ