Risk Perception and Psychological Distress Triggered by Covid-19 Pandemic among Clients of Public Health Centers in Addis Ababa

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Declaration

I hereby declare that the work which is being presented in this thesis entitled "Risk perception and psychological distress triggered by Covid-19 pandemic: The case of selected public health centers in Addis Ababa" is my own original work, has not been presented for a degree in any other university; and that all sources of material used for the research project have been duly acknowledged.

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Signature Date

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Abbreviations and Acronyms

AAU: Addis Ababa University

AOR: Adjusted Odd Ratio

CI: Confidence Interval

COVID-19: Corona virus Disease of 2019

FGD: Focus Group Discussion

GAS: General Adaptation syndrome

IRB: Institutional Review Board

MERS: Middle East respiratory syndrome

NGOs: Non Governmental Organizations

PMT: Protection motivation theory

SARS-CoV-2: Severe acute respiratory syndrome corona virus type 2

WHO: World Health Organization

Abstract

This study tried to describe the effect of COVID-19 in risk perception and psychological distress, with objective of exploring the extent of risk perception and psychological distress triggered by COVID-19 among clients in three selected public health centers in Addis Ababa. To that effect, a quantitative research design was employed. Epi info version seven used to determine sample size of the study which was a total of 384 participants were selected. In order to address the basic research questions of the study, data were analyzed using SPSS, t-test, and ANOVA and Pearson correlation statistical techniques. Accordingly, the study revealed important findings about risk perception and psychological distress. Majority of the clients heard about the corona virus through Facebook and telegram, with rgard to the risk perception of the clients the total average mean that participants on this study had moderate or lower level of risk perception and with regard to the level of psychological distress, the study revealed that the total average mean indicate the level of psychological distress triggered by COVID-19 was moderate. It was observed that statistically there were significant differences among clients on the the extent of psychological distress triggered by the outbreak of Corona Virus. The result of correlation coefficient between the two variables ($r = 0.782$, $p = 0.000<0.05$) indicated that there was statistically significant relashinship between risk perception to covid-19 and psychological distress due to covid-19 pandemic. The magnitude of correlation coefficient ($r = 0.782$) approved that the relashinship between them was high and directly correlated.

***Key words**: Risk perception, Psychological distress*

Chapter One

Introduction

In this chapter subjects concerning to the contexts of the current study, description of the problem statement, the hypothesized relationships among the variables of the study, purpose of the study, scope of the current study, rationale of the study and definition of key terms will be presented.

1.1. Background of the Study

The 2019 coronavirus disease (COVID-19) pandemic is a global public health emergency due to its rapid transmission, the increment of confirmed cases, and deaths. It is highly contagious and transmits to humans through respiratory droplets and contact of contaminated human body as well as fomites. The disease is mainly characterized by common symptoms like fever, dry cough, fatigue, and breathing difficulties. Moreover, the disease may cause aches or pains, sore throat, headache, loss of test or smell and some dermatologic problems. Currently most infected individuals are found to be asymptomatic. (Adhikari and Meng, 2019)

COVID-19 has a wide coverage and death reports as compared to the 2012 first Middle East Respiratory Syndrome (MERS) outbreak in Saudi Arabia. As of May12, 2021 more than 162,582,225 peoples are infected with COVID-19, more than 3,372,839 million was died, and more than 140,482,240 million was recovered. In Africa close to 4,716,638 million infected cases, more than 126,189 thousand are died, and 4,250,706 million cases recovered. In Ethiopia 265,413 thousand population are infected with the virus, close to 3,964 were died and 217,370 thousand cases recovered as retrived from (https://www.who.int/emergencies/diseases/novel-coronavirus-2019)

The globe is on learning phase of the disease's characters. Thus far there is no drug to cure the virus, except palliative cares like treating respiratory distress with oxygen and a vaccine at a starting phase to prevent the infection. Different countries are taking different strategies to prevent the spread of the disease like total lock down, closing boundaries, closing schools and banning different meetings. Moreover, countries enacted regulations for use of face masks. The government of Ethiopia also used to close schools, and banned mass gathering like sport and meetings, mandatory quarantine, minimize the number of passengers during transportation and other measures were taken. Currently use of face mask is mandatory particularly in the capital city, Addis Ababa which is the epicenter of the infection. (Mearns, 2020)

Moreover, different organizations and health professionals recommended different interventions particularly regarding different hygienic behaviors to be followed and implemented. On the other hand, there were deviations from such medical recommendations by the public. For this reason, i.e., the failure of the unanimous spontaneous compliance of the population to the proposed hygienic rules and health practices are the reasons leading to high transmission and increased negative impacts of the disease.

The COVID- 19 outbreak has paralyzed the whole world. The direct and indirect effects of the pandemic range from worse health condition of individuals to psychological and financial defeat on economical, personal and societal levels.

In fact, a significant portion of population continued to be engaged in risky behaviors, requiring stringent guidelines and instructions by the Government bodies. The current emergency could contribute to the inflation, economic downturn, recessions on remittances and the tourism; increased unemployment in urban areas. It is expected that there will be an escalation in the price of key commodities, driven largely by negative behaviors, such as wrong perception and

misconception regarding the disease; not adhering to prevention rules and regulations; less fear of the disease. In addition to that, there will be widespread loss of income and deeper levels of poverty as social distancing intensifies. As it was studied and explored in different parts of the world including Pakistan and Italy, the social and economic impact of the disease may lead the society to significant psychological distress (United Nations Children's Fund (UNICEF), April 2020).

The most common mental and psychosocial disturbances seen during the previous outbreaks occurred in different parts of the world were hopelessness, anger, loss of interest, fear of death, difficulty of initiating and maintaining sleep, loss of appetite, and anxiety,(Johns Hopkins University (JHU), 2020 COVID-19 Dashboard by the Center for Systems Science and Engineering). The current pandemic causes suicide, stress, confusion, anger, fear, frustration, boredom, financial loss, and stigma among confirmed cases and communities living in the world (Africa CDC Dashboard. 2020, Coronavirus Disease 2019 (COVID-19).). Among the well-known psychological impacts of COVID-19, risk perception and psychological distress cover an important research area. Stressors of the disease extremely modified risk perception of the community. Considering the key role of behavioral and psychological reactions of people facing the pandemic, it is fundamental to assess how perceived risks and distress experienced are related to these reactions. What risks did clients perceive during the COVID-19 emergency? What worried clients of health facilities most with regard to Covid-19? Were these worries restricted only to their health condition or related to associate psychological impacts of the disease? These are the key research questions which have driven the current study.

This study provides data about the risk perceptions and psychological distress of the COVID-19 pandemic among clients of health facilities. This study explored the perception of

risk and the psychological distress related to COVID-19 infection in clients of health centers in Addis Ababa. The researcher studied how demographic variables related to risk perception and psychological factors of the study participants.

1.2. Statement of the problem

Although the COVID-19 crisis is, in the first instance health emergency, it has the sources of a major mental health problems as well, if action is not taken. Good mental health is critical to the functioning of society at the best of times. It must be the center and frontward of every country's response to and recovery from the COVID-19 pandemic.

Psychological distress in populations is a widespread phenomenon. Many people are distressed due to the immediate health impacts of the virus and the consequences of physical isolation. Many are afraid of infection, dying, and losing beloved family members. Individuals have been physically distanced from loved ones and peers. Millions of people are facing economic turmoil having lost or being at risk of losing their income and livelihoods. Frequent misinformation and rumors about the virus and deep uncertainty about the future are common sources of distress. A long-term upsurge in the number and severity of mental health problems is likely stated by a policy brief (https://ethiopia.un.org/en/45651-policy-brief-covid-19-and-need-action-mental-health).

The COVID- 19 outbreak paralyzed the whole world. The direct and indirect effects of the pandemic range from worse individuals' health to financial defeat on both personal, economical and societal levels. (Hurnik, 2020).

The closure of borders disrupted the global chain supply, tourism and other economic investments. As the consequence there is an increased increment of food and goods' price in the market. In Ethiopia, peoples in lower economic classes like daily laborers are highly affected by

the pandemic due to decreased economic activity due to the COVID-19; leading to an additional strain of unemployment to the country (Wondimagegn and Bethlehem ,2020).

In Ethiopia, nearly two-thirds (66.4%) of the respondents had moderate to severe levels of a psychological problem, 36% anxiety, 12.4% depression, and 18% stress(Chalachew ,2020). The economic, social, psychological and political negative impact of COVID might be the sole reason for psychological distress or different panic attacks. Moreover, the absence of drug or vaccine to cure or prevent the disease is the other reason for distress (Hurnik, 2020).

During the COVID-19 pandemic, people experienced several affective states beyond just fear and worry typically associated with risk perception, i.e., a sense of anxiety, anger, loneliness, frustration, confusion, inadequacy and uncertainty. By exploring the psychosocial outcomes due to quarantine because of exposure to severe acute respiratory syndrome (SARS), Robertson et al. (2004) found that quarantined health care workers experienced stigma, fear, and frustration. Facing up to the extreme uncertainty of COVID-19 may provoke devastating consequences (Chater, Lazzerini and Putoto, 2020). As a support, empirical evidence stressed the extent to which the intolerance of uncertainty is associated with anxiety and mood disorders (Boelen and Reijntjes, 2009), peaked levels of worry and rumination (Buhr and Dugas, 2006), and behaviors such as information seeking or monitoring and complying with recommendations (Rosen and Knäuper, 2009; Rosen et al., 2007. Flesia et al. 2020) recently revealed that the unpredictability and uncontrollability of the COVID-19 lockdown had a notable impact on predicting stress perceived during the emergency.

In Ethiopia, some studies reported that the risk perception of COVID-19 among health professionals is high. (Wondimagegn and Bethlehem, 2020). In this study, we have tried to investigate the perception of risk and the worries about COVID-19 infection in clients of the

respective health centers population. Therefore this study aimed to see the difference in the magnitude of risk perception, psychological distress and associated factors among clients in Addis Ababa, Ethiopia. The researcher studied the risk perception in this group and how it is related to demographic variables and psychological factors such as stress, anxiety, and death anxiety. The results of this study will serve as an input to address the gaps in risk perception which affects the implementation of preventive measures and for better management and the promotion of the psychosocial wellbeing of a community in response to the pandemic.

1.3. Research Questions and Hypotheses

This study was guided by the following leading questions.

(i) What is the extent of risk perception and psychological distress triggered by Covid-19 pandemic among clients in some selected public health centers?

(ii) Is there statistically significant difference between socio-demographic variables of clients with risk perception and psychological distress triggered by COVID-19?

(iii) Is there a correlation between demographic variables of clients and risk perception, and demographic variables of clients with psychological distress triggered by Covid-19 pandemic?

1.4. Objectives of the Study

1.4.1. General Objective

The study aims at exploring the extent of risk perception and psychological distress triggered by COVID-19 among clients in three selected public health centers in Addis Ababa.

1.4.2. Specific Objectives

- To explain the extent of risk perception and psychological distress triggered by COVID-19 among clients taking health care services in Lideta, Efoyita and Gelan health centers in Lideta, Kirkos and Akaki Kality sub-cities of Addis Ababa, respectively.
- To determine the differences in risk perceptions and psychological distress triggered by COVID-19 pandemic among clients in Lideta, Efoyita and Gelan health centers.
- To determine the association of socio-demographic variables with risk perceptions and psychological distress due to the Pandemic of COVID-19.

1.5. Significance of the Study

This study have many practical and theoretical implications. To name a few, little is well-known about risk perception behavior and psychological distress triggered by COVID-19 pandemic among clients in selected heath centers of Addis Ababa, Ethiopia. Therefore, the present study will have some theoretical contributions. The results of this study will contribute to develop and design contextual social and behavioral change communication messages, materials and services that will prevent the COVID-19 transmission as well lessen the prevalence of mental health problem in the community.

The results of this study explored the gaps in risk perception and the level of psychological distress experienced by the clients related to covid-19, so that this contribute for the Minstry of Health and line health care facilities to develope target specific messages and mental health services to use the possibilities to the risk perception and to alleviate the level of psychological distress.

Different institutions and local NGOs might use the findings of the study to design various program implementations, such as, getting involved in disease prevention and health promotion measures and so that they would help the government and community to acclimatize quickly, become strong and productive. The results of the study and their implications also provide some useful direction for conducting further research in the area.

1.6. Limitation of the Study

This study was conducted in the period of COVID-19 outbreak in the country and this brought considerable burden in conducting and completing the research as planned. Beyond receiving a support letter from Addis Ababa University School of psychology, it was a pre-request to gain instituational review board approval (IRB) approval from Addis Ababa City Adminsteration Public Health Research and Emergency Management Directorate, where this procedure consumed most of the researcher's time, resources and energy to step in to the data collection activity.

1.7. Scope of the Study

Although there are many factors that contribute to psychological distress and risk perception behavior, this proposed study was limited to the area of the role that COVID-19 pandemic in triggering risk perception behavior and psychological distress during the pandemic. Furthermore, it is evident that there are other population groups who has been affected by COVID-19.The scope of this study, however, focuses the risk perception and psychological distress among Clients by COVID-19 pandemic in the study period of December 2020 to February 2021 of selected health centers of Addis Ababa, specifically Kirkos, Lideta and Akaki-Kality sub-cities.

1.8. Definition of Term

Risk Perception: in this study is, what clients understand and feel about, personal calculation of the level of risk related with Covid-19 which accompanied by how they are reacting to the pandemic in their daily life and their level of compliance with prevention methods of the disease.

Psychological Distress: in this study is, client's perception and response to the COVID-19 pandemic which encompasses what they feel, think and behave to handle the effect of the disease in their everyday life

Chapter 2

Review of Related Literature

In this chapter, descriptions of the theoretical framework and relevant theoretical perspectives relating to risk perception and and psychological distress triggered by COVID-19; how the pandemic affects clients' risk perception and psychological distress, situation and implications of the reviewed literature to the present study and the conceptual framework of the current study.

2.1. Emergence of COVID-19

COVID-19 is a communicable respiratory disease caused by a new strain of corona virus, SARS CoV-2 (severe acute respiratory syndrome corona virus (Africa CDC Dashboard. 2020, Coronavirus Disease 2019 (COVID-19). SARS-CoV-2 is the seventh coronavirus known to infect humans of which its exact origin is still unclear (Andersen, Rambaut, Lipkin, Holmes & Garry . 2020; 26(4):450-452). Since the first report of COVID-19 in Wuhan, China in December 31, 2019, it has spread all over the world and caused unprecedented pandemic and widespread health and socioeconomic impact (Li Q, Guan X, Wu P, et al 2020.). The World Health Organization (WHO) then declared the COVID-19 outbreak a pandemic on March 11, 2020. (https://www.statnews.com/2020/03/11/who-declares-the-coronavirus-outbreak-a-pandemic/)

The SARS CoV-2 spreads primarily through saliva droplets or nose discharge with contaminated hands that have contact with people or surfaces which contain the virus. Although the virus affects population of all age groups, the elderly and those with pre-existing health conditions are impacted most severely (Mearns, 2020.).

Globally, COVID-19 has been spreading exponentially disproportionately affecting the Americas, and Europe. The COVID-19 pandemic in Africa lags behind Asia, Europe and North

America. The first case in Africa was identified in Egypt on February 14, 2020. The slow spread of COVID-19 through the African continent remains abstract. The region had only 0.77% of the global cases and 0.43% of deaths even though it represents 13.7% of the world's population According to Africa CDC, 2.3 million cases and 53 thousand COVID-19 deaths were reported as of December 05, 2020. South Africa, Egypt and Nigeria are countries with highest COVID-19 cases. (Adhikari & Meng, 2019). Furthermore, Many African countries acted early, which might also contribute to the low COVID-19 cases.The limited capacity to conduct adequate numbers of testing in Africa might also contribute to the underestimation of the real magnitude of the pandemic in the continent. (Lancet (London, England). 2020; 395(10238):1669.)

As of May12, 2021 globally, more than 162,582,225 peoples are infected with COVID-19, more than 3,372,839 million was died, and more than 140,482,240 million was recovered. In Africa close to 4,716,638 million infected cases, more than 126,189 thousand are died, and 4,250,706 million cases recovered. In Ethiopia first COVID-19 case was reported on March 13, 2020 and as of May 12, 2021 a total cases of 265,413 thousand population are infected with the virus, close to 3,964 were died and 217,370 thousand cases recovered as retrived from. (https://www.who.int/emergencies/diseases/novel-coronavirus-2019)

2.2. An overview of risk perception

According to Slovic and Peters (2006), in our modern world and 20 era, risk unfolds along two trajectories: a rational/cognitive risk referring to an analytic, systematic, deliberative and logical risk analysis and subsequent decision making; and an affective risk denoting an individual's emotional and heuristic response to danger or threat. Several theories have remarked on the importance of emotion in risk perception and risk-taking behaviors, such as the model of affect-as-information (Schwarz and Clore, 1983, 2003) and (Loewenstein et al., 2001), and

(Slovic et al., 2007). Despite their differences, all these models feature the role of the affect and the emotional reactions playing in risk- judgment and decision making.

The data from Germany show that, the fear of becoming infected with COVID-19 is very prevalent in the general population. Even in a time where the prevalence of COVID-19 infections seems difficult to estimate, the risk rating of being infected within the next 4 weeks seems to be higher than the expected number of infections (Schwarz and Clore 1983).

As reported by Sarah Dryhurst et al risk perception of COVID-19 is uniformly high. Several psychological factors emerged as significant predictors across countries. Several specific predictors proved important, including the role of prosocial versus individualistic values and to a lesser extent our measure of social amplification (hearing about the virus from friends and family). Most notably, experience with the virus stands out across all countries, such that people who have had personal and direct experience perceive significantly higher risk. (Serena , Paola and Giulia ,2020)

In Ethiopia, the mean score of perceived vulnerability to COVID-19 among health professionals is higher than other diseases, including HIV, tuberculosis (TBC), malaria, and the common cold. Regarding the practice of recommended health behavior, almost all recommended precautionary measures are applied to the highest level except for wearing masks and gloves. (Chalachew, March 2020).

From other study conducted in Ethiopia shows that almost all study participants heard about the coronavirus. Nearly two-thirds of respondents were thinking, as coronavirus is very dangerous. One-third of the respondents reported as they used preventive measures such as washing their hands, wearing a facemask, and keeping a social distance. (Sarah, Claudia Schneider, John Kerr, Alexandra. Freeman, Gabriel, Anne, David & Sander (2020)).

2.3. An overview of Psychological distress

In Germany the people spent a much more amount of time thinking about COVID-19-related aspects during the day which is much higher than the normal amount of time worrying. Fears regarding COVID-19 targeted more on social than on personal aspects. Besides the fear of general consequences, most fear was expressed with respect to consequences for the health of relatives as well as concerning the social consequences of the pandemic. Social consequences caused more concerns than economic ones. Depressive and anxiety symptoms were higher than the normal reported prevalence with the higher average PHQ-4 Score. (Schwar, and Clore 1983)

Moreover, the protective measures create distress among the population. One study found that lockdown is one of the unpleasant experiences since separation from loved ones, loss of freedom, uncertainty over disease status and the duration of the lockdown itself, burden for financial and economic consequences, and boredom can, on occasion, create dramatic effects. (Slovic and Peters 2006.).

In Ethiopia, nearly two-thirds (66.4%) of the respondents had moderate to severe levels of a psychological problem, 36% anxiety, 12.4% depression, and 18% stress. The economic, social, psychological and political negative impact of COVID might be the sole reason for psychological distress or different panic attacks. Moreover, the absence of drug or vaccine to cure or prevent the disease is the other reason for distress. (Chalachew, March 2020)

Direct and indirect negative impact of COVID-19 in the economic, social, psychological and political conditions, which are the sole reason for psychological distress or different panic attacks when it is combined with the absence of drug or vaccine to cure and prevent the disease.

2.4. Theoretical framework

For this study, the protection motivation theory (PMT) model based on Rogers' (1983) PMT model was used to assess clients risk perception related to the COVID-19 pandemic. The model uses two cognitive processes: threat appraisal and coping appraisal. Threat appraisal includes severity of health threats (severity) and the perceived probability that health threats will occur (vulnerability). Coping appraisal includes the perceived ability of a coping behavior (e.g., wearing face mask, keep social distancing) to remove the health threat which is COVID-19 (response-efficacy) and the individual's perceived ability to carry out the coping behavior (self-efficacy, e.g., actual practice of preventive measures).

As the number of deaths from the disease rises around the world, it is becoming increasingly important to understand public risk perception (Van Bavel et al. 2020). As a fact of threat appraisal the government of Ethiopia gave responses range from lockdown to mandatory of face mask in public areas and social distancing. These measures aim to decrease the exponential transmission of the disease and prevent national health services from becoming overwhelmed by a sudden high number of cases. Yet, from past pandemics that the success of policies to slow down the rapid transmission of a highly infectious disease rely, in part, on the public having accurate perceptions of personal and societal risk factors. In fact, collectively, people's behavior can fundamentally influence and alter the spread of a pandemic (Epstein et al. 2008; Funk et al. 2009; Reluga 2010; Van Bavel et al. 2020). Threat appraisal and risk perception are core features of protection-motivation theory (Floyd, Prentice-Dunn, and Rogers 2000; Rogers 1975) and as such, are known to be important determinants of the public's willingness to cooperate and adopt health-protective behaviors during pandemics, including frequent hand washing, physical distancing, avoiding public places, and wearing face masks

(Bish and Michie 2010; Leppin and Aro 2009; Poletti, Ajelli, and Merler 2011; Rubin et al. 2009; Rudisill 2013; van der Weerd et al. 2011). In other words, accurate public risk perceptions are critical to effectively managing public health risks.

According to Selye's General Adaptation Syndrome model how clients responds to the COVID-19 could be positive or negative which mainly related to cognitive perceptions of the physiological or psychological experience (Selye, 1983). Stress, as described by the GAS model, is a physiological response pattern consisting of three stages (alarm, resistance, and exhaustion) that could lead to diseases or even death (Selye, 1983). Stress is a defense mechanism that can be experienced as eustress (positive) or distress (negative), and the perception predicts physiological and psychological outcomes (Selye, 1983). The GAS model originally considered only stress to derive from the physiologically based consruct, but later researchers added stress to involve psychological concepts (Selye, 1983). Stress is considered a significant life event or change that demands response, adjustment, or adaptation. The GAS model hypothesizes that change is inherently stressful, life situations demand the same level of adjustment across the population, a common threshold of adjustment exists, and exhaustion results in disease (Selye, 1983). When confronted with stress (negative stimulus), the alarm response will initiate the sympathetic nervous system to deal with the stressor (Selye, 1983). The resistance response then alerts the fight or flight reaction to the stressor, accommodating the response to return the body to homeostasis which can lead to adaptive diseases such as psychological distress (Selye, 1983)

2.5. Conceptual Framework

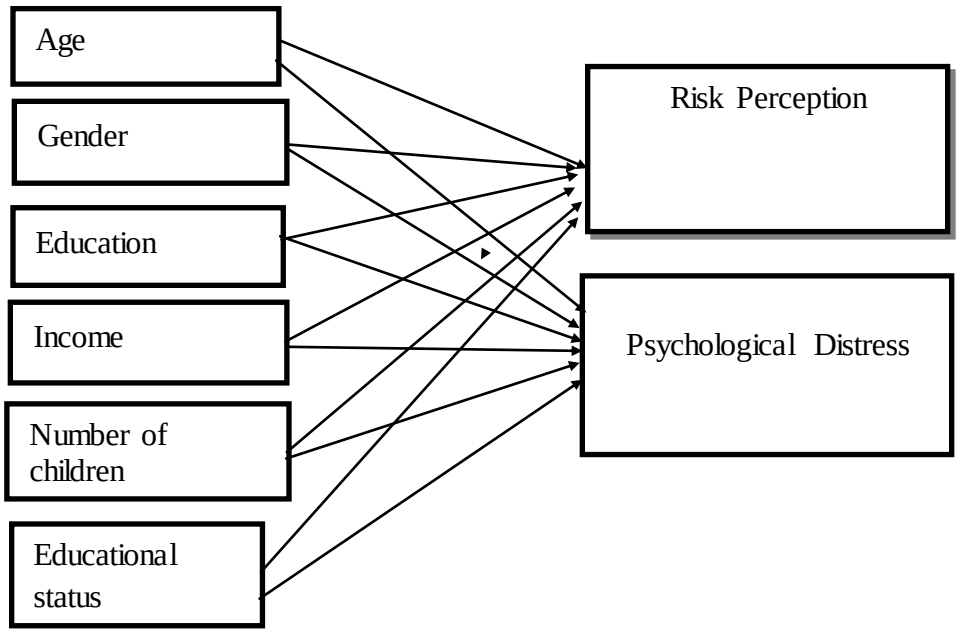

Figure-1: Conceptual model showing the relationships among variables of the current study

Chapter three

Research Methods and Procedures

In this chapter a detailed description about the design of the study, site of the study, sources of data, sampling, instrument development and validation, data collection, pilot study, and data analysis procedures as well as ethical issues are presented.

3.1. Research Design

The selection of a research design is usually determined by the objective of the study, the nature of the data to be gathered and techniques of analysis data. This study is focused more on exploring the extent of risk perceptions to COVID-19 and levels of psychological distress triggered by COVID-19, differences in perceptions to the risk of COVID-19 and distress due to COVID-19 with respect to socio-demographic characteristics of clients and relationship between study variables and respondent's demographic variables. Therefore by combining the above ideas the research design employed in this study was quantitative research design. The instruments were desinged to gather data using more of likert type scales and it was analyzed quantitatively.

3.2. Participants of The study

3.2.1. Target Population

The target population of the present study were clients of the selected health facilities in Kirkos, Lideta and Akaki-Kality subcities specifically who received health care services in Efoyita, Lideta and Gelan health centers.

3.2.2. Description of the Study Site

Lideta Health Center is one of the Health centers in Woreda 9 of Lideta subcity staffed with 138 personnel and with catchment area population of 23,010.Gelan Health Center is one of the health centers in Woreda 4 of Akaki Kality subcity staffed with 140 personnel and with catchment area population of 80,439. And the third is Efoyita Health Center which is located in Woreda 2 of Kirkos subcity staffed with 131 personnel and with catchment population of 31,500.

3.3. Samples and Sampling Techniques

3.3.1 Sampling frame and Sample size

Lideta, Akaki Kality and kirkos sub-city public health center clients were included in the study. The minimum number of the sample size required for this study was calculated using epi info version seven, by assuming 95% confidence level, and the prevalence of psychological distress of COVID-19 among public health care clients was not known, therefore, a proportion of 90%,95% confidence interval, and margin of error 5% was taken:

Sample Size for Frequency in a Population

Population size(for finite population correction factor or fpc)(*N*):	134949
Hypothesized % frequency of outcome factor in the population (*p*):	50%+/-5
Confidence limits as % of 100(absolute +/- %)(*d*):	5%
Design effect (for cluster surveys-*DEFF*):	1

Sample Size(*n*) for Various Confidence Levels

ConfidenceLevel(%)	Sample Size
95%	384
80%	165
90%	271
97%	470
99%	661
99.9%	1075
99.99%	1498

Equation

Sample size $n = [DEFF*Np(1-p)]/ [(d^2/Z^2_{1-\alpha/2}*(N-1)+p*(1-p)]$

Results from OpenEpi, Version 3, open source calculator--SSPropor
Print from the browser with ctrl-P
or select text to copy and paste to other programs.

Figure 2: Epi info clients sample size calculation

The sample size was 384 clients in the three seleceted public health centers out of their total catchment population.

3.3.2 Sampling Techniques

Table 1: Sample of clients in selected public health centers

Health Centers	Clients	
	Catchment population	Sample size
Lideta Public health Center	23,010	65
Gelan Public Health Center	80,439	229
Efoyita Public Health Center	31,500	90
Total	134,949	384

The sample size of each public health center clients was determined by using proportional allocation sampling method. Three public health centers, namely Lideta, Efoyita and Gelan were selected from three sub-cities of Addis Ababa chosen using convenience sampling technique. Convenience sampling method was used since these health centers were providing treatment service for Corona Virus and it was recommended by the Health Bureau of Addis Ababa City Adminsteration to conduct the study at these health centers.

Study participants included in each health center were determined in proportion with the case load of each public health center for the catchment population who were getting health care services from each public health center. Finally, a proportional sample of target clients, who were available during the data collection and fullfil the inclusion criteria were recruited for the study until required sample size was obtained for the specific health center.

3.4. Data Collection Instruments

In the present study data collection instrument employed was self-report questionnaire (what they do, think, or feel). The questionnaire consisted of items relating to the socio-demographic characteristics of respondents, general knowledge of respondents about COVID-19 pandemic, risk perceptions to COVID-19 and Kessler ten (K-10) psychological distress scale.

3.4.1. The ten-item Risk perception scale: - this tool provided a standard questionnaire and each item was evaluated on a five-point Likert scale, which is used to measure risk perception among populations in case of an outbreak of an infectious disease. The questionnaire evaluated the risk perception of the participant in the last 8 months, that is, the participant's perceived feelings to be in control over external events, relationships, emotions and measures taken. While processing the questionnaire results, the researcher used a statistical software known as Stastical Package for Social Science (SPSS).

3.4.2 The ten-item Kessler Psychological Distress Scale (K10):- it is simple measure of psychological distress that involved 10 questions about emotional states each with a five-level Likert scale. A questionnaire used to evaluate the Psychological distress of the participant in the last 8 months, which was used as a brief screen to identify levels of distress. The items were read to the study participants by the data collector and provided to be read by the respondent him/herself.

The study also developed a questionnaire to have the information on COVID-19 related experiences and demographic information, i.e., age, sex, marital status, occupation, household income, number of children, and educational level of the study participants.

3.5. Procedures of Data Collection and Analysis

3.5.1 Data collection procedure

To collect relevant information on the issue under this study, the researcher employed the following procedures. A questionnaire was adapted, translated and developed. The initial questions related to demographic characters were followed by questions which evaluate the extent of risk perception and psychological distress triggered by Covid-19 pandemic. Then, the researcher decided the timeframe for the implementation of the data collection process, contacted the College of Education and Behavioral Studies, department of Social Psychology of Addis Ababa University to obtain a support letter. So the researcher was received acceptance and collaboration of the public health structures of the Health Bureau of the Addis Ababa City Administration where the target samples were located. The next job was to determine the date and time so as to collect data, which was mutually, arranged with the managers of the health facilities, taking into consideration the availability of the target samples in the respective public health facilities. The guiding tool and data collection instrument were prepared in English and translated into Amharic for clients' understanding the items. The original and translated questions were then thoroughly checked by a number of experts who were fluent in both the languages to insure the preciseness of the translation from one to the other vernacular.

3.5.2. Data Analysis Procedure.

In this study, the data analysis technique employed was quantitative method. Quantitative data collected from client of health centers through questionnaire scales was analyzed using the statistical analysis software 'Statistical Package for the Social Sciences' (SPSS) Version 23.0. Generally, a variety of statistical methods such as frequency, percentages, mean, standard

deviations, independent samples t-test, Pearson's product correlation and One-Way ANOVA (Analysis of Variance) were employed.

Moreover, for two level variables like sex, an independent samples t-test was employed to test differences of clients on risk perception and psychological distress triggered by COVID-19. In addition to the above, since age, martial status, family monthly income, number of household, and level of education have more than two levels, One-Way ANOVA was employed to test the basic research questions concerning on risk perception and psychological distress differences of clients about the pandemic.

3.6 Validity and Reliability of instruments

To make the questionnaire easily understandable by respondents, the researcher in collaboration with experienced persons translated in to Amaharic version. Before gathering data for the main study, pre-test was carried out to ensure the precision, reliability, and validity of the instrument. This pre-testing was conducted with a sample of 25 participants (clients) in two health facilities in Addis Ababa other than the centers selected for data collection. The main objective of pilot study was to improve the instruments on clients self-report. This was followed by modifications on the ambigius items of the questionnaires. Finaly, the collected data was analyzed using appropriate methods and interpreted accordingly.

3.7. Ethical Issues

Letter of cooperation was received from Addis Ababa University, school of psychology to Addis Ababa Heath bureau in order to obtain Instituational Review Board (IRB) approval from the office to proceed on data collection process. Ethical approval was obtained from the Institute of Ethical Review Board of Addis Ababa University and Addis Ababa Public Health Research and

Emergency Management Directorate. Informed consent was obtained from all study participants. Information regarding to the purpose of the study, voluntary nature of participation, and risk imposed due to involvement were presented in the information section of the survey. The survey questionnaire was designed in a way that the study participants only directed to the survey questions following a respondent confirmation. All participants included in the study were provided written and oral consent.

By noting the importance of ethics in research work, the researcher has attempted to keep a high level of confidentiality as much as possible. The participants who were involved in the study were asked if they were willing to give the information they are required. Then the purpose, objectives and significance of the study were openly explained. Whatever information that was considered confidential by the participants which they didn't want to be revealed to the public was kept completely confidential.

CHAPER FOUR

RESULTS

This chapter contains the presentation of the findings for the study. The chapter was organized into different sections containing the socio-demographic characteristics of the respondents, findings and discussion on differences of risk perception and psychological ditress due to Covid-19 with respect to demographic characteristics. Data analysis was made using frequencies, percentages, t-tests and ANOVA tests among the clients in the three selected health centers. Generally, the results of this study were organized, presented and analyzed in accordance with the major themes of research questions that addressed the objectives of the study regarding to the level of perceptions and distress clients due to Covid-19 pandemic disease.

4.1 Socio-Demographic Characteristics of Participants

The sex, age, martial status, family monthly income, number of children and level of educations of respondents were presented below. This means that in terms of gender, age category, educational level, occupational status, and other demographic character there is a reasonable representation of samples or participants from each of the three health centers. The demographic data of the participants presented below may have the possibility to infer generalizations from the sample characteristics to the target population since the samples seem to be representative of the target popula tion.

4.1. Socio-demographic characterstics of Participants

Table 2: Socio-demographic characterstics of respondents

No	Variable	Label	Number of Participants	Percent(%)
1	Sex	Male	195	50.8
		Female	189	49.2
		Total	384	100
2	Age	Below 20 years	0	0
		20-35 years	47	12.2
		36-50 years	75	19.5
		51-65 years	134	34.9
		Above 65 years	128	33.3
		Total	384	100
3	Martial Status	Single	109	28.4
		Widowed	39	10.2
		Married	232	60.4
		Divorced	4	1.0
		Total	384	100
4	Family Monthly Income	<1000 Birr	122	31.8
		1000-3000 Birr	111	28.9
		3000-5000 Birr	67	17.4
		>5000 Birr	84	21.9
		Total	384	100.0
5	Number of Children	None	120	31.3
		One child	107	27.9
		Two children	75	19.5
		Three + children	82	21.4
		Total	384	100.0
6	Educational Level	Informal education	86	22.4
		Primary school	84	21.9
		Secondary school	77	20.1
		TVET/Diploma	64	16.7
		Degree & Above	73	19.0
		Total	384	100.0

Among respondent clients, 50.8% were males and 49.2% were females. There was proportional ratio on the sex of respondents. Concerning on the age category of respondent clients 47(12.2%) were 20-35 years, 75(19.5%) were 36-50 years, 134(34.9%) were 51-65 years and 128 (33.3%) were above 65 years. Majority of respondents were above 50 years. Similarily on the issue of martial status, 109(28.4%) were single, 39 (10.2%) were widowed, 232 (60.4%) were married and 4 (1.0%) were divorced. Most of the respondents were married.
As presented at table 2, the monthly income of participants was 122 (31.8%) below 1000 Birr, 111 (28.9%) range in 1000-3000 Birr, 67 (17.4%) range in 3000-5000 Birr and 84 (21.9%) above 5000 Birr. More than half of them were earned below 3000 Birr.

From the above table of item 5 relating to number of children owened by participants, 120 (31.3%) have no child, 107 (27.9%) have one child, 75 (19.5%) have two children and 82 (21.4%) have more than two children. Most respondents have less than two children.

The data presented in table 3 revealed that 86 (22.4%) were informally educated, 84 (21.9%) were attended primary school, 77 (20.1%) were attended secondary school, 64 (16.7%) were TVET/Diploma holders and 73 (19.0%) were degree and above holders. Majority of the respondents were not graduated in colleges or university levels.

4.2 Analysis of Data

4.2.1 Knowledege of Respondents about Covid-19

This part of the analysis depicted the awareness of public health center clients about Corona Virus disease.

Table 3: Knowledege of Respondents about Covid-19

No	Items	Choices		Frequency	Percent
1	Where did you hear about the new corona virus from?	Face book		100	26.0
		Telegram		81	21.1
		Radio		56	14.6
		Television		51	13.3
		Health workers		46	12.0
		Friends or family members		50	13.0
2	Have you ever heard about the new coronavirus disease?		Yes	384	100
			No	0	0
			Total	384	100
3	How does the Corona virus spread?	Droplets from infected people	Yes	190	49.5
			No	194	50.5
		Direct contact with infected people	Yes	195	50.8
			No	189	49.2
		Contaminated objects /surfaces	Yes	192	50
			No	192	50
		Contact with contaminated animals	Yes	201	52.3
			No	183	47.7
		Eating contaminated food & drinking unclean water	Yes	204	53.1
			No	180	46.9
4	What are the main symptoms of Covid-19?	Fever	Yes	214	55.7
			No	170	44.3
		Cough	Yes	202	52.6
			No	182	47.4
		Shortness of breath	Yes	188	49
			No	196	51
		Headache	Yes	201	52.3
			No	183	47.7
		Diarrhea	Yes	205	53.4
			No	179	46.6
5	Do you know how to prevent Covid-19?	Wash hands regularly using soap and water	Yes	205	53.4
			No	179	46.6
		Using hand sanitizer	Yes	208	54.2
			No	176	45.8
		Wearing mask	Yes	202	52.6
			No	182	47.4
		Covering mouth and nose while coughing	Yes	202	52.6
			No	182	47.4
		Avoid close contact	Yes	206	53.6
			No	178	46.4

Regarding on the awareness of respondents about Corona Virus pandemic, all of the respondents had information about Covid-19.

From item 1 stated about where did you hear about the new coronavirus respondents received information 100 (26%) from Facebook, 81 (21.1%) from Telegram, 56 (14.6%) from radio, 51 (13.3%) from Television, 46 (12%) from health workers and 50 (13%) from friends or family members. Among different social Medias, more clients got information via Facebook and by any means all were informed about Covid-19.

In line with the outbreak of Corona Virus as presented in above table, 190 (49. 5%) respondents replied that Covid-19 is spreaded by droplets from infected people, 195 (50.8%) believed that it is spreaded by Direct contact with infected people, 192 (50%) replied by contaminated objects or surfaces, 201 (52.3%) suggests by Contact with contaminated animals and 204 (53.1%) of them believed that it is transmitted by eating contaminated food and drinking unclean water. The response indicated that there was a gap in the people awareness about the transmission of Corona virus.

From the above table about the awareness of clients on the symptoms of the new Corona Virus, among the total respondents 214 (55.7%) replied that fever is its symptom, 202 (52.6%) believed that cough is a symptom, 188 (49%) agreed that shortness of breath and breathing difficulties is a symptom of COVID-19, 201 (52.3%) accepted that headache is a symptom and 205 (53.4%) agrred that diarrhea is a symptom of COVID-19. From the analysis clients viewed the symptoms differently and therefore it can be concluded that respondent clients had limitations of knowledge on the symptoms of Corona Virus.

On the ways of preventing corona virus, the responses of respondents displayed in the above table confirmed that 179 (46.6%) of them did not believe that washing hands regularly using

soap and water can prevent Covid-19 transmission, 176 (45.8%) did not accept that Using hand sanitizer like alcohol prevents Covid-19 transmission, 182 (47.4%) clients did not aware that wearing mask and covering mouth and nose when coughing or sneezing prevents Covid-19 transmission. Similarily 178 (46.4%) of them still did not accept that Avoiding close contact with anyone who has a fever and cough prevents Covid-19. Here one can easily understand that the population including respondents encountered an awareness gap on the prevention methods of covid-19 pandemic.

4.2.2 Risk Perception Differences among Clients with Socio-Demographic Characteristics

To determine the extent of risk perceptions of participant clients taken from three public health centers, a questionnaire was distributed consisting of ten items. The items were based on Likert five-point rating scales started with values very small chance/not at all serious/certainly not = 1 to very large chance/very serious/most certainly = 5. The average cutoff-point of the scale was 3. A record below 3 was considered as poor in risk perception and a result above 3 was interpreted as good in risk perception about covid-19 disease.

An independent t-test and One-Way ANOVA (Analysis of Variance) between groups was conducted using SPSS (Statistical Package for Social Science) version 24 to compare the mean scores on clients among the three public health centers. The mean score, standard deviation (Std. D), F-value and p-values (sig.) were calculated as indicated on the table below. The mean values were computed out of 5 with a cutoff point (average scale) of 3. Values greater than 3 (average of the scale) indicated high level of risk perception and below 3 (average of the scale) indicated low level of risk perception to Corona Virus.

Table 4: Risk Perception Differences among Clients with respect to Socio-Demographic Characteristics

Variables	Category	Mean	F or t value	Df_1	Df_2	P-value
Gender	Male	29.85	-.254	382		.800
	Female	30.06				
Age	20-35	30.06	0.659	3	380	.578
	36-50	29.83				
	51-65	29.28				
	Above 65	30.69				
Marital status	Single	28.98	2.598	3	380	.032
	Married	29.84				
	Widowed	33.44				
	Divorced	29.00				
Household income per month	<1000birr	29.41	.528	3	380	.663
	1000-3000birr	30.69				
	3000-5000birr	29.60				
	>5000birr	30.04				
Number of children	None	29.89	.478	3	380	.698
	One child	30.54				
	Two children	30.11				
	Three & above children	29.12				
Educational level	Informal eduction	30.03	2.157	4	379	.073
	Primary school	31.56				
	Secondary school	27.91				
	TVET/Diploma	29.58				
	Degree & above	30.48				

An Independent samples t-test was performed for male and female catagories on the level of risk perceptions about COVID-19 disease. As shown from above table 4 independent t-test result for gender t (382) = -.254 P-value of 0.800(P>0.05) at 95% confidence interval or 5% probability error. Therefore the result of the independent t-test suggested that there were no statistically significance differences between the responses of males and females on the risk perceptions of COVID-19. That means the mean scores of males and females about the risk perceptions of this disease were similar.

To compare the mean scores of respondents in relation to their age, One-Way ANOVA (Analysis of Variance) was performed for age categories on the level of risk perceptions about COVID-19 disease. As the result of ANOVA indicated at table 4, the value of the ANOVA F (3, 380) =0.659 p-value .578 which is greater than 0.05 (p>0.05). This result specified that there was no statistically significant difference on risk perceptions about COVID-19 with each age categories.

To compare the mean scores of respondents in relation to their marital status, One-Way ANOVA (Analysis of Variance) was performed for different martial status of clients on the level of risk perceptions about COVID-19 disease. From the above table 4 the value of the ANOVA F (3, 380), p-value of .032 which is less than 0.05 (p<0.05) suggested that there was statistically significant difference on risk perceptions about COVID-19 with each marital status categories the difference on risk perception occurred between singles mean (29.98) and widowed mean of (33.44) that is widowed had high level of risk perception to COVID-19 than single.

One-Way ANOVA test was also conducted to compare the mean scores of respondents with different monthly family income on the risk perception of COVID-19. As pointed out in table 4 in all items ANOVA F(3,380),p-value of 0.663 about risk perceptions based on monthly income of family, the analysis of ANOVA revealed that there was no statistically significant difference

with varation of income. All the average responses of respondents with different monthly income level of family were closest to the cutoff-point (3) that specified clients were not considered COVID-19 as a very riskful pandemic.

As presented in table 4, to explore the difference in relation to number of children, One-Way ANOVA F (3,380) = 0.478, p-value of 0.698, the data revealed that there was no a statistically significant risk perception difference among clients having none child, one child, two children and three and above children since all respective significant values are greater than the desired level of error ($p<0.05$). Therefore it can be summarized that the risk perceptions respondent clients in the three selected public health centers to COVID-19 was nearly similar and was closest to the cutoff-point. That is the level of perception to the risk of the disease was moderate level.

Table 4 also presented the mean comparison of clients on risk perception with their perspective educational status. As the result of ANOVA F (4,379) = 2.157, P-value of .073 indicated that there were no statistically significant difference of respondents with respect to their educational status. The average view to risk of covid-19 was medium level.

The grand mean values are closest to the cutoff-point of the scale (3) and the total average mean 2.995 was below the initial point (3). That is, clients who were participated as a source of information in this study had moderate or lower level of risk perception to COVID-19 pandemic disease. Therefore it can be concluded that the risk perception of the population to COVID-19 was in moderate.

4.2.3 Psycological Distress among Clients

Kessler RC. Et al. (2003) developed a simple measure to identify the levels of psychological distress or mental disorder. The scale involves ten questions about emotional states each with a five level response scale. Each item records "none of the time (1)", "a little of the time (2)", "some of the time (3)", "most of the time (4)" and "all of the time (5)". Low scores indicate low levels of psychological distress and high scores indicate high levels of psychological distress.

An independent t-test and One-Way ANOVA (Analysis of Variance) between groups was conducted using SPSS (Statistical Package for Social Science) version 24 to compare the mean scores on clients among the three public health centers. The mean score, standard deviation (Std. D), F-value and p-values (sig.) were calculated as indicated on the table below. The mean values were computed out of 5 with a cutoff point (average of the scale) of 3. Values greater than 3 (average of the scale) indicated high level of disorder and below 3 (average of the scale) indicated that the extent of distress is low.

4.2.4. Psychological Distress of Clients by Kessler Scale

Accordingly the category of psychological distress based on Kessler scale (K10) is interpreted as below.

Table 5: Psychological distress level of respondents by Kessler scale

No	Scale	Category level of distress	Number (f)	Percent
1	10-19	Likely to be well.	27	7.03%
2	20-24	Likely to have a mild disorder.	28	7.9%
3	25-29	Likely to have a moderate disorder.	133	34.6%
4	30-50	Likely to have a sever disorder.	196	51.04%

As shown from the categorical levels of distress by Kessler RC. et al. (2003) K10 scale, 27 (7.03%) clients were likely to be well, 28 (7.9%) clients were likely to have a mild disorder, 133 (34.6%) were likely to have a moderate disorder and 196 (51.04%) were likely to have a sever distress. According to the scale of Kessler RC. et al. (2003) category of disorder, majority of respondent clients who were found taking health care services in the selected public health centers were in moderate and sever levels of distress.

4.2.5 Differences in Psychological Distress among Clients with respect to Socio-Demographic Characteristics

To investigate the existed differences on the average responses of clients on psychological distress triggered by the new Corona Virus disease with socio-demographic variables of clients, independent samples t-test and One-Way ANOVA were performed. For comparison of mean responses of demographic characteristic with two levels like sex, an independent t-test was performed whereas for variables with more than two levels like age, martial status, family monthly income, family children numbers and levels of education categories, One way ANOVA test was conducted as presented in the next section. The ten Kessler scale items to measure disorder level of population were likert-five scales with 1 = none of the time, 2=a little of the time, 3 = some of the time, 4 = most of the time and 5 = all of the time. The average of the scales (cutoff-point) is 3. Average means below 3 indicates low level of psychological distress and above 3 indicates high level psychological distress triggered by COVID-19 pandemic disease.

Table 6: Psychological Distress differences among Clients with respect to Socio-Demographic Characteristics

Variables	Category	Mean	f/ t value	Df_1	Df_2	P-value
Gender	Male	30.74	2.674	382		.103
	Female	30.15				
Age	20-35	30.74	.239	3	380	.869
	36-50	30.41				
	51-65	30.01				
	Above 65	30.83				
Marital status	Single	30.19	1.401	3	380	.242
	Married	30.15				
	Widowed	32.97				
	Divorced	30.75				
Household income per month	<1000birr	30.28	.707	3	380	.549
	1000-3000birr	31.33				
	3000-5000birr	29.63				
	>5000birr	30.20				
Number of children	None	30.51	.175	3	380	.913
	One child	30.85				
	Two children	30.01				
	Three & above children	30.26				
Educational level	Informal eduction	30.07	1.365	4	379	.246
	Primary school	31.94				
	Secondary school	29.10				
	TVET/Diploma	30.95				
	Degree & above	30.18				

An Independent samples t-test was performed for male and female categories on the level of psychological distress due to COVID-19 disease. As shown from table 6, t-test result of t (382)= 0.239,p-value of 0.869 (P>.05) ,that the result of the independent t-test suggested that there were no statistically significance differences between the average responses of males and females on the levels of psychological distress triggered by COVID 19. Therefore it was shown that there were no tangible difference between males and female on psychological distress by COVID-19 pandemic disease.

To compare the mean scores of respondents on psychological distress triggered by COVID-19, One-Way ANOVA (Analysis of Variance) was performed for four age categories. The result of ANOVA F (3,380) =0.239, p-value of 0.578 which indicated that the Significant values for age categories were greater than 0.05 (p>0.05). This result specified that there was no statistically significant difference on psychological distress triggered by COVID-19.

To compare the mean scores of respondents on psychological distress triggered by COVID-19 with their marital status , One-Way ANOVA (Analysis of Variance) was performed with result of F(3,380)= 1.401,p-value of 0.242), significant values were greater than 0.05 (p>0.05). This result confirmed that there was no statistically significant difference on psychological distress triggered by COVID-19 with respect to different martial status of respondents.

Based on different monthly income levels of respondents, the comparison mean scores on psychological distress triggered by COVID-19 was analysed using One-Way ANOVA result of F(3,380)= 0.707, p-value of 0.549, (p>0.05) suggested that there was no statistically significant difference among clients based on their monthly family income.

To compare the mean scores of respondents on psychological distress triggered by COVID-19, One-Way ANOVA was performed on four categories of families with various numbers of

children. The result of the ANOVA F (3,380) = 0.175, p-value of 0.913 which (p>0.05). This result suggested that there were no statistically significant difference on psychological distress triggered by COVID-19 with respect to different family size of respondents.

To investigate the psychological distress level of clients taken from three public health centers by taking educational level in to consideration, their average response was analysed by One-Way ANOVA test. The result of ANOVA F (4, 379) = 1.365, p-value of .246 (p>0.05) suggested that there were no statistically significant differences among clients on the level of education.

4.2.6. Correlation between risk perceptions and psychological distress

Table 7: Correlation between risk perceptions and psychological distress

CORRELATION PARAMETERS		RISK PERCEPTION	PSYCHOLOGICAL DISTRESS
RISK PERCEPTION	Pearson Correlation	1	
	Sig. (2-tailed)		
	N	384	
PSYCHOLOGICAL DISTRESS	Pearson Correlation	.782**	1
	Sig. (2-tailed)	.000	
	N	384	384

**. Correlation is significant at the 0.01 level (2-tailed).

As presented from the above table, the correlation coefficient between the two variables was 0.782. This magnitude confirmed that there was a strong positive correlation between them. Again the sig. (two-tailed) value, p = 0.000<0.05 indicated that there was statistically significant correlation between risk perception to covid-19 and psychological distress due to covid-19 pandemic. That is as the view of covid-19 risk increase; the psychological distress by it would also increase. There existed 61.15% correlation between the two variables.

CHAPTER FIVE

DISCUSSION OF THE RESULT

5.1 Introduction to the Background Information of Respondents

The basic objective of this study was to explore the extent of risk perception and psychological distress triggered by COVID-19 among clients in three selected public health centers in Addis Ababa namely Lideta, Efoyita and Gelan. Data was obtained through questionnaires from populations who were getting health care service in three health centers. Since analysis techniques were the pilar parts of the research, the data was analyzed and interpreted through quantitative approaches such as frequencies, standard deviation, independent samples t-test, one-way ANOVA (Analysis of Variance) and Pearson's product correlation via SPSS (Statistical Package for Social Science) version 24. The main findings of the study were discussed below based on the basic research questions and objectives of the study with incorporation of literature reviews.

Among 384 respondents 50.8% were males and 49.2% females. 68.2% of them were above 50 years and the rest were between 20 and 50. Majority of respondents (about 60.4%) clients were married followed by 28.4% single clients. The monthly family income of 67.7% respondents was less than Birr 3000 and 68.7% of them had atleast one children. About 35.7% of clients were TEVT/Diploma, Degree and above holders whereas majorities (64.3%) of them were none graduated in College or university levels. Among 384 respondents 16.9% were in Lideta, 59.6% were in Efoyita and 23.45 were in Gelan public health centers.

5.2 Findings Related to Risk Perceptions and Psychological Distress

All of the respondents were informed about the new Corona virus (COVID-19) pandemic disease through various Mass Medias especially 47.1% got the information via Facebook and Telegram. Around 50.5% clients believed that the virus is not transmitted by droplets from infected people, 49.2% did not believed that it spreads by direct contact with infected people and 50% of them also did not agree that the virus is transmitted by contaminated objects/surfaces. Therefore it was easily understood that the society had a gap on the knowledge of Covid-19 transmission.

Regarding to the symptoms of Corona Virus, majority of the respondents better recognized that fever; headache, Diarrhea and cough are symptoms whereas 51% of them did not awared that shortness of breath and breathing difficulties are a symptoms of COVID-19. Similarly, on the prevention methods of Corona virus only 52%-53% respondents understood that washing hands regularly using soap and water, using hand sanitizer like alcohol, wearing mask, covering mouth and nose when coughing or sneezing and avoiding close contact with anyone who has a fever and cough prevents Covid-19. In general there was a great limitation on the outbreak, symptoms and prevention methods of this serious and rapidly transmitted disease.

With regard to risk perceptions among clients in three selected public health centers, ten standard items were developed and the result was analyzed by independent t-test and One-Way ANOVA. In most cases related to risk perception of respondents, there was no statistically significant difference on the average response of clients in the three health centers. The total average mean 2.995 was below the cutoff-point of the scale (3) suggested that participants on this study had moderate or lower level of risk perception to COVID-19 pandemic disease. Therefore it can be concluded that the risk perception of the socity to COVID-19 was not meaningfully improved.

On the other hand, to identify the extent of psychological distress triggered by the outbreak of Corona Virus on the society, Kessler's scale was applied and tested using one-way ANOVA with respect to three health centers. The total average mean of all items was 3.045 (closest to 3) which indicate the level of psychological distress triggered by COVID-19 was moderate and high a little bit. The result also specified that there were no statistically significant difference among clients in the three public health centers on the average psychological distress level. In addition to ANOVA test, Kessler scale (K10) categorical interpretation indicated that majority of clients were moderately or severely distressed due to Corona Virus.

5.3 Differences of Risk Perceptions and Psychological Distress with Socio-demographic Variables

To test variation in risk perception and psychological distress as a function of socio-demographic characteristics such as sex, age, martial status, family income, family size and educational levels of clients, independent t-test (for two levels) and One-way ANOVA test (for more than two levels) were employed.

Accordingly, the result of the independent t-test suggested that there were no statistically significance differences between the responses of males (grand mean = 2.984) and females (grand mean = 3.004) on the risk perceptions of COVID 19.

In line with differences of psychological distress and risk perceptions of clients with different age categories, the ANOVA test the result specified that there was no statistically significant difference on risk perceptions about COVID-19 with each age categories. However, with respect to differences of clients' age, there were some differences among clients on the level of psychological distress triggered by Corona Virus pandemic disease. Respondents with age category of 36-50 years were relatively more psychologically distressed and 20-35 years were

less distressed. The total grand mean of respondents to risk perceptions (mean = 2.995) and grand mean of the psychological distress scale (mean = 3.045) which is closest to the average cutoff-point indicated that clients were at moderate level both in perceptions and distress.

With respect to martial status of respondents, there was statistical difference on risk perceptions to COVID-19. The variation occurred between single clients (mean = 2.59) which is low risk perception and widowed clients (mean = 3.36) which is high scale indicated that widowed clients had high risk perception on the Corona Virus pandemic disease.

On house hold income variability of respondents with four monthly income categories the analysis of ANOVA revealed that there was no statistically significant difference with varation of income.

The responses of clients with different sizes of family or number of children indicated that there were no significant differences among clients both in risk perception level and psychological distress triggered by Corona Virus pandemic disease.

The result of ANOVA on perceptions to the risk of Covid-19, the analysis specified that there were no statistically significantly differences among respondents with various educational levels.

5.4. The Correlation between the Study Variable

The correlation between the two study variables risk perception and psychological distress triggered by COVID-19 were also computed by Pearson's correlation method. The result of correlation coefficient between the two variables ($r = 0.782$, $p = 0.000<0.05$) indicated that there was statistically significant relashinship between risk perception to covid-19 and psychological distress due to covid-19 pandemic. The magnitude of correlation coefficient ($r = 0.782$) approved

that the relashinship between them was high and directly correlated. That is, when the perceptions to the risk of COVID-19 gets high, psychological distress due to COVID-19 will also high and vice versal.

The study conducted in Ethiopia by (Sarah, Claudia Schneider, John Kerr, Alexandra. Freeman, Gabriel, Anne, David & Sander (2020) which supports the finding of the present study that almost all participants heard about the Corona virus and COVID-19.

The study conducted in Ethiopia by(Chalachew ,2020) supports the finding of the present study that nearly two-thirds (66.4%) of the respondents had moderate to severe levels of a psychological problem, which revealed that the finding of this study (51.04%) were likely to have a severe distress according to the scale of Kessler RC. et al. (2003) category of distress, majority of respondent clients who were found taking health care services in the selected public health centers were in moderate and severe levels of distress.

CHAPTER SIX:

CONCLUSIONS AND RECOMMENDATIONS

This chapter provided the conclusions and recommendations of the study that investigated about risk perceptions to the outbreak of Corona Virus and psychological distress followed by this disease in three selected public health centers of Addis Ababa city. The study was guided by three leading questions and used quantitative methods of data analysis and the results were discussed briefly in chapters four and five. Based on the summary of the findings, the researcher had drawn the following conclusions and forwarded their corresponding implications as recommendations.

6.1. Conclusions

Based on the major findings of the study the researcher draws the following conclusions as follows:

The result of the study revealed that the society particularly in Addis Ababa city did not consider the currently introduced pandemic disease as high riskable. That is even if it is rapidly spreaded through various and simple methods like contaminating with infected bodies, objects and droplets from infectious, the risk perception of the population to Corona Virus was not tangebily developed. The anxiety level or psychological distress level of the society triggered by COVID-19 was also at moderate level. Therefore it can be concluded that the awareness of the society to the outbreak, symptoms, preventive methods and attitudes towards COVID-19 did not considerably improved.

The perceptions of the society to the riskness of Corona Virus and the followed psychological distress did not indicate significant variation with different socio-demographic characteristics.

That means the populations with various living standards such as different age groups, educational levels, family income levels and family size did not significantly vary in risk perceptions to Corona Virus and psychological distress triggered by it.

From the findings of the study it was observed that there was no a relationship between risk perceptions to COVID-19 and respondents' socio-demographic characteristics; and between psychological distress and respondents' socio-demographic characteristics. It can be therefore concluded that the variations in demographic characteristics of the population like age, economy level, family house holding and levels of educations did not vary in perception to the risk of Corona Virus and its consequence, psychological distress.

Finally, it was undermined that there was a strong and direct relationship between risk perceptions and psychological distress triggered by Corona Virus. That is, as the degree of risk perception of the population to Corona Virus gets high, the psychological distressed followed by the pandemic disease will also gets high. This correlation may motivate the population to practice consistence preventive measures against COVID-19.

6.2. Recommendation

The findings of the study will be disseminated to pertinent offices such as Addis Ababa university, Addis Ababa city administration health Bureau, Addis Ababa Public Health Research and Emergency Management Directorate, Kirkos, Akaki Kality and Lideta subcity health offices and selected health centers, which may benefitt from the findings for the planning, designing strategies, evaluating the impact of the pandemic and further study feasible areas. Based on the above conclusions, the researcher recommend

- The results of this study will serve as an input to generate appropriate mental health crisis management guidelines for the promotion of the psychosocial wellbeing of a community in

response to the pandemic.

- Check how the consequence of the pandemic communicated and perceived, because the firmness for risk communication is low.
- Facilitate the public via communication by referring them to reliable sources (such as websites of the National Institute of Public Health, Ministry of Health and health care workers)

• Government should keep creating awareness about the Virus consistently by using mass media, social networking such as facebook and telegram from which most of general population usually use as a source of information and should also take appropriate and immediate actions or responses based on the circumstances.

• Psychologists, social workers, practitioners and health professionals working with Covid-19 have to develop a strategic communication materials and messages to address the gaps in the community

• Social and health policy makers are advised to incorporate clear statements boldly into the policies about the risks and psychological problems manifested after the Covid-19 Pandemic

• Interventions and services that aim at improving the social, mental and physical health of the health care workers and clients of the health facilities

• The present study has also some implications for future research. Future research should expand the scope of the present study by incorporating other related parameters and scope of the research area.

• As this pandemic is new to the globe and the country there will be new perspectives and findings related to it. Thus for psychologists and other related professionals, researchers has to be well capacitated so that they can address would be emerging psychosocial problems.

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Appendices

Appendix A

Addis Ababa University

College of Education and Behavioral Studies School of Psychology

Appendix A: Semi-Structured Interview Guide for the respondents of the Study

Code_____ Interview date: _____ Interview time _____

Part Two: Questionnries Guidelines:

Before starting the key informant interview questions, copies of informed consent and confidentiality forms will be provided to each participant and read aloud for the benefit of those who cannot read. Participants will also be provided an opportunity to ask any questions. Verbal agreement should also be taped. Before proceeding to the questions, the interviewer explains the ground rules as follows:

Before we start, I would like to remind you that there is no right or wrong answers in this interview response. I am interested in knowing what you think, so please feel free to be frank and to share your point of view. It is very important that I hear your opinion.

Sr. No.	**Questions**	**Alternative choices of response**	Yes/No response	
Part One: Respondent's socio-demographic characteristics				
			Yes	No
1.	Age	_____years		
2.	Gender	Male_____ Female _____		

		Prefer not to disclose _____		
3.	Marital status	a. Never married b. Widowed c. Married d. Divorced e. Separated		
4.	Occupation	a. Unemployed (no job) b. Daily laborer c. Service provider d. Professional		
5.	Household Income per month in Birr	a. <1000birr b. 1000-3000birr c. 3000-5000birr d. >5000birr		
6.	Number of children	a. No child b. One child c. Two children d. Three and above children		
7.	Family size including house made, guard, father and mother	a. One b. Two c. Three and above		
8.	Educational Level	a. Unable to read and write b. Primary education c. Secondary education		

		d. Vocational and Technical training or College diploma e. Degree and above		
9. COVID related questions				
1.	Have you ever heard about the new coronavirus disease? (COVID-19)	a. Yes b. No		
2.	What kind of information have you received about the disease?	a. How to protect yourself from the disease? b. Symptoms of the new coronavirus disease c. How it is transmitted d. Vaccination against Covid-19 e. Other		
3.	Where did you hear about the new coronavirus from? What channels or sources? (circle all that apply)	a. Facebook b. Telegram c. From Radio or Television, d. Health workers, e. friend or family members		
4.	How does the coronavirus spread? (circle all that apply)	a. Droplets from infected people b. Direct contact with infected people c. contaminated objects/surfaces d. Contact with contaminated animals e. Eating contaminated food and drinking unclean water		
5.	What are the main symptoms of COVID-19?	a. Fever b. Cough		

		c. Shortness of breath and breathing difficulties d. Headache e. Diarrhea		
6.	Do you know how to prevent COVID-19? (circle all that apply)	a. Wash your hands regularly using soap and water b. Using hand sanitizer like alcohol c. Wearing mask d. Cover your mouth and nose when coughing or sneezing e. Avoid close contact with anyone who has a fever and cough		
7.	What have you and your family done to prevent becoming sick with coronavirus in the recent days?	a. Wash your hands regularly using soap and water b. Using hand sanitizer like alcohol c. Wearing mask d. Cover your mouth and nose when coughing or sneezing e. Avoid close contact with anyone who has a fever and cough		
8.	What to do if you or someone from your family has symptoms of COVID-19 disease?	a. I will look for a more experienced relative to advise me on what to do b. I will go to the health care service facility		

		c. I will buy medicines at the market d. I will look for the traditional healer e. I will call to EPHI tele center (8335)		

Risk perception standard questionnaire

		Not at all serious	Not serious	Slightly serious	Serious	Very serious
1.	How serious do you think COVID_19 is?					
2.	How would you feel if you were to contract the COVID-19 disease in the coming year?					
		Certainly not	Probably not	Perhaps not-perhaps yes	Probably yes	Most certainly
3.	Do you think that you can contract COVID-19 in the coming year if you don't take any preventive measures?					
		Very small chance	Small chance	Not small-not large	Large chance	Very large chance
4.	Suppose you <u>have not been</u> vaccinated against COVID-19. What do you think your chance of contracting COVID-19 in the coming year?					
5.	Suppose you <u>have been</u> vaccinated					

	against COVID-19. What do you think your chance of contracting COVID-19 in the coming year?					
6.	How large do you think the chance is that you will contract the following disease in the coming year?					
		Not at all concerned	Not concerned	Slightly concerned	Concerned	Very concerned
7.	How concerned are you about contracting COVID-19?					
		Certainly not	Probably not	Perhaps not-perhaps yes	Probably yes	Most certainly
8.	Do you think that measure of wearing face mask helps to prevent COVID-19?					
9.	Do you think that you will manage to carry out measure of wearing face mask, if this is advised?					
10.	Would you carry out measure if t of wearing face mask his was advised?					

Kessler Psychological Distress Scale due to COVID-19

	Please tick the answer that is correct for you	All the time (Score 5)	Most of the time (score 4)	Some of the time (core 3)	A little of the time (Score 2)	None of the time (Score 1)
11.	In the past 8 months, about how often did you feel tired out for no good reason?					

12.	In the past 8 months, about how often did you feel nervous?					
13.	In the past 8 months, about how often did you feel so nervous that nothing could calm you down?					
14.	In the past 8 months, about how often did you feel hopeless?					
15.	In the past 8 months, about how often did you feel restless or fidgety?					
16.	In the past 8 months, about how often did you feel so restless you could not sit still?					
17.	In the past 8 months, about how often did you feel depressed?					
18.	In the past 8 months, about how often did you feel that everything was an effort?					
19.	In the past 8 months, about how often did you feel so sad that nothing could cheer you up?					
20.	In the past 8 months, about how often did you feel worthless?					

Thank you for your time!!

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Code_____ Interview date: _____ Interview time _____

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Before starting the key informant interview questions, copies of informed consent and confidentiality forms will be provided to each participant and read aloud for the benefit of those who cannot read. Participants will also be provided an opportunity to ask any questions. Verbal agreement should also be taped. Before proceeding to the questions, the interviewer explains the ground rules as follows:

Before we start, I would like to remind you that there is no right or wrong answers in this interview response. I am interested in knowing what you think, so please feel free to be frank and to share your point of view. It is very important that I hear your opinion.

የአዲስ አበባ ዩኒቨርሲቲ ትምህርት እና ሥነ ምግባር ትምህርት ኮሌጅ

ይህንን ቃለ መጠይቅ ከእኔ ጋር ለማድረግ ጊዜዎን ስለሰጡኝ አመሰግናለሁ ። ስሜ ራሄል አበራ ይባላል። በማኅበራዊ ስነ-ልቦና (ማስተር)(Master of Arts) የሥነ-ጥበባት ተመራቂ ተማሪ ነኝ ። ከኮቪድ-19 በሽታ ጋር ተያይዞ ለበሽታው ያለን ተጋላጭነትን መረዳት/መገንዘብ እና ስላለው የስነ-ልቦና ጭንቀት መጠን ላነጋግርዎ እፈልጋለሁ ።

ቃለመጠይቁ ከ20(ሃያ) ደቂቃ በላይ አይቆይም። በውይይታችን ጊዜ የተወሰኑ ነጥቦችን በማስታወሻዬ እወስዳለሁ ይህም የተወሰኑ ደቂቃዎች ሊወስድብኝ ይችላል፤ ለዚህም ፍቃደኛ እንዲሆኑልኝ በትህትና እጠይቃለሁ ።

የቃለ መጠይቁ ሁሉም መረጃዎች በሚስጥር እንደሚጠበቁ እና ስም-አልባነትዎ እንደሚጠበቅ እርግጠኛ ነኝ። ይህ ማለት የእርስዎ እይታ ወይም ምልከታ በምንም መንገድ ለሶስተኛ ወገን ተላልፎ አይሰጥም። የምወስደው መረጃ የእርስዎን ማንነት እንደ ተሳታፊ አያሳውቀዎትም። ያስታውሱ ፣ የማይፈልጉትን ነገር ማውራት አይጠበቅብዎትም እና ቃለ መጠይቁን በማንኛውም ጊዜ ሊያቆሙት ይችላሉ ።

መስማማትዎን ለማረጋገጥ እባክዎ እዚህ ይፈርሙ

ፊርማ _____

ቀን _____

ተ. ቁጥር	ጥያቄዎች	አማራጭ ምላሾች	አዎን / አይደለም	
Part One: Respondent's socio-demographic characteristics **ክፍል አንድ፤**				
			አዎን	**አይደለም**
1.	ዕድሜ	_____ዓመት		
2.	ፆታ	ወንድ _____ ሴት _____		

3.	የጋብቻ ሁኔታ	a. ያላገባ b. ባል/ሚስት የሞተባት/በት c. ያገባ d. የተፋታ/ች e. የተለያዩ		
4.	ስራ	a. ስራ የሌለው/ላት b. የቀን ሠራተኛ c. አገልግሎት ሠጪ d. ባለሙያ		
5.	ወርሃዊ የቤተሰብ የገቢ መጠን (በብር)	a. < 1000ብር በታች b. 1000-3000ብር c. 3000-5000ብር d. > 5000ብር በላይ		
6.	ጠቅላላ የልጆች ቁጥር	a. አንድ b. ሁለት c. ሶስት እና ከዚያ በላይ		
7.	ጠቅላላ ቤተሰብ መጠን	a. አንድ b. ሁለት c. ሶስት እና ከዚያ በላይ		
8.	ትምህርት ደረጃ	a. ማንበብ መፃፍ የማይችል/ትችል b. የመጀመሪያ ደረጃ c. ሁለተኛ ደረጃ d. የሙያ ስልጠና/ዲፕሎማ e. ዲግሪ እና ከዚያ በላይ		
COVID related questions / ከኮቪድ ጋር ተያያዥነት ያላቸው ጥያቄዎች				

1.	ስለኮረና ቫይረስ ህመም ሰምተዋል (መረጃ አለዎት)?	a. አዎ b. አይደለም (የለም)		
2.	ስለኮቪድ-19 ህመም ምን አይነት መረጃ አግኝተዋል?	a. ስለበሽታውን መከላከያ መንገዶች		
		b. ስለ ኮረና ቫይረስ ህመም ምልክቶች		
		c. ስለ ኮረና ቫይረስ ህመም መተላለፊያ መንገዶች		
		d. ስለኮረና ቫይረስ ክትባት		
		e. ሌላ_____		
3.	ስለኮረና ቫይረስ ህመም ከየት ሰሙ? ከምን አይነት የመረጃ ምንጭ? (አማራጭ ነው ያሉትን በሙሉ ይምረጡ)	a. ፌስ ቡክ (ማህበራዊ ድህረ-ገፅ)		
		b. ቴሌግራም		
		c. ሬድዮ /ቴሌቪዥን		
		d. ከጤና ባለሙያዎች		
		e. ከጓደኛ ወይም የቤተሰብ አባላት		
4.	የኮረና ቫይረስ እንዴት ይተላለፋል ? (አማራጭ ነው ያሉትን በሙሉ ይምረጡ)	a. በበሽታዉ የተየዘ ሰዉ ሲያስነጥስና ሲያስል በትንፋሽ ጠብታዎች ዉስጥ		
		b. በበሽታዉ ከተያዘ ሰዉ ጋር ቀጥተኛ የሆነ ንክኪ ሲኖር		
		c. ከቫይረሱ ጋር ንክኪ ያላቸውን እቃዎች በመነካካት		
		d. ከቫይረሱ ጋር ንክኪ ያላቸውን እንሰሳት በመነካካት		
		e. የተበከለ ምግብ በመመገብና ንፅህናው ያልተጠበቀ ውሃ በመጠጣት		
5.	የኮቪድ-19 በሽታ ዋና ዋና ምልክቶች ምንድን ናቸው?	a. ትኩሳት		
		b. ሳል		
		c. የትንፋሽ እጥረት		
		d. የራስ ህመም		
		e. ተቅማጥ		

6.	የኮቪድ-19 በሽታን እንዴት መከላከል እንደሚቻል ያውቃሉ ? (አማራጭ ነው ያሉትን በሙሉ ይምረጡ)	a. እጆችን በሳሙናና ውሃ በተደጋጋሚ መታጠብ		
		b. የእጅ ማጽጃ ሳኒታይዘር መጠቀም		
		c. የፊት ጭንብል ወይም የጨርቅ የፊት ሽፋን መጠቀም		
		d. በሚያስሉበትና በሚስነጥሱበት ወቅት አፍና አፍንጫን መሸፈን		
		e. የሳልና የትኩሳት ምልክቶች ካሉት ሰው መራቅ		
7.	እርስዎም ሆኑ የቤተሰብዎ አባል በሽታውን ለመከላከል ምን ያደርጋሉ?	a. እጆችን በሳሙናና ውሃ በተደጋጋሚ መታጠብ		
		b. የእጅ ማጽጃ ሳኒታይዘር መጠቀም		
		c. የፊት ጭንብል ወይም የጨርቅ የፊት ሽፋን መጠቀም		
		d. በሚያስሉበትና በሚስነጥሱበት ወቅት አፍና አፍንጫን መሸፈን		
		e. የሳልና የትኩሳት ምልክቶች ካሉት ሰው መራቅ		
8.	እርስዎ ወይም የቤተሰብዎ አባል የኮቪድ-19 ህመም ምልክቶች ቢኖራችሁ ምን ያደርጋሉ?	a. ምን ማድረግ እነዳለብዎ ለመወሰን ልምድ ካለው ቤተሰብዎ ምክር ይጠይቃሉ		
		b. አቅራቢያ ወደሚገኝ ጤና አገልግሎት መስጫ ተቋም ይሄዳሉ		
		c. መድሀኒቶች ገዝተው ይጠቀማሉ		
		d. ወደ ባህል መድሐኒት አዋቂ ይሄዳሉ		
		e. ወደ ሕብረተሰብ ጤና ኢንስቲትዩት ስልክ 8335 እደውላለሁ		

ከኮቪድ-19 መከሰት ጋር ተያይዞ ያሉ የአደጋ ተጋላጭነትን ስለመረዳት እና የስነ-ልቦና ጭንቀት የሚዳስሱ መጠይቆች

	እባክዎን ለእርስዎ ትክክል የሆነውን መልስ ምልክት ያድርጉ	**በጣም ከባድ**	**ከባድ**	**ትንሽ ከባድ**	**ከባድ አይደለም**	**በጭራሽ ከባድ አይደለም**
1.	ኮቪድ-19 ምን ያህል ከባድ ነው ብለው ያስባሉ?					
2.	በመጪው ዓመት በኮቪድ-19 በሽታ ቢያዙ ምን ሊሰማዎት ይችላል?					
		በጣም በእርግጠኝነት	**ምንአልባት አዎ**	**ላይሆንም ሊሆንም ይችላል**	**ምንአልባት አይደለም**	**በእርግጥ አይደለም**
3.	ማንኛውንም የመከላከያ እርምጃ የማይወስዱ ከሆነ በመጪው ዓመት በኮቪድ-19 ልያዝ እችላለሁ ብለው ያስባሉ?					
		በጣም ትልቅ ዕድል	**ትልቅ ዕድል**	**መካከለኛ**	**ትንሽ ዕድል**	**በጣም ትንሽ ዕድል**
4.	የኮቪድ-19 ክትባት አልወሰዱም እንበል ። ስለሆነም በመጪው አመት በኮቪድ-19 የመያዝ እድልዎ ምን ያህል ሊሆን ይችላል ብለው ያስባሉ?					
5.	የኮቪድ-19 ክትባት ወስደዋል እንበል ። ስለሆነም በመጪው አመት በኮቪድ-19 የመያዝ እድልዎ ምን ያህል ሊሆን ይችላል ብለው ያስባሉ?					
6.	በመጪው አመት በኮቪድ-19 በሽታ የመያዝ እድልዎ ምን ያህል ነው ብለው ያስባሉ?					
		በጣም ያስጨንቃል	**ያስጨንቃል**	**በትንሽ ያስጨንቃል**	**አያስጨንቅም**	**በጭራሽ አይደለም**
7.	በኮቪድ-19 ስለመያዝ ምን ያህል ያሳስብዎታል?					
		በጣም	**ምንአልባት**	**ምንአልባት**	**ምንአልባት**	**በእርግጥ**

		በእርግጠኝነት	አዎ	ላይሆን-ሊሆን ይችላል	አይደለም	አይደለም
8.	የፊት መሸፈኛ ማድረግ ኮቪድ-19ን ለመከላከል ይረዳል ብለው ያስባሉ?					
9.	የፊት መሸፈኛ መጠቀም ቢመከሩ ይህን ማድረግ እችላለሁ ብለው ያስባሉ?					
10.	የፊት መሸፈኛ አንዲያደርጉ ቢመከሩ ይህን ያደርጋሉ?					
	እባክዎን ለእርስዎ ትክክል የሆነውን መልስ ምልክት ያድርጉ	**ምንም ጊዜ=1**	**ትንሽ ጊዜ =2**	**አንዳንድ ጊዜ=3**	**አብዛኛውን ጊዜ =4**	**ሁልጊዜ=5**
11.	ባለፉት 8 ወራት ያለበቂ ምክንያት ለምን ያህል ጊዜ የድካም ስሜት ተሰምቶዎታል?					
12.	ባለፉት 8 ወራት ውስጥ ምን ያህል ጊዜ የጭንቀት ስሜት ተሰምቶዎታል?					
13.	ባለፉት 8 ወራት ውስጥ ምን ያህል ጊዜ ከጭንቀት ስሜትዎ ምንም ነገር ሊያረጋጋዎ አልቻለም?					
14.	ባለፉት 8 ወራት ውስጥ ምን ያህል ጊዜ የተስፋ መቁረጥ ስሜት ተሰምቶዎታል?					
15.	ባለፉት 8 ወራት ውስጥ ምን ያህል ጊዜ የለመረጋጋት ወይም ግራ የመጋባት ስሜት ተሰምቶዎታል?					
16.	ባለፉት 8 ወራት ውስጥ ምን ያህል ጊዜ ያህል መረጋጋት ማጣት መቀመጥ አለመቻል					

	ተሰምቶዎታል?					
17.	ባለፉት 8 ወራት ስንት ጊዜ ያህል የመንፈስ ጭንቀት ይሰማዎታል?					
18.	ባለፉት 8 ወራት ውስጥ ሁሉም ነገር የጥረት/የልፋት ውጤት አንደሆነ ተሰምቶዎታል?					
19.	ባለፉት 8 ወራት ውስጥ ምንም ነገር ሊያበረታታዎ ያልቻለ ሀዘን ተሰምቶዎታል?					
20.	ባለፉት 8 ወራት ውስጥ ምን ያህል ጊዜ ወጋ እንደሌለው ሰው ተሰምቶዎታል?					

ስለነበረን ቆይታ አመሰግናለሁ!!!