ADDIS ABABA UNIVERSITY

COLLEGE OF EDUCATION AND BEHAVIORAL STUDIES

SCHOOL OF PSYCHOLOGY

PSYCHOLOGICAL DISTRESS AND BURNOUT AMONG HEALTH PROFESSIONALS DURING COVID-19 PANDEMIC IN MENELIK-II REFERRAL HOSPITAL

TITO MENGISTU

August, 2021

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Abbreviations and acronyms

BOS-burnout syndrome

CIDI-Composite International Diagnostics Interview

CNS-central nervous system

COVID-19-corona virus disease of 2019

DP-depersonalization

EE -emotional exhaustion

HCPs –health care professionals

HCWs- health care workers

ICU-ventilators and intensive care unit

MERS-Middle East respiratory syndrome

NHCWs-non-healthcare workers

PA-cynicism and low personal achievements

PPE-lack of personal protective equipment

PTSD-post-traumatic stress disorder

SARS-Acute Respiratory Syndrome

WHO-World Health Organization

Abstract

Frontline health professionals are under a great deal of stress, including a high risk of suspected or confirmed COVID-19 infection, a potential resource shortage, as well as a job overload. The objective was assess the magnitude of psychological distress and burnout among health professionals and statistically significant difference of health professionals who had contact history of COVID -19 suspected and/or confirmed patients during the (COVID-19) outbreak in Menillik II referral hospital. A descriptive survey was conducted using simple random sampling techniques with 272 of health professionals who has been working in Menellik-II referral hospital Addis Ababa, Ethiopia. An independent t-test and/or one-way ANOVA for testing variation at 95% confidence interval and P-value < 0.05were used to compare means of independent variables. A P-value less than 0.05 will consider being statistically significant in all cases. Magnitude of burnout and psychological distress was assessed by validated English language version of the Maslach Burnout Inventory and Kessler 10 scale respectively. Clean data was coded, entered, and analyzed by using computer software SPSS version 20. About 258 (96.7% response rate) respondents completed the questionnaire and used for analysis. The participants were included 24% special or general doctor, 34.1% BSc nurse, 22.5% health officer, 6.2% Midwifery, 4.3% Laboratory technician and 8.9% others types health professionals. A 229(88.7%) of health professionals were had a direct contact history with patients of COVID-19 confirmed or suspected during work time. A health professionals who had contact history of Covid-19 confirmed or suspected clients were developed 130(56.7%) moderate, 90(39.3%) high and 2 (0.8%) very high psychological distress. As well as from health professionals who had contact history of Covid-19 confirmed or suspected clients were recorded 88 moderate to high emotional exhaustion, 190 moderate to high depersonalization and 192 moderate to high personal accomplishments. Male nurses, female Midwifery, male Laboratory technician, and others types of female health professionals were recorded high prevalence of psychological distress and burnout. There is a statistically significant difference in psychological distress, personal accomplishment, and emotional exhaustion, but not in depersonalization scores between health profession types. There is a statistically significant difference in psychological distress and burnout scores between working areas or wards of the health profession. This study shows more than half of health professionals were categorized as having mild to severe psychological distress and burnout in related to the COVID-19 pandemic and other factors. About 0.8% of the health professionals in surveyed hospital considered that they might need psychological or psychiatric treatment in the future. Regular assessment of the prevalence of burnout and psychological distress within hospitals and other health systems of health professionals in might help to identify risk factors or protective factors for burnout, psychological distress and other mental disorders; this would benefit individuals and health systems/organization.

CHAPTER ONE

1. INTRODUCTION

1.1. Background of the study

Coronavirus disease or novel coronavirus (COVID-19) is a new infectious virus causing a deadly outbreak of respiratory illness, which was first reported in Wuhan, China. The WHO declared this viral disease as a worldwide health emergency and a pandemic on March 11, 2020 (Rothan et al., 2020). COVID-19 illness is also one of the most serious pandemics, with devastating morbidity and mortality rates. People from many nations, continents, ethnicities, and socioeconomic categories were affected. It evolved to be one among the central health crises of current generations (WHO, 2020).

Until the preparation of this thesis (August 03, 2021), 199,620,134 confirmed cases of COVID-19 are reported from more than 223 countries and territories, leading to over 4,249,434 deaths but 180,108,465 people recovered from this deadly virus. In August 2021, there are 6,834,482 confirmed cases of COVID-19 leading to over 172,317 deaths but 5,969,545 people recovered from this disease are reported in Africa (Worldometer, 2021).

COVID-19 is a global disaster, requiring international cooperation to challenge the pandemic. As a result, a variety of public health measures, largely behavioral interventions, are implementing to contain and mitigate the spread of coronavirus (Suresh, 2020). Currently, there is no effective antiviral treatment but there is continuing distribution of the vaccine for COVID-19 (WHO, 2020). As of March 10, 2021, 300,002,228 different types of vaccine doses has been administered, and antivirals drugs are now in phase III clinical trials to treat the clinical appearance of COVID-19 disease (Worldometer, 2021).

The quick spread of COVID-19, as well as the severity of symptoms can induce in many infected people, has put a lot of pressure on health care systems. The COVID-19 pandemic is unparalleled in current history, and it has spread across the globe, posing a serious public health threat not just to China but also to the rest of the world. The rising number of cases has posed a major challenge to hospitals treating people with COVID-19 symptoms, resulting in a shortage of medical resources and work force, particularly in intensive care units(Brahmi et al., 2020; Zhang et al., 2020).

Burnout is a psychological syndrome that develops because of a constant response to persistent stressors and interpersonal interactions at workplace. As a result, mental issues such as emotional exhaustion, depersonalization, and diminished personal achievement may arise (Bond et al., 2018). Burnout syndrome is linked to a number of negative outcomes, including depression, the chance of medical errors, and patient health and safety issues (Ishak et al., 2009). Several studies on burnout syndrome among health care professionals have been published in recent years; however, data on residents published in the scientific literature is minimal (Shah et al., 2020). Long working hours, workload, work conditions, and system-related frustrations were identified as the most important contributing factors to burnout syndrome in a large-scale South African study of health professionals working in the cape town Metropolitan municipality community healthcare clinic and district hospital of the provincial (Rossouw et al., 2013).

Psychological distress is an emotional trauma that individual experiences because of a real or perceived physical or psychological threat. Psychological distress is one of the most serious public health crises that can occur because of workplace conditions (Montemurro, 2020) and many local and worldwide catastrophes, such as the COVID-19 pandemic. Psychological distress, as a crucial indication, reflects a person's feelings and psychological responses to

environmental adaptability, and has a negative impact on their job performance, family life, and overall well-being. During the COVID-19 outbreak, this psychological distress develops (Ornell et al., 2020).

According to the International Council of Nurses (ICN), health professionals account for around 10% of all cases worldwide, with more than 20,000 infected. At least 1,500 nurses and other healthcare workers were believed to die because of the disease. In a retrospective study in Spain, about 11% of HCPs tested positive for COVID-19 (Suarez-Garci'a et al., 2020). Early evidence from nations with the greatest death rates suggests that healthcare workers are at a higher risk of contracting COVID-19, with rates ranging from 15% to 20% of the infected population, putting the rest of the community at a disproportionate risk (Ali et al., 2020; Hussain et al., 2020).

Constant fear of infection, severe stress, helplessness, and distress observing sick individuals die alone are all indicators while treating COVID-19 patients. Health professionals, who are continuously in close contact with COVID-19 positive and/or quarantined patients and treating them, are also experiencing psychological distress and burnout. For example, the Italian Regional Reference Laboratories found that healthcare professionals were responsible for 10% of the country 162,000 COVID-19 cases (Epicentro, 2020). Similarly, the US Centers for Disease Control and Prevention indicated that COVID-19 cases accounted for almost 11% of all confirmed cases in the US (CDC, 2020).

In recent years, many scientific researchers have focused on mental illnesses among health professionals. During disasters, a phenomena occurs in which health professionals have symptoms identical to those of the patients as a result of sustained exposure and vicarious stress. Professionals have been found to have a high prevalence of psychological problems, with a wide

range of symptoms linked to the high emotional pressures and difficult working conditions they encounter. Healthcare workers are facing different levels of stress, anxiety, and tension. In British hospitals, 50% of the medical staff is sick and at home, placing a lot of pressure on the remaining staff to deal with this problem. In addition to high levels of work-related stress, physicians and nursing professionals, particularly nurses (Nobre et al., 2019), are more vulnerable to the development of these problems (Ishak et al., 2009). Health professionals who treated patients another type of coronavirus outbreak in Korea in 2016 also described burnout syndrome. (Kim & Choi, 2016).

Healthcare professionals were exposed and forced to fight a deadly virus while lacking personal protective equipment during the COVID-19 pandemic (Rangachari P & Woods JL, 2020; Wang XU et al., 2020a). Most professionals are likely to experience psychological distress and other mental health-related symptoms, which may be caused by a lack of protection in the face of an unprecedented situation, work overload, a shortage of diagnostic tests and personal protective equipment (PPE), and a lack of specific treatment drugs, among other factors (Shah et al., 2020). According to Chinese studies, health care policies and views of COVID-19 healthcare professionals need to be improved (Li et al., 2020 & Kang et al., 2020).

Health professionals have been closely involved in disease management during this pandemic, and as a result, they are at a higher risk of infection because of direct contact with infected patients (Fessell & Cherniss, 2020). In addition, professionals who are directly involved in the treatment of a disease with a high risk of exposure it may be stigmatized. All healthcare professionals, particularly nurses who interact closely with sick or isolated individuals, have suffered major physical and psychological implications of this dangerous situation. On the opposite end of the spectrum, a trend that is more triggered in COVID-19 is to promote health

professionals to the position of superheroes. While this provides value, it also adds pressure, because superheroes do not fail, give up, or get sick.

Health professionals hectic schedules may put them at risk for physical and emotional stress, which can lead to burnout (BOS). Although working as a health professional can be rewarding, factors such as work-life balance, long working hours, perceived workload, concerns about complaints against health professionals, and a lack of mutuality in relationships with patients and coworkers can reduce job satisfaction and, as a result, increase the risk of burnout (Devalk & Oostrom, 2007).

The COVID-19 incident in Ethiopia was officially recognized on March 13, 2020, after a Japanese traveler arrived from Burkina Faso that tested positive for the novel COVID-19. There has been an increase in occurrences since this time, with a peak of 1,829 new infections recorded as of August 21, 2020, and 28 deaths in one day, as well as several exposed individuals in quarantine (Tekle et al., 2020). Until August 03, 2021, Ethiopia has reported 280,833 confirmed COVID-19 cases 4,391 deaths, and 263,694 recoveries (Worldometer, 2021). Despite attempts to prevent COVID-19 in Ethiopia, community transmission continues, and the number of cases is increasing at an alarming rate. Behavioral changes are influenced by knowledge and perceptions of COVID-19 susceptibility and severity, as well as the advantages of preventive public health initiatives (Asefa, 2020).

1.2. Statement of the Problem

More researches needed that are comprehensive and systematic for better understanding the magnitude of psychological distress and burnout during COVID-19 pandemic, related risk, and protective elements. There are gapes of studies on the psychological impact of the COVID-19 pandemic on Ethiopian health professionals.

Because of challenging work situation, health professionals are highly susceptible to emotional strain and work-related stress, which can contribute to burnout syndrome (BOS) and psychological distress. Mental health problems such as psychological distress, stress, anxiety, depressive symptoms, insomnia, burnout, traumatic stress, denial, anger, and fear, which are worsened by potential prejudice and a lack of contact with support networks affect healthcare professionals as a consequence of the COVID-19 pandemic (Carlotto et al., 2013). Long-term exposure to high amounts of stress has negative health repercussions. It is widely assumed that the risk of burnout in health care workers is higher than in the general working population. Burnout is the most common and dangerous health problem, with a prevalence of 20% to 60% among various health professionals (Rudman, 2012).

Health professionals have every justification to be concerned about their well-being. When frontline health professionals were faced a large number of severely sick patients in a short period, they are required to perform their maximum for an extended longer duration. Health care professionals are also under a great deal of stress, including a high risk of suspected or confirmed COVID-19 infection, a potential resource shortage, as well as a job overload. Doctors, nurses, druggists, surgeons, and laboratory professionals all over the world had to struggle with a shortage of personal protective equipment (PPEs) from the start of the pandemic, and some of them died while fighting the disease (WHO, 2020).

In Ethiopia, very few studies were conducted on burnout and psychological distress none of them were on health professionals during COVID-19 pandemic. Coronavirus is more prevalent in Addis Ababa than in other Ethiopian areas and countries. As a result, health professionals in Addis Ababa health centers and hospitals are susceptible to patient overload, resulting in burnout and psychological distress among healthcare workers.

Healthcare providers are at risk of higher psychological distress due to longer working hours and high risk of exposure to the virus. This may also lead to stress, anxiety, burnout, depressive symptoms, and the need for sick or stress leave, which would harm the capacity of the health system to provide services during the crisis. Following that, there was an increase in cases, with a peak of 124 new infections on April 27, 2020. At that time, three people had died, and other exposed health professionals were under quarantine due to their contact with patients. As of September 17, 2020, about 1,311 Ethiopian health professionals were infected coronavirus. (Asefa, 2020). Until this study ends, about 60 health professionals are dead as the result of COVID-19 infection in Ethiopia (NPHEOC, 2020a).

There is a lot of gossip and information about who is suffering from different mental health disorders such as drug addiction and suicide within Menelik-II referral hospital health professionals. Additionally, the Menelik-II referral hospital is overloaded with patients from various referral districts. As a result of the overload of work time and exposure to coronavirus disease, health professionals at Menelik-II referral hospitals are at risk for psychological distress and burnout syndromes. Physicians in Menelik-II referral hospitals, in my opinion, are more vulnerable to psychological distress and burnout due to their type of work, working circumstances, and long working hours.

1.3. Objectives of the study

Health professionals with burnout and psychological distress have lesser attention to their patients in providing routine care especially during COVID-19 pandemic. The primary objective of the study is to assess the magnitude of psychological distress and burnout among health professionals in Menelik-II referral hospital during the time of the COVID-19 pandemic. Specifically, this study intends to:

1. Assess the magnitude difference of psychological distress and burnout between health professionals who had contact history of COVID -19 suspected and/or confirmed patient and who had not contact history.
2. Assess which type of health professions are further impacted in psychological distress and burnout during the time of the COVID-19 pandemic.
3. Evaluate statistically significant difference of psychological distress and burnout magnitude among health professionals in terms of genders, ages, work experiences, wards and type of professionals.

1.4. Research questions

This research attempts to answer the following questions and test the corresponding

1. What is the magnitude of psychological distress and burnout among health professionals during the COVID-19 pandemic in Menellik-II Referral Hospital?
2. Which type of health professionals are more impacted in burnout and psychological distress during the COVID-19 pandemic?
3. Is there a statistically significant difference in psychological distress and burnout magnitude among health professionals in terms of contact history of COVID -19

suspected and/or confirmed patients, genders, ages, work experiences, wards and type of professionals?

1.5. Scope of the study

All Health professionals that are diverse type of professions who are working in difference ward in Menillik-II hospital during the time of the COVID19 pandemic. More specifically health professional workers that exposed to jobs indirectly or directly related to the disease of COVID 19 such as screening, diagnosing, and treating coronavirus exposed clients. In addition, health professionals that are working in loaded area or ward.

1.6. Significance of the study

This study was conducted in Menellik-II referral hospital to determine the magnitude of burnout syndrome and psychological distress at work among health professionals during the COVID-19 pandemic. It will serve as an enhanced understanding of the magnitude of psychological distress and burnout on health professionals during the COVID-19 pandemic. The study will be benefit health professionals who are exposed to psychological distress and burnout due to their work during COVID19 in Menillik-II referral hospital. Which leads to an intervention such as psychotherapy through management decision of Menillik II referral hospital to address those health professionals after knowing the full details magnitude of psychological distress and burnout and the type of health professional more venerable.

In general, this study also will be significant because it will serve as a foundation for future research in this field. Furthermore, the findings of this study may be used as a source of information by interested governments and nongovernmental organizations in order to develop strategies to solve the problem. Therefore, this thesis will be an alarm, and indicator for

additional works to capture the scope of the problem for health system stakeholders like Addis Ababa health bureau and Ethiopian minister of health.

1.7. Strengths and limitations

In my belief, this study was the first of its kind assessing the magnitude of psychological distress and burnout among Menillik II referral hospital of health professionals at COVID-19 outbreak in Ethiopia. Other studies have also investigated the psychological impact of COVID-19 and other infectious disease outbreaks on hospital staff. It is essential to pay attention to the psychological wellbeing of health professionals. This study found the magnitude of psychological distress and burnout that experienced health care professionals working in Minillik-II referral hospital during the COVID-19 outbreak were one of strongest side.

The findings of this study may not be generalizable to other countries or regions. Because it limited to Menillik-II referral hospital only due to limitations of time and fund. There was relatively smaller sample size, even though it was adequate for this analysis, it was not sufficient to carry out more detailed analysis of differences in workplaces and professionals across different health facilities and departments units. Accordingly, this study was conducted in a single institution focusing on only health professionals providing services to patients during COVID-19 pandemic is one of limitation. Furthermore, because it was not assessed the baseline magnitude of burnout and psychological distress before the pandemic therefore unable to compare changes of prevalence during COVID-19 pandemic.

1.8. Operational definition of terms

Health professional: In this study, 'health professionals' denotes all trained and certified professionals who had direct involvement in health care services. It included special or general

physicians, public health professionals, nurses, midwifes, pharmacists or druggists, laboratory technologists, physiotherapists, anesthetists, radiologists, and others.

Burnout: It is defined as a syndrome characterized by whether he or she has a high level of emotional exhaustion or depersonalization and a low level of personal accomplishment because of excessive and prolonged stress. When a person is overworked, emotionally tired, and unable to fulfill continual requirements, it is called burnout. As the stress mounts, he/she begins to lose interest and desire in the position that drew him/her in the first place.

Psychological distress; Psychological distress is not specific to a particular pathology. It is an unpleasant subjective experience of feelings or emotions resulting from aggressive and adversative work, an experience that influences the level of functioning and is an indicator of psychological problems.

CHAPTER TWO

2. REVIEW OF RELATED LITERATURES

The definition and prevalence of coronavirus disease (COVID-19); how the COVID-19 pandemic affects health professionals; the prevalence of psychological distress among health professionals; the prevalence of burnout among health professionals; and the implications of the reviewed literature for the present study were discussed in this chapter.

2.1. Definition of COVID-19 and its prevalence

At the end of 2019, the coronavirus disease (COVID-19), also known as a novel coronavirus, was discovered to be a new contagious virus that caused a devastating outbreak of respiratory illness in China, particularly in Whang City, Hubei Province (Wang et al., 2020a). COVID-19 has sparked a worldwide response from the scientific community, which has moved quickly to disseminate information. Governments and institutions all over the world, from Asia to Europe, North America, the Middle East, Africa, and Latin America, have been put on notice because of the virus's rapid spread. Closing borders, before the isolation, and quarantine were among the quick and promising actions taken by the majority of countries to prevent the disease from spreading (Devi, 2020).

COVID-19 is a respiratory syndrome caused by a larger family of ribonucleic acid (RNA) viruses that has infected humans, causing a large number of deaths and significant psychological distress around the world. It causes cough, shortness of breath or dyspnea, fever, muscle pain, renal dysfunction, and other symptoms (Zhu et al., 2019; Suresh, 2020). The World Health Organization classified COVID-19 a pandemic in March 2020, claiming the disease's global spread as the basis (WHO, 2020b). Ground-glass opacity and focal chest infiltrates were

seen on tomography images in severe cases of bilateral interstitial pneumonia (Rothan & Byrareddy, 2020).

Despite the fact that the majority of human Coronavirus infections are associated with upper respiratory tract infections, various laboratories have attempted to link inflammatory brain diseases to Coronavirus infection in the past. The results acquired, however, indicated that the human Coronavirus is capable of infecting the CNS. During the acute phase, murine Coronavirus could proliferate and cause direct lysis of oligodendrocytes as well as ultimate demyelination in human primates' CNS. SARS-CoV-2 penetrates the CNS through the neural structure and may reach the brainstem, causing malfunction and/or death of infected neurons, particularly those located in cardiorespiratory regions in the medulla, according to prior findings on coronavirus (Murray et al., 1992).

According to the most recent data, the majority of COVID-19 patients recovered, but a small subset of patients with severe illness (ranging from 0.5 to 5%, depending on their access to adequate treatment and pre-infection health conditions) will develop serious illness. Correction of hypoxia with mechanical ventilation in critically ill patients is difficult from a clinical management standpoint. Because both ventilation and perfusion were affected in the pathogenesis, some clinicians speculated that pulmonary vasculature involvement could lead to a mismatch in the airflow system (Zhonghua, 2020).

2.2. How COVID-19 pandemic impact health professionals

COVID-19 disease is the worst worldwide public health crises in modern history, causing plenty of psychological and emotional problems as well as a high level of stress, depression, and anxiety among the general populace (Ornell et al., 2020). Quarantining entire neighborhoods, closing schools, social and physical isolation, or shelter in place measures were all implemented

quickly, changing the lives of millions of people. Since the first case report, it has resulted in more than 766,332 deaths worldwide (WHO, 2020).

The fast transmission rates and clinical severity of coronavirus disease 2019 (COVID-19) on patient health have placed significant pressure on worldwide national healthcare systems and their healthcare workers (HCWs). HCWs currently face significant levels of job-related stress and are at risk for mental health problems; however, their demanding work will be intensified during a pandemic, raising the risk of 'burnout,' lower quality of care for others, and the development of additional psychological problems (Burke & Greenglass, 2001). When HCWs and non-healthcare workers (NHCWs) were compared for psychological disorders during COVID-19, it was discovered that HCWs had a greater rate of insomnia (Sheraton et al., 2020). Further research indicates that health professionals of all ages have a high prevalence of mental disorders, anxiety, and depression scores are significantly high, and teams of HCWs dealing with infected patients had a greater incidence of mental disorders (Da Silva et al., 2020).

Frontline healthcare professionals are more susceptible to infection due to their direct contact with patients during coronavirus pandemic emergencies, which increase their anxiety of contaminating their families and work colleagues (Liu et al., 2020; Ran et al., 2020). By COVID-19, diseases had infected about 12,000 doctors and nurses by the end of April 2020, and 228 doctors and 26 nurses had passed away (Fusaroli et al., 2020; Manzoni & Milillo, 2020).

According to the most current data from the Department of Labor, the lockdown in the United States has resulted in loss of 22 million jobs. Many people have lost family and friends who were not allowed to attend their memorials, which can lead to psychological problems such as acute stress disorder, anxiety, depression, and suicide in the grieving (Starace & Ferrara, 2020). Mental and behavioral illnesses can be caused by psychosocial problems relating with a

coronavirus pandemic. The magnitude of depression, anxiety disorder, and both depressions and anxiety disorder was 48.3 %, 22.6 %, and 19.4 %, respectively, according to an initial public survey conducted in Wuhan, China in 2020 on psychological status problems during the COVID-19 pandemic (Gao et al., 2020; Roy et al., 2020).

Headaches, fatigue, sleep disturbances, irritability, marital problems, anxiety, depression, hypertension, and myocardial infarction have all been linked to the BOS (Caadas De et al., 2015; Toker et al., 2012), and the BOS may lead to alcoholism and drug addiction. Burnout symptoms can lead to medical/medication errors in Healthcare professionals, and these errors can contribute to BOS. Not only for Health professionals and their families, but also for patients and health care organizations, dissatisfaction and distress have significant costs (Van Mol et al., 2015).

There are currently few scientific researches addressing epidemiological data and intervention models focused on the mental health of health professionals who manage COVID-19 patients. COVID-19-affected health professionals have been found to have high levels of depression, anxiety, and psychological distress, according to studies (Shaukat et al., 2020; Shreffler et al., 2020). Health care worker shortages, lengthy shifts without sufficient rest time, and a lack of personal protective equipment are all essential contributors to fatigue and inadequate infection prevention measures. Isolation can result in poor sleep, psychological distress, anxiety, depressive symptoms, and executive function deficits(Shaukat et al., 2020; Stuijfzand et al., 2020).

Recent studies of COVID-19 treatment nurses and physicians discovered a high incidence of stress, anxiety, and PTSD, with higher levels of anxiety in women and nurses compared to men and physicians, respectively. This is due to the fact that nurses work longer shifts and have more contact that is direct with patients, which can easily result in exhaustion and

tension. Another study with a similar sample found that the level of social support among physicians was positively correlated with efficacy and sleep quality, but adversely linked with anxiety and stress (Xiao et al., 2019). In addition, when they were nurses, women, frontline health care workers, and working in Wuhan, a substantial percentage of participants experienced symptoms of depression (50.4 %), anxiety (44.6 %), insomnia (34.0 %), and distress (71.5 %). In order to analyze the effects of Covid-19 on personnel, Lai et al. studied 1257 health care workers (60.8% nurses and 39.2% physicians) who worked in hospitals in China with fever clinics or wards for Covid-19 patients (Lai et al., 2020).

In African hospitals, burnout syndrome is a serious problem. Burnout is a common side effect of offering massive treatment to a large number of patients with limited resources. This frightening discovery should encourage us to initiate an attempt to enhance practices, including prevention efforts, while emphasizing the need of enriching working conditions and valuing African health professionals. Indication from previous outbreaks publicized that levels of moderate anxiety ranged from 22.6% to 44.6%, and severe anxiety ranged from 2.9% to 5.3%, according to a systematic analysis of the potential impact of COVID-19 on mental health outcomes of healthcare providers and the implications for service solutions. Furthermore, 50.4 %, 34.0%, and 10.5 % of them had symptoms of moderate or severe depression, insomnia, and distress, respectively. 34%, 22%, and 6.2% of health-care workers had mild disturbances, moderate disturbances, and severe disturbances, respectively (Pappa et al., 2020).

COVID-19 is an infectious illness that needs medical attention on a continuous basis. The breakout of a fatal disease is not a new event in Ethiopia, as the nation has experienced several outbreaks of emerging and recurring diseases such as malaria, measles, HIV/AIDS, meningitis, TB, and many more, yet has yet to overcome to them. The COVID-19 pandemic appears to have

had an effect on the physical and mental health of health professionals who work in clinical settings. COVID19 pandemic has brought along with it, innovation and changes that Ethiopia are not used to which can lead to psychological distress and burnout among health professionals (Asefa, 2020).

COVID-19 transmission is quickly raising throughout Ethiopia, with the highest reports coming from Addis Ababa, the capital. The pandemic has put the society's strong principles, such as living and sharing, to the test. These restrictions may limit their engagement with one another, perhaps leading to increased anxiety, loneliness, hopelessness, and suicide. A satisfying social interaction is necessary for society at large mental and emotional well-being (Asefa, 2020; Tekle et al., 2020).

2.3. The prevalence of psychological distress among health professionals during COVID-19

While caring for patients, health professionals are at risk of being exposed to highly infectious microorganisms, as well as being exposed to the patient's environment or biological samples. This may make individuals fearful of becoming ill and infecting family members (Hammen, 2018; Koh et al., 2005). Such anxiety may have unfavorable consequences. Due to quarantine, reporting, body temperature monitoring, and eventually terminating a refusal to care for patients, health professionals exposed to the severe acute respiratory syndrome (SARS) outbreak in 2002–2003 faced high levels of psychological stress (Chan & Huak, 2004; Brug et al., 2004). They also had to contend with the unpredictability of their job schedule, which forced them to make adjustments to their personal and social lives. Stress can have long-term effects, such as depression or posttraumatic stress disorder (Maunder, 2004; Bisson et al., 2010).

In people with pre-existing mental illness, frontline healthcare professionals (Phua, 2005), and survivors of severe and life-threatening pandemics, such as the 2003 outbreak of Severe Acute Respiratory Syndrome (SARS), research has revealed higher rates of illness fears, psychological distress (e.g., depression, anxiety, stress), insomnia, and other mental health problems (e.g., posttraumatic stress) (Chua et al., 2004). People's physical health and the fight against the Pathogen are the primary focus of attention of health professionals, managers, and stakeholders in the case of pandemics or natural disasters, therefore the effects for mental health are often overlooked or overstated. During the 2003 SARS outbreak, 18 to 57% of healthcare workers reported substantial emotional problems and psychiatric symptoms both during and after the incident (Lee et al., 2015).

The significance of psychological distress in psychiatric nosology is uncertain, and the scientific literature has disputed it extensively. On the one hand, psychological discomfort is defined as an emotional disturbance that might affect an individual's social functioning and day to day life (Wheaton, 2007). As a result, various research have been conducted to determine the risk and preventive variables linked with it. Distress, on the other hand, is a diagnostic criterion for some psychiatric disorders (e.g., obsessive-compulsive disorders; posttraumatic stress disorder) and a marker of the severity of symptoms in other disorders (e.g., major depression; generalized anxiety disorder) when combined with impairment in daily living (Phillips, 2009; Watson, 2009).

The extensive gender difference and the variance through the lifetime are two notable features of the prevalence of psychological discomfort. Psychological distress is more common in women than in males in most countries (Caron & Liu, 2011; Jorm et al., 2005; Phongsavan et al., 2006), and it affects people of all ages (Cairney & Krause, 2005; Darcy & Siddique, 1984;

Myklestad, Roysamb, & Tambs, 2011; Paul, Ayis, & Ebrahim, 2006; Storksen et al., 2006; Walters, McDonough, & Strohschein, 2002). However, this gender divide is not universal. For example, no gender differences were seen in Mexican Americans (Aranda et al., 2001), African, Asian, Central American, and South American immigrants in Norway (Thapa & Hauff, 2005), rural Australians (Kilkkinen et al., 2007), or senior Chinese (Chou, 2007).

Frontline health professionals, for example, self-reported a lack of support in the workplace during and after the Significant Acute Respiratory Syndrome (SARS) outbreak in 2003, and as a result, severe psychological symptoms such as acute distress. The health of health professionals has been severely harmed as a result of SARS and MERS (Tam et al., 2004). During the Middle East respiratory syndrome (MERS) epidemic in 2015, health workers demonstrated an elevated long-term risk of acquiring post-traumatic stress disorder (PTSD), which resulted in an increase in job absenteeism (Lee et al., 2018).

Dysphoria and stress were seen among health professionals during the Middle East respiratory syndrome (MERS) outbreak in 2015, which was also caused by a coronavirus. These conditions were linked to misconduct, treatment delays due to communication difficulties, and absenteeism, among other things. It is normal in these scenarios for feelings that are not vocally stated by teams to be reflected in the workplace through absences and omissions. Battlefield health professionals were also shown to have a higher chance of acquiring post-traumatic stress disorder (PTSD), which lasted even after they returned to work (Lee et al 2018). There are additional researches that show that the mental health consequences for healthcare workers involved in epidemics can be long lasting. After some time had passed after the incident ended, high levels of stress, depression, anxiety, and PTSD were discovered (Li et al., 2020; Ornell et al., 2020).

Wheaton and his colleagues contested the fleeting character of psychological distress by looking at the stability of psychological distress in people over the course of seven longitudinal investigations ranging from one to ten years. They discovered that psychological anguish was some what stable, which they claim contradicts the notion that distress is a fleeting occurrence (Wheaton, 2007). They were unable to account for the function of personality in the long-term stability of psychological distress. In consequence, neuroticism is linked to psychological anguish, and some claim that it may account for some of the chronic distress that people experience (Jorm & Duncan, 1990).

The prevalence of psychological discomfort tends to diminish over time (Caron & Liu, 2011; Gispert et al., 2003; Phongsavan et al., 2006; Walters, McDonough, & Strohschein, 2002). The decreasing trend varies in intensity depending on the age range studied, and it is commonly linked to differential risk factor exposure and survival bias. Although the location of the peaks of this distribution is unknown, there is some evidence that the prevalence of psychological distress follows a U-shaped distribution. Schieman (Schieman, Van Gundy, & Taylor, 2001) discovered that the prevalence of psychological distress peaks at 18-29 and 80-89 years old, respectively, but Pevalin (Pevalin, 2000) discovered a curve rising until middle age, dropping to around 60, then rising again in both genders. In studies of seniors, Paul et al. (Paul, Ayis, & Ebrahim, 2006) and Cairney and Krause (Cairney & Krause, 2005) found that the prevalence of psychological discomfort increases after the age of 65. Jorm reviewed at eight studies on the distribution of distress through the lifetime and found that the evidence was contradictory. He explains the contradiction to apparent age biases in distress measurement, the influence of neuroticism, which tends to decrease with age, and cohort effect confounding (Jorm, 2000).

2.4. The prevalence of burnout among health professionals during COVID-19

Health professionals primary role is to provide comprehensive treatment to all patients seeking medical care, regardless of race, gender, or cultural background. A cross-sectional study of health-care employees in Slovenia and Granada found a significant prevalence of burnout (43%-50%) in three categories. According to this research, working in an emergency room, working night shifts, and being older were all linked to increased burnout (Martínez et al., 2007 & Selic et al., 2012).

Furthermore, HCPs' hectic schedules may put them at risk for physical and emotional stress, which can lead to burnout (BOS). Many young HCPs experience anxiety at work because of a lack of support from senior colleagues, unfriendly working environment, and a lack of organizational skills, all of which are significant causes of BOS (Abdulla et al., 2015). Long working hours, workload, work conditions, and system-related frustrations were identified as the most important contributing factors to burnout syndrome in a large-scale South African study of health professionals working in the Cape Town Metropolitan Municipality Community Healthcare Clinic and District Hospital of the Provincial (Rossouw et al., 2013).

The BOS has an impact on an individual's health as well as their physical and mental talents. Every health professionals has a different level of stress because of the job's workload (Van Mol et al., 2015; Abdulla et al., 2011). Burnout is commonly thought of as a syndrome marked by emotional tiredness, depersonalization, and a lack of personal accomplishment (Maslach & Jackson, 1982). A comparable study on health workers in Greece discovered a statistically significant link between medical supply constraints and emotional weariness and depersonalization (Rachiotis et al., 2014). Numerous reasons might cause stress, all of which

should be thoroughly investigated. Burnout symptoms can lead to medical/medication errors in Health professionals, and these errors can contribute to BOS. Not only for HCPs and their families, but also for patients and health-care organizations, dissatisfaction and anguish have considerable consequences (Van Mol et al., 2015).

There are various researches have been conducted on burnout syndromes among Police officers, firefighters, teachers, psychologists, medical students, nurses, physicians, and other health professionals, such as pharmacists, are among the professions with the highest risk of burnout. For example, a study of palliative care nurses found that nearly half of them (48%) felt stressed (Johns, 2017). Similarly, 41.2% of general practitioners in the Qatar study had the BOS, with the bulk of them being young (35 years old). It is worth noting that at least half of them were caused by professional work stress (Abdulla et al., 2011). Physical stress and emotional shifts in their working lives can wreak havoc on their behavior, leading to melancholy and even suicide. This degree of stress is very common among doctors who work in emergency and oncology units. A study of physicians working on oncology wards found that the majority (78%) of oncologists have BOS shortly after a patient's death because of low self-esteem, physiological stress, and emotional stress (Koh et al., 2015).

CHAPTER THREE

3. METHODS

An overview of research methods is provided in this section. The following are some specific concerns: study design, study setting, study population, sample and sampling technique are all covered. Research variables, data collecting instruments, data collection processes, pilot study, data collection method, data analysis and ethical consideration also covered.

3.1. Research design

A descriptive survey was conducted among health professionals who are working in Menelik II referral hospital Addis Ababa, Ethiopia conducted from February22, 2020 to August 3, 2021. A descriptive survey design is an appropriate choice when target to detect the characteristics, magnitude and categories of psychological distress and burnout. The reason to select this research approach was that, the nature of the basic research questions how much and where are needed to answer of some statistical procedures.

3.2. Study Area

The study was conducted at Menellik-II referral hospital Addis Ababa, Ethiopia, from February 22, 2020 to August 3, 2021. Menellik-II Referral Hospital one of the oldest public hospital in the country located in northeast Addis Ababa in Yeka sub-city. Menelik II referral hospital has various professionals that included 78 males and 28 females 106 of physicians, 119 males, and 263 females of 382 nurses and 193 other health professionals. Overall, there are 681 health professionals in Menelik II referral hospital.

3.3. Study Population

Form 681 health care professionals who are working in Menelik II referral hospital during the study period are the target population. The inclusion criteria were:

1. All health professionals who are working in Menelik II referral hospital,

2. Health professionals who are engaged in direct patient care during study period, and

3. Health professionals who are having a minimum of 1years of work experience in Menelik II referral hospital during the COVID 19 pandemic.

3.4. Sample size and sampling procedure

The sample size (n) was calculated based on a single population proportion formula, by assuming a 95% confidence level, and the prevalence of psychological distress and burnout during the COVID-19 pandemic among healthcare professionals was not known, therefore, a proportion of 50%, 95% confidence interval, and margin of error (d)=5% was taken:

$$n = \frac{(Z\alpha/2)\ 2 \times p(1 - p)}{d2}$$

Where n= Initial estimated sample size

Z = Confidence level (alpha, α)

P = prevalence

d = marginal error

$$n = \frac{(1.96)\ 2 \times 0.50(1 - 0.5)}{0.052} = 384.$$

Since the total population are 681 of health professionals in Menelik II referral hospital, which are less than 10,000 I use the correction method of reduction formula: $n_f = n/1+n/N$

Where n_f= final sample size

n= initial estimated sample size

N= total population

$$n_f = \frac{384}{1+384/681} = 246.15 \approx 247$$

Taking non-response rate to be 10% using previous related research response rate:

247×10% =24.7 ≈ 25; and considering design effect

The final sample size is: 247+25 = 272 health professionals

The researcher then selected the required number of samples from each cluster using proportional sampling method. Each service areas (wards) were attempted to include in sampling selection procedure. All health professionals with simple random sampling techniques were included in the sampling of the study.

3.5. Data collection instruments

A self-report questionnaire was set up to collect socio-demographic variables (age, gender, educational level, occupation, marital status), health status like history of chronic diseases and family history of psychiatric disorders and work related conditions (changes in working activities, working on the frontline, and having direct contact with confirmed cases of COVID-19infection). To get socio-demographic and work related data appropriate to the study participants were asked to provide information about their age, gender, marital status, educational level, current place of residency (ward) and years of experience, shift duty, work overload, health status perception, quality of life perception, job satisfaction and finally intention to leave work within the next 12 months.

To assess the magnitude of burnout, the English version of Maslach's Burnout Inventory-Human Services Survey (MBI-HSS) was used. It is a self-administered questionnaire, which is reliable and valid. Christina Maslach and Susan E. Jackson developed the original form of the

MBI intending to assess an individual's experience of burnout, which comprises 22 items with 8 items for emotional exhaustion (EE), 5 items for depersonalization (DP), and 9 items of personal accomplishment (PA). Each item was answered on a 7 point which ranging from never (0) to daily (6). Scoring <16 (low), 17-26 (moderate) & ≥27 (high) for emotional exhaustion subscale, <6 (low), 7-12 (moderate) & ≥13 (high) for depersonalization and ≤31(low), 32-38 (moderate) & ≥39 (high) for personal accomplishment (Maslach & Jackson, 1982).

The Kessler 10 (K10) tool was used to measure the psychological distress experienced by subjects during the study period. Professors Kessler and Mroczek developed the Kessler 10 (K10) in 1992 for use interview survey as a brief measure of non-specific psychological distress in the anxiety-depression spectrum (Kessler et al., 2002). The K10 is a simple measure of general distress without identifying its cause. It is a screening instrument to identify people in need of further assessment for anxiety and depression. The K10 has ten items with a Likert rating scale ranging from 1 (not at all) to 4 (extremely). The full assessment scale contains ten items (scored from 0 to 50) with confirmed reliability and validity that measures psychological distress across diverse cultural settings (Andrews & Slade, 2001). Respondents were instructed that the items constituted a list of ways they may have felt or behaved.

The K10 scores are categorized into four levels: when 10–15 scores categorized as low psychological distress, when16-21 scores categorized as moderate psychological distress, when 22-29 scores categorized as high psychological distress and when 30-50 scores categorized as very high psychological distress. The Cronbach's alpha must have 0.89 to indicate study the acceptable internal consistency of the scale used to measure psychosocial distress (Andrews, 2001). The K10 scale is indicative of the levels of psychosocial distress, with 'very high' psychological distress scores (> 30) associating with a case for a mental disorder, and high scores

are strongly associated with a current diagnosis of anxiety and depression using the Composite International Diagnostics Interview (CIDI) (Andrews & Slade, 2001).

3.6. Data collection procedure

A self-administered structured closed ended questionnaire was prepared and designed by reviewing different similar type of literature, on the magnitude of health professionals burnout and psychological distress by modified in such a way that could meet the objectives of this study. For administration and data collection, the researcher was approach and explains the purpose and benefit of the study for all participants at their work time in Menillik-II referral hospital. After consent was taken, the researcher was collected the data every three days because the health professionals who are taking each questionnaire need to fill the instrument properly.

Non-respondents were inspired to fill the questionnaire and was revisited a minimum of twice per week and therefore the respondents were inspired to respond to any or all things within the questionnaire at intervals the time they dedicated the maximum amount as possible to reduce large non response rate. A total 258 health professional participants were included in this study. From 272 questionnaires sent out, 263 were collected (96.7% response rate), but 5 questionnaires were removed from the analysis due to too many missing responses or unclear answers. An overall of 258 health professionals completed the questionnaire and data from 258 participants were included in the analysis.

3.7. Data analysis

The collected data was edited to detect errors and omissions, to assure that the data are accurate, consistent, and complete. Clean data was coded, entered, and analyzed by using computer software SPSS version 20. Then data was cleaned, coded, organized, summarized, and classified into major study variables and made ready for quantitative data analysis.

To explain the study population to relevant variables, descriptive statistics (frequencies, means, and standard deviations) were used to describe the variables of interest. Frequencies are first determined followed by cross-tabulations to compare the frequencies in terms of their sex, age, marital status, services area (ward), work of experienced, and types of professional. An independent t-test and/or one-way ANOVA for testing variation at 95% confidence interval and P-value < 0.05were used to compare means of independent variables. A P-value less than 0.05 will consider being statistically significant in all cases. The result of the analysis is summarized and presented in narratives with the quantitative results. The result is also present in tables and charts.

3.8. Pilot study

In order to assure the quality of instruments of this survey the following measures were taken. Questionnaire of psychometric instrument was tested by pilot study in order to identify the simplicity, flow, and consistency. The purpose of the pilot survey was to check the reliability of the tools, the total time required for completion, and find out if the wording, instruction and answer classes of the instrument as a whole were clear and comprehensible to respondents. The items that were often asked for further interpretation were improved by rephrasing.

Kessler 10 for psychological distress and Maslach's Burnout Inventory for burnout validity and reliability was assessed using pilot study on 27 of health professionals in Goro health center were performed which is 10% of the sample size. The internal consistency estimate of reliability of test score (Cronbach’s alpha) was found to 0.85 for Maslach's Burnout Invent and 0.89 for Kessler 10 scale. Furthermore, an average of 17 min time was selected to complete the questionnaire. Some modifications were made based on the result from the pre-test.

3.9. Ethical considerations

Letter of cooperation to conduct the study was obtained from Addis Ababa University School of Psychology. Subsequently, permission to carry out the study will be required from Addis Ababa Health Berou to secure the permission to access the hospital for this study. After obtaining permission from the hospital directors, and unit coordinators, formal (verbal and/or written) consents was obtained from all participants after the purpose of the study was explained.

Detailed information about the objective and expected outcomes of the study was explained to all participants before questionnaire administration. The study was not be incurring any cost or expenses on the study participants apart from time cost. There is no potential risk that caused harm for any of study participants. Information obtained from individual participants were keep secured and confidential. Names and other identifying data of respondents were made anonymous or eliminated throughout the study process to maintain confidentiality.

CHAPTER FOUR

4. RESULTS

4.1. Socio-demographic characteristics

In this study, among the respondents, the majority were females (156 (60.5%)), and the majority of the respondents were in the age range of 30-39 years (106 (41.1%)). Among all participants, about 178 respondents were married (69%). There were 62 special or general doctors (24%), 88 BSc nurses (34.1%), 58 health officers (22.5%), 16 midwifery (6.2%), 11 Laboratory technician (4.3%), and 23 other health professionals (8.9%) among the total participants.

Among the participants, 69 (26.7%) worked in medical ward, 40 (15.5%) worked in emergency care unit, 39 (15.1%) worked in surgical ward, 31(12%) worked in intensive care unit, 24 (9.3%) worked in pediatrics wards, 23(8.9%) worked in gynecology wards and 32(12.4%) worked in others ward. About 83.7% of health professional participants, were involved in active clinical duties that is alternate shift time of work. Furthermore, about 93.4% respondents health profession has greater than 4 years experience in clinical practice. The socio-demographic profiles of the respondents are outlined in Table 1.

Table 1. *Socio-demographic characteristics of respondents* (*N=258*)

Socio-demographics		Frequency	Percent
Gender	Male	102	39.5
	Female	156	60.5
Age	20-29 years	81	31.4
	30-39 years	106	41.1
	40-49 years	56	21.7
	≥50 years	15	5.8

Profession	Special or general Doctor	62	24
	BSc nurse	88	34.1
	Health officer	58	22.5
	Midwifery	16	6.2
	Laboratory technician	11	4.3
	Others types of health professionals	23	8.9
Marital status	Single	56	21.7
	Married	178	69
	Divorced	14	5.4
	Widowed	10	3.9
Wards	Medical ward	69	26.7
	Surgical ward	39	15.1
	Pediatrics ward	24	9.3
	Emergency care unit	40	15.5
	Intensive care unit	31	12
	Gynecology ward	23	8.9
	Others	32	12.4
Years of work experience	1- 3 years	17	6.6
	4-6 years	94	36.4
	7-10 years	97	37.6
	11-15 years	35	13.6
	Greater than 15 years	15	5.8

About 88.7% health professionals who participate in this study had direct contact with patients whose COVID-19 confirmed or suspected case in active clinical duties during work time. Among all respondents, 177 health professionals were perceived fair quality of life, 205 health professionals were perceived fair job satisfaction and 161 health professionals were

perceived fair current health status. A 34.5% of health professional participants had planning to leave their current job (see Table 2).

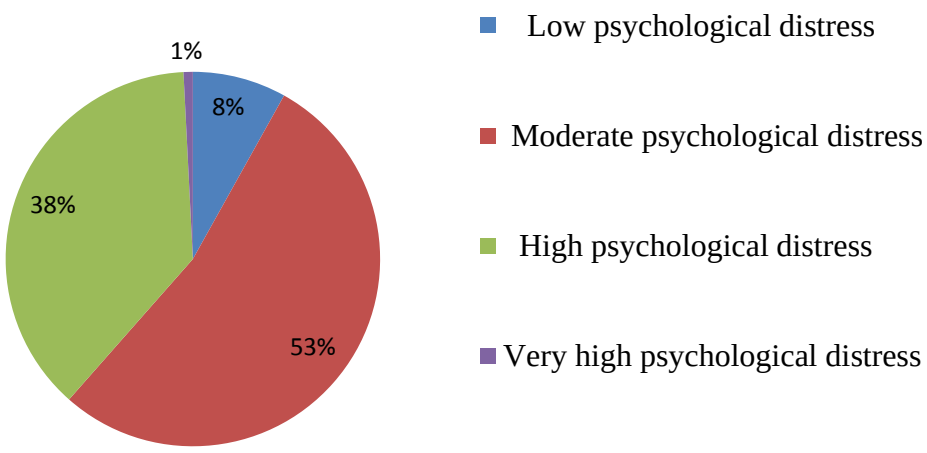
Table 2. *Work-related characteristics of health professionals (N= 258)*

Variables		Frequency	Percent
Contact history of COVID-19 suspected or confirmed patients	Yes	229	88.7
	No	29	11.2
Work overload	Yes	200	77.5
	No	58	22.5
Perceived quality of life	Poor	16	6.2
	Fair	177	68.6
	Good	65	25.2
Perceived job satisfaction	Poor	50	19.4
	Fair	205	79.5
	Good	3	1.2
Have plane to leave job	Yes	89	34.5
	No	169	65.5
Perceived health status	Poor	14	5.4
	Fair	161	62.4
	Good	83	32.2

4.2. Magnitude of psychological distress

From all respondents, 21 (8.1 %) had low psychological distress, 138 (53.4 %) had moderate psychological distress, 97 (37.7 %) had high psychological distress, and 2 (0.8%) had very high psychological distress. Mean score of psychological distress is 20.84 with standard deviation 3.848 (Figure 1).

Figure 1. Magnitude of psychological distress



4.3. Magnitude of burnout syndrome

Burnout syndrome subscale scores were: emotional exhaustion subscale (mean =16.04, SD = 8.758) with 62% low, 28.7% moderate and 9.4% high prevalence, depersonalization subscale (mean score =10.84, SD = 4.487) with 20.5% low, 44.3% moderate and 35.3% high prevalence and personal accomplishment subscale (mean score =36.77, SD =6.976) with 16.3% low, 52.3% moderate and 31.5% high prevalence (see Table 3).

Table 3. *The magnitude of burnout in relation to COVID-19 contact (N=258)*

Burnout syndrome subscales	Have you contacted with patients with COVID-19 suspected or confirmed during work time?		Total
	Yes	No	
Low emotional exhaustion	146(91.3%)	14(8.7%)	160(62%)
moderate emotional exhaustion	64(86.5%)	10(15.5%)	74(28.7%)
high emotional exhaustion	24(100%)	0(0%)	24(9.4%)
Low depersonalization	44(83.1%)	9(16.9%)	53(20.5%)
moderate depersonalization	105(92.1%)	9(7.9%)	114(44.3%)

high depersonalization	85(93.4%)	6(6.6%)	91(35.3%)
Low Personal accomplishment	42(100%)	0(0%)	42(16.3%)
moderate personal accomplishment	129(95.6%)	6(4.4%)	135(52.3%)
High personal accomplishment	44(54.3%)	37(45.75)	81(31.5%)

4.4. The statistical difference

An independent t-test was conducted to explore the difference between male and female of the respondents in psychological distress and burnout. There was no significant difference for gender, in psychological distress male (M =20.95, SD = 3.45, N = 102) with female (M = 20.78, SD = 4.09, N =156), t(.357) = 1.2, p < .272, two-tailed, in emotional exhaustion male (M =16.7, SD = 8.38, N = 102) with female (M = 15.6, SD = 8.99, N =156), t(.99) = .28, p < .600, two-tailed and in depersonalization male (M =10.7, SD = 4.42, N = 102) with female (M = 10.9, SD = 4.54, N =156), t(.351) = .21, p < .645, two-tailed. However, there was significant difference for gender, in personal accomplishment male (M =35.95, SD = 7.54, N = 102) with female (M = 237.29, SD = 6.55, N =156), t(1.5) = 5.54, p < .019, two-tailed.

Health professionals who had contact history with patients with COVID-19 suspected or confirmed during work time are 229 (88.75%) among all participants. From respondents who have contact history of COVID-19 confirmed (suspected) clients 130 (56.7%), 90 (39.3%) and 2 (0.8%) of them developed moderate, high and very high psychological distress respectively. As well as from respondents who have contact history of COVID-19 confirmed or suspected clients 64 (27.9%) moderate emotional exhaustion, 24 (10.4%) high emotional exhaustion, 105 (45.8%) moderate depersonalization, 85 (37.1%) high depersonalization, 129 (56.3%) moderate personal accomplishments and 44 (19.2%) high personal accomplishments were recoded. The magnitude

of psychological distress &burnout among health professionals are summarized in the Table 3 and 4.

Table 4. *Descriptive status of psychological distress and burnout in terms of professionals*

	Types of profession	N	Mean	Std. Deviation
psychological distress	Special or general Doctor	62	19.63	4.074
	BSc nurse	88	21.44	3.493
	Health officer	58	20.12	4.155
	Midwifery	16	22.75	3.768
	Laboratory technician	11	22.18	2.401
	Others types of health professionals	23	21.70	3.225
	Total	258	20.84	3.848
emotional exhaustion	Special or general Doctor	62	13.08	7.914
	BSc nurse	88	15.89	7.831
	Health officer	58	17.41	9.304
	Midwifery	16	18.25	2.324
	Laboratory technician	11	10.55	5.222
	Others types of health professionals	23	22.26	12.278
	Total	258	16.04	8.758
depersonalization scores	Special or general Doctor	62	11.10	4.393
	BSc nurse	88	10.99	4.537
	Health officer	58	10.76	4.936
	Midwifery	16	10.75	4.524
	Laboratory technician	11	12.91	4.230
	Others types of health professionals	23	8.83	2.902
	Total	258	10.84	4.487
Personal accomplishment	Special or general Doctor	62	34.00	7.439
	BSc nurse	88	36.76	6.491

Health officer	58	37.17	8.240
Midwifery	16	39.63	4.365
Laboratory technician	11	37.27	.905
Others types of health professionals	23	41.00	3.503
Total	258	36.77	6.976

Among all health professionals that have contact history of COVID-19 suspected or confirmed clients, male nurses (mean= 22.77, SD ±2.555 with 95% CI), female midwifery (mean= 23, SD ±3.830 with 95%CI), male laboratory technician (mean= 23.50, SD ±2.380 with 95% CI) and others types of female health professionals (mean =22.88, SD ±2.642 with 95% CI) high prevalence of psychological distress were recorded. From all health professionals that have no contact COVID -19 suspected or confirmed patients, only female midwifery (mean=27.3, SD ±2.217 with 95% CI) recorded of high psychological distress.

As seen in Table 5: there was a statistically significant difference between had contact history of Covid19 confirmed of suspected clients or no contact history of health professionals on the as determined by one-way ANOVA (*F(1, 257) = 5.35, p <.022*) on the psychological distress. There was statistically significant difference between who had contact history of Covid19 confirmed of suspected clients or not of health professionals and no contact history of health professionals (*F(1, 257) = 5.45, p <.020*) on the emotional exhaustion. There was statistically significant difference between who had contact history of Covid19 confirmed of suspected clients or not of health professionals and no contact history of health professionals (*F(1, 257) = 12.05, p <.001*) on the depersonalization. There was statistically significant difference between who had contact history of Covid19 confirmed of suspected clients or not of

health professionals and no contact history of health professionals (*F(1, 257) = 18.16, p=.001*) on the Personal accomplishment.

A one way between groups ANOVA was performed to compare the psychological distress and burnout with health professional of the participants were divided in to six groups based on their current educational type or profession (group1: special or general doctor; group2: BSc nurse; group3: health officer; group4: midwifery; group5: laboratory technician; group6: Others type of health professions). There was a statistically significant difference in psychological distress scores for the six health profession *groups (F(5,252)* =3.51, *p<.004).* There was a statistically significant difference in emotional exhaustion scores for the six health profession *groups (F(5,252)* = 5.55, *p=.001).* There was a statistically significant difference in Personal accomplishments scores for the six health profession *groups (F(5,252)* = 4.52, *p<.001).* There was no a statistically significant difference in depersonalization scores for the six health profession *groups (F(5,252)* = 1.47, *p*<.199*).*

Table 5. *COVID-19 contact significance difference values in psychological distress and burnout*

	Contacted history with patients in COVID-19 suspected or confirmed during work time	Mean	SDs	F	P
Psychological distress	Yes	21.01	3.503	5.348	.022
	No	19.05	6.343		
Emotional exhaustion	Yes	16.43	8.665	5.450	.020
	No	11.91	8.885		
Depersonalization	Yes	11.13	4.182	12.048	.001
	No	7.73	6.296		
Personal accomplishment	Yes	36.22	6.864	18.161	.000
	No	42.64	5.368		

A one way between groups ANOVA was performed to compare the psychological distress with health professional of the participants were divided in to three groups based on how their current perceived health status (group1: who perceive Poor health status; group2: who perceive Fair health status; group3: who perceive good health status). There was a statistically significant difference in psychological distress scores for the health profession within three groups on their current perceived health status *(F(2,255) = 18.82, p=.001).*

A one-way ANOVA between groups was performed to compare the psychological distress and burnouts with health professional of the participants were divided in to seven groups based on their service area or wards (group1: medical ward; group2: surgical ward; group3: pediatrics wards; group4: emergency care unit; group5: intensive care unit; group6: gynecology wards; group7: others ward). There was a statistically significant difference in psychological distress scores for the seven groups of based on wards of health profession *(F(6,251)* = 8.54, *p=.001).* There was a statistically significant difference in emotional exhaustion scores for the seven groups of based on wards of health profession *(F(6,251)* = 9.25, *p=.001).* There was a statistically significant difference in depersonalization scores for the seven groups of based on wards of health profession *(F(6,251)* = 3.31, *p<.004).* There was a statistically significant difference in personal accomplishment scores for the seven groups of based on wards of health profession *(F(6,251)* = 14.31, *p=.001).*

A one way between groups ANOVA was performed to compare the psychological distress and burnout with health professional of the participants were divided in to five groups based on their services years in clinical areas (group1: 1- 3 years; group2: 4-6 years; group3: 7-10 years; group4: 11-15 years; group5: greater than 15 years). There was no a statistically significant difference in depersonalization scores for the five health profession groups years of

experience *(F(4,253) = 1.65, p<.163).* There was no a statistically significant difference in psychological distress scores for the five health profession groups on years of experience *(F(4,253) = 1.52, p<.197).* There was a statistically significant difference in emotional exhaustion scores for the five health profession groups on years of experience *(F(4,253) = 4.82, p<.001).* There was a statistically significant difference in personal accomplishments scores for the five health profession groups on years of experience *(F(4,253) = 5.23, p=.001).*

A one way between groups ANOVA was performed to compare the psychological distress and burnout with health professional of the participants were divided in to four groups based on their age (group1: 20-29 years; group2: 30-39 years; group3: 40-49 years; group4: greater than 50 years). There was a statistically significant difference in psychological distress scores for the ages of health profession within four groups *(F(3,254) = 6.13, p=.001).* There was a statistically significant difference in emotional exhaustion scores for the ages of health profession within four groups *(F(3,254) = 5.58, p<.001).* There was a statistically significant difference in depersonalization scores for the ages of health profession within four groups *(F(3,254) = 3.41, p<.018).* There was no a statistically significant difference in personal accomplishment scores for the ages of health profession within four groups *(F(3,254) = 0.58, p<.631).*

CHAPTER FIVE

5. DISCUSSION

Currently COVID-19 causes relatively high workload with high infection and mortality rate that leads to feelings of burnout and psychological distress among health professionals. In Menillik-II referral hospital of health professionals are experiencing a significant amount of psychological distress and burnout. This study rates are comparable to findings from Italy with a prevalence of 29.3% experiencing high psychological distress (Eskin et al., 2016). However, it is possible to observe that the study results showed considerable psychological distress and burnout during the COVID-19 pandemic.

This study indicates that during the initial stages of the COVID-19 outbreak from all respondent, 8.1%, 53.4%, 37.7%, and 0.8% recorded low, moderate, high and very high psychological distress respectively. These results are consistent with the findings from research regarding the COVID-19 outbreak in China, demonstrating that 53.8% of the general population experienced moderate or severe psychological impact during the outbreak (Wang et al., 2020). This can be explained by the fact that health professionals have longer work shifts and closer contact with patients, which can easily lead to fatigue and tension. Coping level and social support were found to be important predictors of psychological discomfort among healthcare professionals, in addition to other moderating factors.

Those health professionals who score k10 scale > 30 that is approximately 1% are in level of very high psychological distress associating with a case for a mental disorder. About 38% of health professionals scores high level of psychological distress is strongly associated with a current diagnosis of anxiety and depression using the Composite International Diagnostics Interview (CIDI). Among all health professional respondents more than half of nurses, midwifes,

laboratories and others types of health professions scored high level of psychological distress. These findings should be used to guide the development of interventions that promote coping resilience and social support in health professionals in order to reduce the impact of psychological distress.

From all respondents, 16.3% low personal accomplishment, 44.3% moderate and 35.3% high depersonalization and 28.7% moderate and 9.4% high emotional exhaustion were recorded. Moderate to severe levels of emotional exhaustion were present in more than 38.1% of the participants, low personal accomplishment were present in more than 16.3% of the sample, and moderate to severe levels of depersonalization in more than 79.6% of the sample. The findings show that severe burnout and psychopathological symptoms are common, and that work-related and psychological characteristics connected with the COVID-19 emergency increase the likelihood of unfavorable psychological repercussions. For patients, healthcare personnel, and institutions, burnout can have catastrophic repercussions.

In this study, found that more than 40% of nurses and more than 30% of midwifes and health officers met the criteria for burnout. Previous research on burnout has already found that the highest prevalence rate of burnout occurs among health professionals in hospital emergencies (Portero et al., 2019). Without comparing this situation to the pandemic, emphasized those HCWs in hospital emergencies also deal with crises.

In this study, more than half of midwives, doctors, nurses, and health officers scored moderately depersonalized, but the laboratory health profession scored highly depersonalized. Results are compatible with some recent studies report that nurses caring for COVID-19 patients experience more burnout than others (Chen et al., 2020a & Franza et al., 2020). However, high prevalence of burnout has been reported among emergency ward (26%) (Adriaenssens et al.,

2015) and pediatric nurses (21–39%) (Pradas et al., 2018) which is not comparable to this study result. Nurses made up half of the participants, with half of them suffering from professional burnout.

Female nurses and male midwifes participants were having significantly more distress and burnout. According to this survey, a large number of nurses suffer from professional burnout for the reason that of their working types and long duration of working. These results are more important to have a clear inference for both the health professionals and efficiency of the health care systems during the COVID-19 pandemic. Among physicians in China (N = 9302 participants from 11 studies), burnout prevalence ranged from 66.5–87.8% (Lo et al., 2018) Among healthcare providers in Arab countries (N = 4108 from 19 studies), high burnout prevalence was estimated in the MBI subscales of emotional exhaustion (20.0–81.0%), depersonalization (9.2– 80.0%), and personal accomplishment (13.3–85.8%) (Elbarazi et al., 2017).

According to the findings of this study, healthcare professionals that care for COVID-19 patients experience high levels of burnout. This leads lack of motivation, absenteeism, and low morale, but also in deterioration of the quality of care provided by the staff affected, decreases in patients' satisfaction levels, an increase in health-related infections, and high mortality among patients (Jalili et al., 2020).

Statistically significant associations were identified between burnout and its associate factors: like educational level, service year of experience, workload, their intention to leave their work and current health status had statistical significant association with nurses professional burnout.

This study included all types of health professionals, with the majority scoring a moderate level of personal accomplishment. In Sub-Saharan Africa, burnout is prominent among physicians, nurses, and other healthcare providers, with prevalence estimates ranging from 40 to 80%.In this study more than half of others types of health professions scored high level of emotional exhaustion that will compared to other systematic reviews of burnout among healthcare providers.

CHAPTER SIX

6. CONCLUSION AND RECOMMENDATION

6.1. Summary

This was a hospital based, descriptive study conducted to assess the psychological distress and burnout among health professionals in menillik II referral hospital during COVID-19 outbreak. More than half of health professionals were categorized as having mild to severe psychological distress and burnout in related to the COVID-19 pandemic and other factors.

This study indicates that, in Ethiopia, the magnitude of psychological distress among healthcare professionals is high and associated with specific socio-demographic risks. Psychological distress and burnout in male and female health professionals in Minillik-II referral hospital by independent t-test there is no statistically significant difference between male and female respondents except in the personal accomplishment subscale of burnout syndrome. Among all health professionals that have contact history of COVID-19 suspected or confirmed clients, male nurses, female midwifery, male laboratory technician, and others types of female health professional high prevalence of psychological distress was recorded. From all health professionals that have no contact COVID -19 suspected or confirmed patients, only female midwifes recorded of high psychological distress.

Burnout was significantly connected with workload and exposure to the consequences of COVID-19 clients but not with gender and marital status. Factors that potentially contribute to the level of burnout and psychological distress of health professionals include education level (profession type), years of experience and direct contact with COVID-19 infected people.

There is a statistically significant difference between having a contact history of COVID-19 confirmed or suspected clients or no contact history of health professionals, as determined by

one-way ANOVA on psychological distress and burnout syndrome. There is a statistically significant difference in psychological distress, personal accomplishment, and emotional exhaustion, but not in depersonalization scores between health profession types. There is a statistically significant difference in psychological distress and burnout scores between working areas or wards of the health profession.

Finally, with respect to the data related to subjective issues, the following data were obtained. In the first place, only a small percentage of health professionals consider that they need psychological and psychiatric support, but, nevertheless, 90.4% of the persons surveyed consider that this service should be provided from the work centers in view of the current health crisis. In other words, health professionals currently perceive a situation of emotional vulnerability, and they are also aware of the intensity of it and the repercussions it may have for them in the future.

6.2. Conclusion

This study indicates that, health professionals who are currently working Menillik II referral hospital, the prevalence of moderate psychological distress was substantial and high burnout verified. The majority of respondents were psychologically impacted by COID-19 pandemic cases in hospital, while some felt well on a regular basis. On the other hand, the majority of respondents were able to completely finish crucial events in their lives, while others were unable to cope with everything that was going on out there.

This study established that health professional in contact with COID-19 suspected or confirmed patients had greater levels of burnout and psychological distress as compared with no contact history with COID-19 suspected or confirmed patients. About 1% of the health professionals in surveyed hospital considered that they might need psychological or psychiatric

treatment in the future. About 38% of health professionals needed close follow up because they scored high level of psychological distress which leading to anxiety and depression.

In conclusion, there is a need to develop an intervention plan for the burnout and psychological distress exhibited health professionals; mainly targeting those who have contact history of COVID-19 patients and high load of job health professional.

6.3. Recommendations

Regularly assessing the prevalence of burnout and psychological distress among health professionals in hospitals and other health systems could help in identifying risk or protective factors for burnout, psychological distress, and other mental disorders, which would benefit both individuals and health systems/organizations. The findings of this study may point to the need for relevant stakeholders to develop and implement appropriate plans and policies to help mitigate psychological distress and burnout among health professionals during the current pandemic, so that the health system can have an effective frontline health workforce to deal with the major crisis.

Psychological treatments to enhance emotional well-being in COVID-19-exposed health care professionals are required and urgent. Implementing a recovery plan for health professionals and developing methods for resilience training and self-care are examples of possible measures. Such initiatives might help to create protective factors against environmental risks like the present pandemic, as well as good mental health aspects. In addition, enlisting the assistance of other specialists ensures a variety of viewpoints.

Considering the findings of this study, the following are suggested in order to enhance psychological wellbeing among Ethiopia during the COVID-19 pandemic period:

1. The government should always involve psychological health service providers in the fighting against the present and future pandemic or any disease outbreak in the country.

2. Healthcare stakeholders needed to collaborate with psychotherapists in the management of pandemic or disease outbreak to regulate health professionals emotions and promote health professionals psychological wellbeing in health systems.

3. Experts should start awareness campaign on basic means of overcoming psychological distress and burnout in hospital health workers especially nurses and mid wife generally in Ethiopian health professionals mental healthiness.

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ANNEXES

Annex 1. Informed Consent

My name is Tito Mengistu. Am postgraduate student from the University of Addis Ababa, Department of Counseling Psychology. I am conducting a study on the magnitude of psychological distress and burnout during COVID 19 pandemic among health professionals at Menellik II referral hospital.

Project Objective

The overall objective of the study is to estimate the magnitude of psychological distress and burnout during COVID 19 pandemic who are randomly selected health professionals at Menellik II referral hospital.

What I will do

In order to meet the objective, I will administer the English version of Maslachs Burnout and Kessler-10 scales including to will be used.

Duration

It is estimated that the needed time to complete the survey and questionnaire will take between 15 and 30 minutes per person.

Risks/Confidentiality

There is no risk for anyone who agrees to participate in the study. Your name, title, and of work will not be recorded anywhere. The information you gave will be used for research purpose only. You are free to choose not to answer any question.

Compensations/Benefits

You will not receive any compensation for participating in the study. However, you may get some level of satisfaction knowing that the response you provide will assist to identify the magnitude of burnout and psychological distress among health professionals.

Voluntary Participation

Participation is completely voluntary. You are free to participate or not. If you agree to participate, you may change your mind at any time and ask to withdraw, or not to answer certain questions.

All your response should be confidential and anonymous. Please give your views freely and honestly. There is no right or wrong answers; all information provided is highly appreciated.

Who should you call for more information or if you have questions or concerns?

Please speak to the principal investigator: Tito Mengistu

Tell phone: +251913181021

E-mail: titonangne@gmail.com

Thank you for your time and consideration. Would you like to participate in this study?

Please circle one: Yes No

Declaration of consent (signature or thumb print is mandatory)

I acknowledge that I have given my consent to participate in the study. I understand that my participation is voluntary and that I can decline to answer any question or withdraw from the study at any time.

I understand that my response to questions will be collected and that any information obtained will be kept confidential.

I was informed that my name or any other identifiable information will neither be recorded on the survey questionnaires nor will it appear in any report or publication.

Signature or thumb print of respondents:

_____ **Date**_____

Annex 2. English Version Questionnaire

Research questionnaires to be filled by health professionals who are working in Menellik II referral hospital Addis Ababa, Ethiopia.

Dear respondents: - This questionnaire will be designed for preparing a thesis on the title of magnitude of burnout and psychological distress among health professionals in Menellik II referral hospitals Addis Ababa, Ethiopia.

Part I: Questionnaire to be filled by health professionals

Instruction: Please circle the number in front of the option you choose.

1. Sex: 1. Male 2. Female

2.Age: 1. 20-29 years 2. 30-39 years 3. 40-49 years 4. ≥ 50 years

3. Current marital status: 1. Single 2. Married 3. Divorced 4. Widowed

5. Service area: 1. Medical ward 2. Surgical ward 3. Pediatrics wards
4. Emergency care unit 5.Intensive care unit 6. Gynecology ward
7. Others

6. Service years in this working area: 1. 1- 3 years 2. 3-5 years 3. 6-10 years
4. 11-15 years 5. Greater than 15 years

7. Current educational level (Profession): 1. health officer 2. BSc nurse 3. Medical Doctor
4. Midwife 5. Laboratories 6. Others

9. Presence of work overload: 1. Yes 2. No

11. How do you perceive your current health status? 1. Poor 2. Fair 3. Good

12. How do you perceive your current quality of life? 1. Poor 2. Fair 3. Good

13.How do you perceive satisfaction with your work? 1. Poor 2. Fair 3. Good

14. Do you have planned to leave your current work within the next 12 months?
1. Yes 2. No

15. Have you contacted with patients with COVID-19 suspected or confirmed during work time?
1. Yes 2. No

Part II: Kessler Psychological Distress Scale (K10). These questions concern how you have been feeling over the past 30 days. Tick a Box below each question that best represents how you have been.

Please tick the answer that is correct for you:	All of the time (score 5)	Most of the time (score 4)	Some of the time (score 3)	A little of the time (score 2)	None of the time (score 1)
1. In the past 4 weeks, about how often did you feel tired out for no good reason?					
2. In the past 4 weeks, about how often did you feel nervous?					
3. In the past 4 weeks, about how often did you feel so nervous that nothing could calm you down?					
4. In the past 4 weeks, about how often did you feel hopeless?					
5. In the past 4 weeks, about how often did you feel restless or fidgety?					
6. In the past 4 weeks, about how often did you feel so restless you could not sit still?					
7. In the past 4 weeks, about how often did you feel depressed?					
8. In the past 4 weeks, about how often did you feel that everything was an effort?					
9. In the past 4 weeks, about how often did you feel so sad that nothing could cheer you up?					
10. In the past 4 weeks, about how often did you feel worthless?					

Part III: The Maslach Burnout Inventory (MBI). To determine the risk of burnout, the MBI explores three components: exhaustion, depersonalization and personal achievement.

SECTION-A Questions	Never (**0**)	A few times per year (**1**)	Once a month (**2**)	A few times per month (**3**)	Once a week (**4**)	A few times per week (**5**)	Every day (**6**)
I feel emotionally drained by my work.							
Working with people all day long requires a great deal of effort.							
I feel like my work is breaking me down							
I feel frustrated by my work.							
I feel I work too hard at my job.							
It stresses me too much to work in direct contact with people.							
I feel like I'm at the end of my rope.							
Total score – SECTION A							

SECTION-B Questions	Never (**0**)	A few times per year (**1**)	Once a month (**2**)	A few times per month (**3**)	Once a week (**4**)	A few times per week (**5**)	Every day (**6**)
I feel I look after certain patients/clients impersonally, as if they are objects.							
I feel tired when I get up in the morning and have to face another day at work.							
I have the impression that my patients/clients make me responsible for some of their problems.							
I am at the end of my patience at the end							

of my work day.							
I really don't care about what happens to some of my patients/clients.							
I have become more insensitive to people since I've been working.							
I'm afraid that this job is making me uncaring.							
Total score – SECTION B							

SECTION-C Questions	Never **(0)**	A few times per year **(1)**	Once a month **(2)**	A few times per month **(3)**	Once a week **(4)**	A few times per week **(5)**	Every day **(6)**
I accomplish many worthwhile things in this job.							
I feel full of energy.							
I am easily able to understand what my patients/clients feel.							
I look after my patients'/clients' problems very effectively.							
In my work, I handle emotional problems very calmly.							
Through my work, I feel that I have a positive influence on people.							
I am easily able to create a relaxed atmosphere with my patients/clients.							
I feel refreshed when I have been close to my patients/clients at work.							
Total score – SECTION C							