PREVALENCE OF POSTTRAUMATIC STRESS DISORDER AND DEPRESSION AMONG INTERNALLY DISPLACED PERSONS IN MOGADISHU

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2021

DECLARATION

I declare that this proposal is my original work and has not been presented for the award of a degree in any other university.

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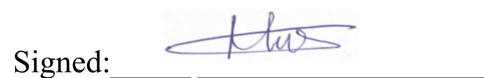

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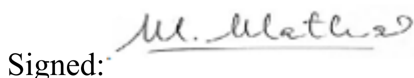

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DEDICATION

This work is dedicated to my parents, immediate family and all those Internal displaced persons suffering from psychiatric disorders.

ACKNOWLEDGMENT

All praises are due to almighty Allah. I began with His name, the Compassionate and Merciful. I obliged to Him for giving the fortune and providing me with enough energy and patience to carry out and complete this thesis work.

It is pride for me to express my sincere gratitude to my supervisors, Dr. Mburu Maina, Dr. Teresia Mutavi and Prof. Muthoni Mathia, for their support, advice, and critical review of this work.

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LIST OF ABBREVIATIONS

AMISOM	African Union Mission in Somalia
APA	American Psychiatric Association
FGM	Female Genital Mutilation
IDPs	Internally Displaced Persons
IDMC	Internal Displacement Monitoring Centre
HTQ	Harvard Trauma Questionnaire
HSCL-25	Hopkin Symptom Checklist
KNH	Kenyatta National Hospital
MHPSS	Mental Health and Psychosocial Support
OCHA	United Nations Office for the Coordination of Humanitarian Affairs
SGBV	Sexual and Gender Based Violence
SPSS	Statistical Package for Social Sciences
TFG	Transitional Federal Government
UNHCR	United Nations High Commissioner for Refugees
UON	University of Nairobi
PTSD	Post-traumatic stress disorder
WHO	World Health Organization
YLD	Years Lost due to Disability
YLL	Years of Life Lost

OPERATIONAL DEFINITIONS

Depression: Depression is a mental disorder whose hallmark is low mood or loss of interest / pleasure with low energy, low self-esteem or guilt feelings, distortions in appetite and sleep, poor concentration and at times anxiety for a at least two weeks

Post-traumatic stress disorder: A trauma and stressor related disorder with five symptom domains which are stressor, intrusion symptoms, avoidance, negative alterations in cognition and mood, alterations in arousal and reactivity

Internally displaced persons: Persons or groups of persons who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of armed conflict, situations of generalized violence, violations of human rights or natural or human-made disasters, and who have not crossed an internationally recognized State border

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ABSTRACT

Background

Nearly three decades of conflict and frequent droughts and environmental hardships left 2.6 million of Somalis in displacement camps. Even though psychological impact of war and natural disasters are well documented, little is known about the unseen scars of psychological trauma in Internally Displaced Persons in Somalia. The purpose of the study is to determine rates of post-traumatic stress disorder (PTSD) and depression amongst these internally displaced persons (IDPs), and examine association between displacement and these psychiatric conditions.

Methodology

A cross-sectional quantitative study was conducted among 406 IDPs in Mogadishu. Harvard Trauma Questionnaire was used to determine levels of trauma exposure and PTSD, and Hopkins Symptom Checklist-25 was used to estimate prevalence of depression. Bivariate and multivariate analysis was conducted to analyze the association of demographic and displacement variables on the outcomes of PTSD and depression.

Results

More than half (59%) of participants had symptom criteria for depression, and nearly one third (32%) of respondents met symptom criteria for PTSD. The most prevalent traumatic event was lack of food or water (80.2%). Important predictive factors in development of psychiatric morbidity were unemployment, cumulative traumatic exposure, frequency and duration of displacement.

Conclusion

This study revealed high levels of Depressive disorder and Post-traumatic stress disorder among internally displaced persons in Mogadishu. Furthermore, this study provide evidence to IDPs' susceptibility to trauma exposure and lack of essential services and goods. Study also highlighted the importance of provision of MHPSS services in IDP camps.

CHAPTER ONE: 1.0 INTRODUCTION

1.1 Background

Every year millions are forced to flee from their home around the globe, due to violence, war, and natural disasters, and they remain in displacement within their home country (UNHCR, 2010). Its reported that at the end of 2018 about 41.3 million people were lived in internal displacement because of conflict and environmental hardships (IDMC, 2018). This figure shows magnitude of internal displacement, which will be a big crisis to tackle and world is mainly unaware. Although internal displacement is a universal phenomenon, but it's worth mentioning that it's commonly seen in some countries and generated by few events. 28 million new IDP cases has been recorded in 2018 alone, and this surge of displacement was associated with conflict and natural disasters in 148 states (IDMC, 2019).

Internally displaced people (IDP) are "Persons or groups of persons who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of armed conflict, situations of generalized violence, violations of human rights or natural or human-made disasters, and who have not crossed an internationally recognized State border" (Cohen, R. 2004).

Somalia has been in civil war and political unrest for more than two decades, and Somali people have experienced cyclical drought conditions, seasonal floods, long term armed conflicts and lack of infrastructure, this lead significant number of the Somali people to leave their home (Mohamoud et al., 2017). Mogadishu hosts the largest IDP population in the country, and most of these people live mainly in informal settlements in the city and its corridors. Its estimated that 2.6 million Somalis live as internally displaced persons (IDPs) in their home country with

another 1.1 million forced to become refuges in neighboring countries, mainly in Kenya and Ethiopia (UNOCHA, 2018)

Research shows that for most of IDPs, the live of camps mean another predicament, where they encounter high risk of disease outbreak, sexual and gender-based violence (SGBV), limited access to healthcare service and water resources, as well as the overall insecurity, including indiscriminate killing and terror attacks which are common in Mogadishu. Due to lack of protection, they are considered as subject of traumatic events (IDMC, 2019).

1.2.1 Somalia

Following the collapse of Military Regime presided by Mohamed Siad Barre in 1991, Somali's game of thrones had started, battle of power between powerful warlords had emerged which left devastating famine and agony (Elmi & Barise, 2015). In the early of 1990s, United Nation Mission of Somalia (UNISOM) efforts was somehow helped many Somalis to overcome the famine conditions, but the humanitarian mission halted when the UN pulled out peacekeepers in 1995, after they had suffered devastating losses by the hands of Somali warlord. Somalia continued to represent one of the modern world's most prolonged cases of statelessness (UNDP, 2014). Modest economic growth and improvement had been reported from 1995 to 2006 (Donner & Schwarz, 2018). In 2004 Transitional Federal Government (TFG) was set up in Kenya with the help of international community and early 2006 the Union of Islamic Courts (UIC) had gained the control of the most parts of South-Central Somalia, followed by the intervention of Ethiopian military, who were sided with Transitional Federal Government (TFG) (Central Intelligence Agency, 2019). Late 2006 UIC had been defeated and TFG was established in Mogadishu,

this followed by the start of African Union Mission to Somalia (AMISOM) mandated by United Nation Security Council in early 2007 (Donner & Schwarz, 2018) .
The fall of UIC and the invasion of Ethiopian troops had resulted complex islamist insurgency, which headed by Harakat al-Shabaab al-Mujahideen (Alshabaab), one of the most dangerous terror organizations in Africa (Elmi & Barise, 2015). In 2009 peace negotiation resulted that moderate Islamist forces to join the Transitional Federal Government (TFG) but Alshabaab continued its fight against TFG and its Ally (Central Intelligence Agency, 2019). In 2010 the insurgence of Islamic radicalists (Alshabaab) gained control vast majority of South-Central Somalia, but AMISOM forces made their success short, they lost major towns to hands of Somali National Army (SNA) and AMISOM forces, and its estimated that more than 10,000 had lost their lives and forced hundreds of thousands to flee from their homes. This conflict and delayed seasonal rains have resulted complex humanitarian crisis in in 2011. (Donner & Schwarz, 2018)

While South-Central provinces of Somalia were the hotspot and most troublesome zone in the country, the Republic of Somaliland and Puntland (Autonomous state in Northeaster Somalia) continued to thrive and accelerate toward state-building and democratization (Samantar, 2016). Somaliland is self-declared state who claimed that it retained its Independence from Somalia in 1991, which was confirmed later by public referendum in 2001, and it’s yet to recognize internationally (European Commission, 2007). Both states has territorial disputes which led recurrent conflicts in their contested areas of Sanag and Ceyn. Despite of Somaliland’s overall accomplishment in peace- and state-building, a fragile economy and limited opportunities for foreign business and investment have

hindered back government's ability to provide services to its citizens, which are approximately 4 million. (Donner & Schwarz, 2018)

Despite the defeat of Islamic militants by allied forces their threat is still high, hundreds of innocent people had been killed indiscriminately by Al-Shabab militants, particularly in Mogadishu. On the other hand, operations targeting Al-Shabab, lead civilian causalities and human right violation by Somali government and AMISOM forces. On October 14, a bomb blast occurred in the busy Junction of Zoobe in Mogadishu, which left at least 358 people dead and wounded many more, this considered as the deadliest terrorist attack in the east African region; no group had claimed the responsibility of that attack (Human Rights watch, 2019).

1.2.2 IDPs in Mogadishu

Humanitarian agencies estimate 2.6 million people are internally displaced, who live in informal settlements countrywide, and there are about 2000 IDP centers in Somalia. Droughts and climate shocks, Conflict, lack of livelihood opportunities and evictions are main reasons of internal displacement (UNOCHA, 2018).

Most of displacements recorded were into or within Mogadishu, which makes Mogadishu second highest densely populated city in the world. It hosts more than 600,000 IDPs (IDMC, 2018). Most of displaced persons came from neighboring regions; Middle and Lower Shabelle, Bay and Bakool regions. These region were most affected areas of 2011 famine and it also experienced military offensives and clan based conflicts (UNHCR, 2016).

IDPs have numerous vulnerabilities, including poor shelter and overcrowding, lack of protection, reduced water access, food insecurity, limited access to health service, a lack of personal documentation and the growing number of forced evictions. Children and women are highly

exposed to health risks. 98 percent of women in IDPs are victims of Female Genital Mutilation (FGM) and another 77 percent are GBV survivors and fear retaliations and stigmatization were hindered back seeking appropriate service (UNOCHA, 2018). Both maternal and child mortality are high in Somalia, and mental illness is quite common in Somalia, World Health Organization reports that one in three persons are affected by mental illness with people suffering from mental illness being subjected to stigma, social isolation and a huge burden of care left to their care givers (WHO, 2010).

Mental health is public health concern for conflict-affected populations. Increased number of psychosocial distresses were common amongst diverse populations that have witnessed conflict. Post-traumatic Stress Disorder and Depressive disorder are among commonest psychosocial disorders and most researched in this group of population (Roberts et al., 2009).

1.2.3 Post-traumatic Stress Disorder

Post-traumatic stress disorder (PTSD) is a persistent disabling condition that may affect people who experienced or witnessed potential traumatic events, such as serious accident, rape, a natural disaster, conflict, or violent personal assaults, a terrorist attack. Its symptoms can touch every aspect of life – psychological, physiological, functional and social life (APA, 2013).

Subjects with Posttraumatic Stress Disorder (PTSD) may relive the incident through flashbacks and nightmares, they may also have difficulty in sleeping, low mood, irritability, detached or estranged from other people. People with PTSD may avoid people or situations which remind them of the traumatic incidents and they may over respond to something as ordinary as a loud noise or an unintentional touch (Javidi & Yadollahie, 2012). These strange feelings and intense disturbing thoughts related to their experience of traumatic incident may lead marked last long

impairment in person's quality of life, it may lead marital problems and divorces, occupational instability, substance abuse, to the extreme it may lead suicidal tendencies (Balayan et al., 2014). This syndrome was initially elucidated by ABR Myers (1838–1921) in 1870 as combining effort an aching sensation in the left pericardium, dyspnea, tiredness, racing heart, sweating, tremor, it was highlighted that this condition somehow resembles relinquishment to emotion and fear, instead of the 'effort' that normal people try to overcome challenges (Myers, A. B. 1870).
The term PTSD emerged after Vietnam war; it was observed that potentially traumatic incidents can lead spectrum of psychological manifestations. During American civil war, a condition which was similar PTSD syndrome was referred to as the 'Da Costa's Syndrome' (Da Costa, J. M. 1951). In 1871 Da Costa stated that this psychiatric disorder is common among veterans, who experienced immense fear and stress in the battle field (Da Costa, J. M. 1951).
Although traumatic events are rampant, the vast majority of subjects who experience it usually don't develop PTSD. A study which was examining the conditional risk of developing PTSD, found conditional risk of 10.6%, and it's also noted that male subjects experience more traumatic incidents than female subjects, while women are more prone to develop PTSD then men (Kilpatrick et al., 2013).

1.2.4 Depression

Depressive disorder is condition characterized by markedly diminished of pleasure or interest, persistent depressed mood, change in appetite, disturbed sleep, feelings of worthlessness and guilty, fatigue, difficulties in concentration and suicidal thoughts. Depression can be enduring or recurrent, and can also markedly impair person's ability to perform properly at school or at work or even manage with daily life stressors. Severe form of depression may lead to suicide to the subjects (Feyera et al., 2015)

Depressive Disorder can be categorized into major depressive disorder and dysthymia which is similar to depressive episode but with milder symptoms and persistence and chronicity of the symptoms (APA., 2013). WHO has stressed the burden of depression in the world, and it's estimated that over 50 million Years Lived with Disability (YLD) led by depressive disorders only in 2015. around 80% of this burden affects people who live in low and middle-income countries (WHO, 2017). It's also estimated total number of 322 million people live with depressive disorder globally. About half of these number live in Western Pacific Region and South-East Asia Region, reflecting on larger populations of two Regions (WHO, 2017).

1.3 Problem Statement

Approximaly 2.6 million people are internally displaced in Somalia. The armed conflicts and the environmental disasters affected most parts of Somalia led this huge number of people to flee from their homes (UNOCHA, 2018). Somalia has been in Turmoil and political instability for the last three decades, The country experienced fierce fighting between rival groups and frequent terrorist attacks since the collapse of Siyad Bare regime in 1991 (Donner & Schwarz, 2018). World Health Organization, 2010 reported that prevalence of mental illness in Somalia is higher than other low-income countries, one in three persons has some kind of mental illness, this can be explained due to long lasted conflicts, war trauma, displacement and widely used substance like Kat, and yet mental health is neglected and underfunded with limited number of human resources (WHO, 2010).

There is dearth of epidemiological data on assessment of mental distress and psychosocial difficulties on IDPs in Mogadishu. The aim of this study is to explore burden of Post-traumatic Stress Disorder (PTSD) and Depressive Disorder among Internally displaced persons (IDPs) in selected IDP camps in Mogadishu.

In conflict-affected populations mental health is considered major public health concern (Jong et al., 2003). People with psychological disorders may suffer significant agony, and they are more vulnerable to destructive behaviors such as substance use, and violence (Mollica.,et al, 2004). It has been reported significantly high rates of PTSD and depressive disorder among IDPs. In South Sudan PTSD and Depressive disorder rates were 36% and 50% respectively (Roberts et al., 2009). In Uganda, its reported PTSD rate of 44.5% and depression rate of 67.4% (Roberts et al., 2008).

CHAPTER TWO: 2.0 LITERATURE REVIEW

2.1.1 Prevalence of Posttraumatic Stress Disorder and Depression in IDPs

Prevalence of PTSD and depressive disorders are frequently investigated in conflict setting, as Psychological trauma is expected to be widely common among this population. A systemic review in Psychiatric disorders in Refuges and IDPs in 30 studies was found to be prevalence rates between 2.2 and 88.3% (Morina et al., 2018), they also found depression rate which was varied between 5.1 to 81% and anxiety disorders to be from 1% to 90% (Morina et al., 2018). Makhashvili et al., (2014) studied psychiatric disorders and their association in disability among IDPs and former IDPs in Georgia, the probable prevalence of PTSD was 23.3%, and depression was 14.0% (Makhashvili et al., 2014). This study shed to the light the treatment gap of mental disorders in among conflict affected people in Georgia and its finding has supported the necessity for scale up, comprehensive and evidence-based trauma focused programs to affected and vulnerable population in Georgia. Study on IDPs in Ukraine found prevalence of PTSD of 32%, while the prevalence of Depression was 22% (Roberts et al., 2017), this study showed decreased mental health and psychosocial support (MHPSS) care utilization among IDPs in Ukraine and its finding highlighted integrating Trauma focused health services with other health components (Roberts et al., 2017).

In Colombia study found high levels of PTSD and Depression in IDPs, 88% and 41%. This finding may reflect the long term armed conflict in Colombia which has been there for more than five decades, with the small sample size and non-representative sample may contribute these elevated Psychological distresses in the sample (Richards et al., 2011).

In Sri Lanka, study on conflict related psychiatric morbidities and its relationship with displacement status was done by Husain and colleagues, among IDPs in Jaffna district, the

overall prevalence of depressive disorder and Posttraumatic stress disorder were 22.2%, 7% respectively (Husain et al., 2011). In Iraq, a country which has been exposed on sanction and war for long term, a study tried to measure the extent of Psychological sequel of displacement in internally displaced people (IDP) by estimating the prevalence of PTSD, which were 20.8% (AlShawi, 2018).

Study on internally displaced persons in northwestern Nigeria found high rates of PTSD and Depression. A 42.2% had a diagnosis of PTSD and 59.7% had diagnosis of probable depression (Sheikh et al., 2014).

Another Study done among south Sudanese in Juba on post-conflict mental health needs found that almost half (50%) had symptoms of depression, while one-third (36%) had symptom criteria of PTSD. This study showed elevated levels of mental distress among former IDPs and residents of Juba (Roberts et al., 2009), another study in mental health problems of Darfurian Internally displaced persons established that PTSD and general health distress were rampant. Almost more than half of respondents (54%) were considered as possible PTSD cases (Hamid & Musa, 2010). Roberts et al., (2008) found that IDPs in northern Uganda, who witnessed 20 years of conflict between a rebel group (LRA) and the government army, that over half (54%) of the respondents had probable diagnose of Posttraumatic Stress Disorder, and over two third (67%) of respondents had diagnostic symptoms of depression (Roberts et al., 2008). A Study on women at Ekernyo Camp in Kenya found extremely high levels psychological distresses, nearly all respondents had PTSD (100%) with depression rate of 94%. This is not surprising by considering traumatic events that this population underwent during the post-election violence (burning of houses, indiscriminate killings, displacement, rape, etc.) (Magruder & Ph, 2009).

In Somalia there is paucity of epidemiological date in mental health, and this could be explained due to fragile health system of the country with diminished research capacity and poor data management in health centers. In addition to that, there is no specific word for PTSD and depression in Somalia language, and Somalis describe this in a way that is similar to everyday hardships and life struggles (Cavallera et al., 2016).

Study on exposure of violence and symptoms of PTSD among Somali women attending primary health clinic in Mogadishu, showed extremely high levels of PTSD cases especially for those who were exposed to potentially traumatized events, nearly one-third of study subjects had significant PTSD (De Jong., 2011). Among Somali refugees in Uganda, study found prevalence rate of posttraumatic stress disorder of 48% (Onyut et al., 2009). Another study revealed that over one third of Somali refugees (38.3 %) in Melkadida camp in Ethiopia met the symptom criteria for depression. The prevalence rate of Posttraumatic stress disorder among Somali refugees in Netherlands was found to be 4%, a number which was lower than asylum seekers from Iran (43.4%), although Somali subjects had been exposed as many potentially traumatic events as the other refugees (Gerritsen et al., 2006).

2.1.2 Sociodemographic Predictors of PTSD and Depression.

Its general consensus that women are more likely to develop Depression and PTSD than men, a study by Roberts et al. showed a strong association between sex and PTSD, women were twice more likely than men to show symptoms of Post-traumatic stress disorder (OR 2.01 [95% CI]) and depressive disorder (OR 2.37 [95% CI]) (Roberts et al., 2009). Men reported lower rate of psychiatric disorder than female subjects, even though male respondents experienced more traumatic events than female subjects. Roberts and colleagues explained this "due the higher

possibility of being exposed to traumatic events such as violent loss of partner and children, rape and being single parent or widow, but recommended for further investigation to explain gender-differences in the response to traumatic events" (Roberts et al., 2009)

PTSD and trauma in World Mental Health Survey by WHO found that age is significantly associated with conditional risk of PTSD, with highest risk during childhood-adolescence and people who are older than 65 (Kessler et al., 2017). In marital status some studies didn't find any correlation between PTSD and marital status (Atwoli et al., 2013), while other studies found significant association, subjects who were either divorced or widowed, were more likely to show symptoms of PTSD than subjects who never been married or married (Housen et al., 2017; Roberts et al., 2009). Despite the findings that PTSD is associated for being unmarried, study done in Turkey to examine the prevalence of post-traumatic stress disorder (PTSD) among internally displaced people, when the PTSD and non-PTSD groups were compared in terms of socio demographic characteristics, PTSD was more common among married respondents (30.5%) than single (20.0%) or divorced/separated (14.3%) respondents (Essizoglu & Keser, 2014).

The level of education is another predictor for development of PTSD as shown in many studies. Having a lower educational attainment were significantly associated with PTSD and Depression, Higher education level could be a protective factor for development of PTSD (Housen et al., 2017).

Positive correlation has been found between PTSD and history of psychiatric disorder in the family, study on prevalence of PTSD in Syrian refugees in Turkey found that family history of mental disorders is significantly associated with PTSD (Alpak et al., 2015). Study in Kenya

amongst Mau Mau concentration camp survivors found significant association between positive family history of Psychopathology and PTSD (Atwoli et al.,2006).

As showed in recent World Mental Health report (Liu et al., 2017), a conditional risk of PTSD after trauma exposure was 4.0%, but this varies according by trauma type, with being raped had the highest conditional risk (19.0%), followed by physical abuse by a spouse and being kidnaped (11.7%), (11.0%) respectively (Kessler et al., 2017).

Dose response relationship were observed between PTSD and frequency of trauma experienced. Roberts and Colleagues found that higher number of traumatic events (more than 16 trauma events) increases likelihood of developing PTSD (OR 6.5 [95% CI) and depression (Roberts et al., 2008), also another study on mental health of IDPs in Sri Lanka found same association between psychiatric disorders and frequency of trauma events (Husain et al., 2011).

2.2 Study Justification

Post-traumatic stress disorder and Depressive disorder are considered most common mental health problems in conflict-affected population. In our knowledge, there is no study in literature, which investigated the burden of mental disorders among Internally Displaced Persons in Somalia. There is dearth of epidemiological data to assess Psychiatric disorders among IDP camps in Mogadishu. This study is meant to examine prevalence and associated factors of Post-traumatic Stress Disorder and Depressive disorder among IDPs, and it will be pioneering study which serve as baseline data for future epidemiological studies in mental health of vulnerable populations, including IDPs.

2.3 Study Significance

This study will help to enlighten the burden of psychological distress among IDPs to policy makers and NGOs who work health and health related sectors in Somalia. Most of humanitarian

activities are currently involved only responding physical needs or treating physical illnesses, without giving any consideration to psychosocial interventions that affected population were needed. It will also aid to Ministry of Health and other stake holders to put in place policy and legislations to respond the psychological needs of IDPs.

2.4 Study Questions

1. What is the estimated prevalence of PTSD among Internally Displaced Persons in Mogadishu?
2. What is the estimated prevalence of Depressive disorder among Internally Displaced Persons in Mogadishu?
3. What are associated factors of PTSD and Depressive disorder among IDPs in Mogadishu?
4. Is there association between PTSD and Depression among the respondents?
5. What is the nature and exposure of trauma among respondents?

2.5 Study Objectives

2.5.1 Broad Objective

To assess the prevalence and associated factors of PTSD and Depression among IDPs in Mogadishu.

2.5.2 Specific Objectives

1. To determine prevalence of posttraumatic stress disorder among IDPs in Mogadishu.
2. To estimate prevalence of Depression among IDPs in Mogadishu.
3. To identify associated and predictors of PTSD and Depression among IDPs in Mogadishu.
4. To assess association between PTSD and Depression among IDPs in Mogadishu.
5. To evaluate nature and exposure of trauma among respondents

2.6 Conceptual Framework

The framework shows a direct relationship between exposure (independent) and outcome (dependent) variables as a causal relationship. The arrow from moderator variables modifies and measure strength relationship between independent variable (displacement) and dependent variables (PTSD and depressive disorder).

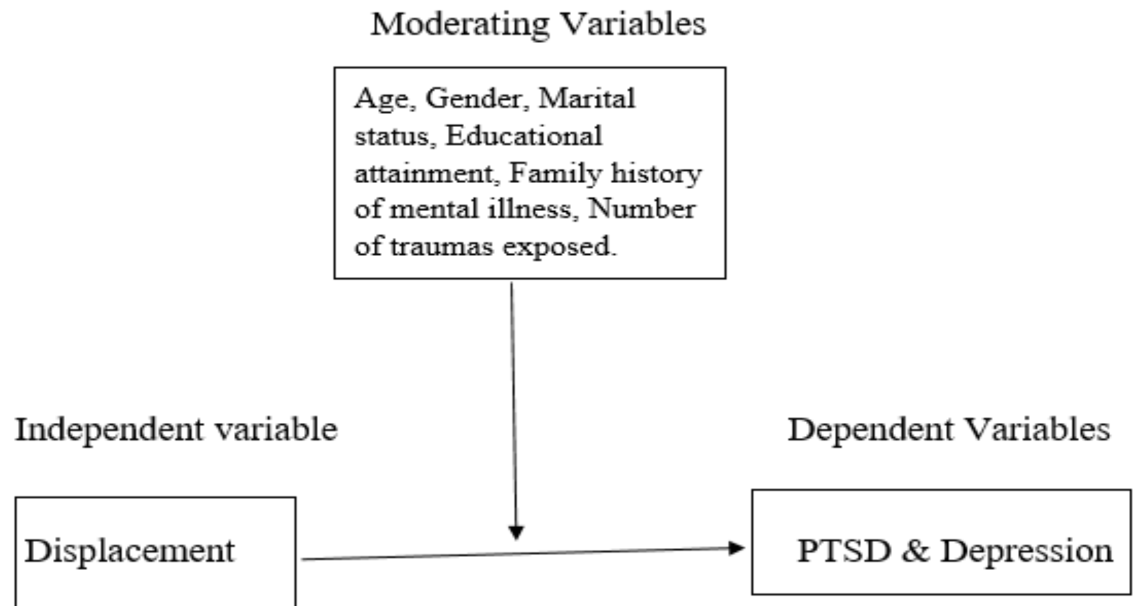


Figure 2. 1: Conceptual Framework

CHAPTER THREE: METHODOLOGY

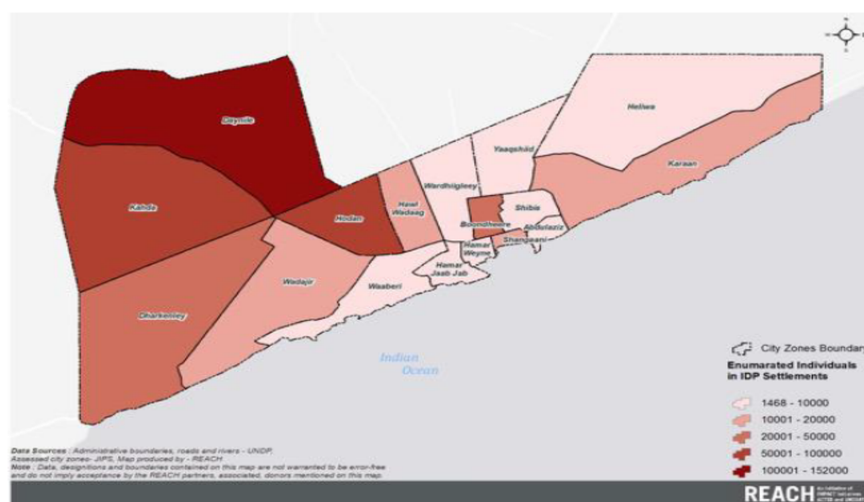
3.1 Study Design

This study used a cross sectional analytical study design to determine the prevalence of PTSD and Depressive Disorder, and also to test the association between independent variable and dependent variables.

3.2 Study Area Description

Study was conducted in IDP camps in Mogadishu. Mogadishu is the capital and largest city of Somalia, it has population of 2.5 Million residents with area of 91 km^2. It consists of 17 districts. In recent years Mogadishu hosted huge number of internally displaced people who fled from neighboring regions.

Map 1: IDPs in Mogadishu by district adapted from REACH website



3.3 Study Population

The study population were internally displaced persons who live in camps in Mogadishu. Humanitarian agencies estimate that Mogadishu hosts more than 600,000 IDPs, who live in informal settlements within the city (IDMC, 2018). Droughts and climate shocks, Conflict, lack

of livelihood opportunities and evictions are main reasons of internal displacement (UNOCHA, 2018).

3.4 Inclusion and exclusion criteria

The inclusion criteria will be:

1. The internally displaced persons living in Mogadishu.
2. Respondents who are 18 years and above.
3. Respondents who give consent to participate the study

The exclusion criteria will be:

1. Respondents who refuse to give consent to participate the study.
2. Respondents who are severely ill and not able to participate the study

3.5 Sample Size Determination

To determine the sample size, Leslie and Kish formula (Kish L., 1965) will be used.

Formula: $n = \frac{z^2pq}{d^2}$

n = the desired sample size,

z = the standard normal deviate, usually set at 1.96 at 5% level,

This corresponds to 95% confidence level,

p = proportion of population, where prevalence of PTSD and Depression is unknown, I assumed 50%.

q = 1- p

d = the degree of accuracy level considered as 5.00 %, which assumes 0.05

$n = z^2 pq/d^2$

$(1.96)^2$ x0.50x 0.50/$(0.05)^2$= 384

n=384

The minimum required sample size is 384. However, allowing for 10% attrition for non-response, the sample size will be adjusted upwards to 422.

3.6 Sampling Procedure

Multistage random sampling method was used. In the first stage four districts was randomly selected from 17 administrative districts in Mogadishu. Boondheere, Hodan, Wadajir, and Dharkeynley administrative districts were randomly selected. There are about 76 IDP camps in the four districts (see the list of IDP camps in appendix XI), these camps will be proportionately sampled based on estimated IDPs population from REACH Initiative 2016 joint IDP Profiling report (see table 1). In the next stage due to restricted data and unsystemic layout of the camps, random and systemic sampling method is not feasible. According to Collins,. 2004, when there are limitations preventing using other methods of selecting households, a segmentation method can be used. This method involves obtaining roughly map of the camp from camp leaders or from other online data bases such as REACH. Camps will be divided into smaller segment which approximately containing number of households desired to be sampled. A random segment of the camp was selected by numbering 4 pieces of paper (1 to 4) and picking one. Segment (n) was randomly chosen and all households within that segment were included until required number is reached. All eligible individual from selected household were included.

Table 3. 1: Proportional to size sampling of four Mogadishu Districts

S/N	District	IDPs	Number of IDP Camps		Proportion that will sampled	Number of IDPs to be interviewed per camp
1	Boondheere	18249	15		62	4
2	Wadajir	16616	5		56	11
3	Hodan	73410	55		248	5
4	Dharkeenley	17876	1		61	60
Total		126,151	76		427	80

3.7 Study Variables

The dependent variables are posttraumatic stress disorder and Depressive disorder, which will be screened using Harvard Trauma Questionnaire Revised, and Hopkins Symptoms Checklist respectively. The independent variable is displacement, while Age, Gender, Marital status, Level of Education, Family History of Psychiatric illness, Nature of Trauma, Number and Frequency of Trauma, Number of Displacements, Duration of displacement will be the moderating variables.

3.8 Study Instruments

Data was collected by using a researcher designed questionnaire to capture socio-demographic characteristics and displacement history of IDPs. Harvard Trauma Questionnaire Revised (HTR-R) (Mollica at el., 1992) was used to detect posttraumatic stress disorder and Identify exposure of trauma.

HTQ is developed by the Harvard Program in Refugee Trauma, it's cross-cultural screening tool to document trauma exposure, and trauma related symptoms in displaced people and refuges.

HTQ contains four parts: I) Traumas that displaced people encounter frequently. II) Subjective description of most severe traumatic experience. III) Head injury. IV) Trauma symptoms DSM IV. V) Trauma symptoms DSM V.

It has been translated and adapted into many languages and cultures (Berthold et al., 2018). In Nigeria Sheikh., et all (2014) had used HTQ and found prevalence rate of 42.2 % (Sheikh et al., 2014).

Hopkin Symptom Checklist (HSCL-25) was used to screen Depression. This screening tool was developed by Parloff, Kelman, and Frank at Johns Hopkins University, and it dates back to 1950s. The Hopkins Symptoms Checklist (HSCL) consists of 25 items: the first Part of the HSCL-25 has 10 items for anxiety symptoms; and the second Part consists 15 items for depression symptoms and this is the part we will use in our study. HSCL-25 contains four-point severity scale ("Not at all," "A little," "Quite a bit," "Extremely," rated 1 to 4, respectively). It consistently correlates with major depression in Diagnostic and Statistical Manual (DSM-IV).

The reliability and validity of the HTQ and HSCL-25 have been tested in many countries with displaced people and it showed positive results (Oruc et al., 2009; Mollica at el., 1992). Study in Northern Uganda used HSCL-25 and found prevalence rate of 67% (Roberts et al., 2008).

Harvard Trauma Questionnaire and Hopkin Symptom Checklist have Cronbach alpha of internal consistency of 0.92 and 0.85 respectively (Roberts et al., 2009). In this study both instruments were translated and adapted to Somali language.

3.9 Data Collection Procedure

Upon the arrival of the camp, camp leaders wapproached and he/she will be explained about the nature of the study. Study respondents were recruited from households in randomly selected section. They were invited and screened for exclusion criteria for the suitability of the study. The

participants who fulfill the inclusion criteria were briefed about the nature of the study, those who are willing to participate the study were interviewed to complete the questionnaires, all individuals in that household were included in the study and next house was moved until desired number is reached. The principal investigator read the questions as it is in the questionnaire and responses were recorded, and it took approximately 30 minutes to fill each questionnaire.

The following questionnaires will be used in data collection:

1. Researcher designed Socio-demographic questionnaire
2. Harvard Trauma Questionnaire
3. Hopkin Symptom Checklist (HSCL-25)

3.10 Quality Assurance Procedures

The principal investigator is trained on human subject research ethics, researcher made sure that respondents fully understand the questions being asked while questionnaires were accurately completed. Pilot testing was conducted, to ensure validity of study tools, among 25 internally displaced persons from different camp that was not used in the study sample.

3.11 Data Storage and archival

The questionnaires were cross checked for completeness and accuracy, and it was locked in a cabinet and only the researcher was able to access it for privacy propose. Data were entered using SPSS version 24 and it was password protected database. Each questionnaire was assigned a code for facilitation of referral process, if needed while confidentiality is ensured.

3.12 Data Analysis

Data was analyzed using Statistical Package for Social Sciences (SPSS) version 24. For continues variable data was summarized using descriptive statistics (mean, median and mode and standard deviation). Relationships between the variables were shown by Pearson’s correlation (Pearson’s

r). The associations between the variables will be determined by Pearson's Chi square (p-value). Data was summarized and presented using frequency tables, graphs and charts.

3.13 Result presentations and disseminations

Result was presented in the department of psychiatry; University of Nairobi and it will be shared with concerned authorities in Somalia to develop measure to support mental health of internally displaced persons. This study will be published with consultation of supervisors.

3.14 Ethical Consideration

Ethical approval to conduct this study was obtained from Kenyatta National Hospital and University of Nairobi Ethics and Research Committee (KNH-UON ERC). Permission was also got form local Benadir region administration. Camp leaders were consulted and their permission was sought. There were no monetary gains and confidentiality were assured for all participants. Informed written consent were sought from respondents before the beginning of interview and also the purpose and nature of the study was explained while their questions were clarified. They were well informed about their rights to withdraw anytime, if they felt distress about the interview. The researcher, who is psychiatry resident is trained on providing psychological first aid, and he tried to minimize the emotional distress which interview may trigger and those who have severe symptoms was referred to available psychiatric services.

3.15 Study Timeline

Below table will provide study timeline

Table 3. 2: Study Timeline

	January -	March 2020	April-Oct	2020	Feb 2021	March 2021	Jun 2021
Proposal development							
Ethical clearance							
Data collection							
Data analysis							
First draft							
Thesis Presenation							

CHAPTER 4: RESULTS

Response Rate: A total of 406 respondents consented and participated in the study of which 401 (Response rate 98.8%) had complete information on PTSD and Depression, while 5 did not have complete information hence they were excluded from the study.

4.1 Socio-demographic and Other Characteristics

The socio-demographic and other characteristics of the respondents are presented in Table 1. More than ¾ (87.3%) were females. With regard to age majority (37.6%) of the respondents were aged between 26-35 years followed by those aged between 36-60 years (32.0%). The proportion of those aged between 18-25 years was 23.6% and the least were those aged above 60 years (6.5%). More than 2/3rd (69.1%) of the respondents were married, 5.5% were single, 2.0% were separated, 12.5% were divorced and 11.0% were widowed. Majority of the respondents (64.8%) had no formal education, 24.2% had Qur'anic education, 8.5% had primary level of education; 2.0% had secondary level of education while 0.5% had tertiary education. About 2/3rd (66.3%) were unemployed, 32.2% were employed while the rest 1.0% were students. 25.3% of the respondents had family history of psychiatric illness. In terms number of displacements majority (29.8%) had been displaced more than three times, 26.3% had been displaced three times, 24.5% had been displaced twice, while 19.5% had been displaced once. With regards to age at first displacement 37.4% of the respondents were displaced at age of less than 18 years, 42.4% were displaced when they were aged between 19-35 years and 20.2% were displaced when they were older than 35 years. In terms of duration of displacement majority 66.8% had been displaced more than 3 years, while 23.3% had been displaced between one and three years and 10.0% had been displaced for less than one year.

Table 4. 1: Socio-demographic Characteristics of the Respondents

Variable	**Category**	**Frequency (N=401)**	**Percentage (%)**
Gender	Male	65	16.3
	Female	334	83.7
	non-response	*2*	
Age	18-25 Years	94	23.6
	26-35 Years	150	37.6
	36-60 Years	129	32.3
	>60 Years	26	6.5
	non-response	*2*	
Marital Status	Single	22	5.5
	Married	277	69.1
	Separated	8	2.0
	Divorced	50	12.5
	Widowed	44	11.0
Education Level	None	260	64.8
	Qur'anic	97	24.2
	Primary	34	8.5
	Secondary	8	2.0
	Tertiary	2	0.5
Employment Status	Employed	129	32.2
	Unemployed	268	66.8
	Student	4	1.0
Presence of Family History of psychiatric illness	Yes	101	25.3
	No	299	74.8
	non-response	*1*	
Number of displacements	Once	78	19.5
	Twice	98	24.5
	Three Times	105	26.3
	More than Three times	119	29.8
	non-response	*1*	
Age of first displacement	<18 Years	150	37.4
	_19-35 Years	170	42.4
	>35 Years	81	20.2
Duration of displacement	<1 Year	40	10.0
	one-3 Years	93	23.3
	>3 Years	267	66.8

	non-response	*1*

4.2 Prevalence of PTSD and Depression

A total of 129 participants screened positive for PTSD (Mean>2.5) giving a prevalence rate of 32.2% 95% C.I. 27.7% to 36.7%. (Table 2 and Figure 1). The Mean Median, SD, Min. Max and interquartile range are presented in Table 3.

In terms of depression, a total of 238 participants screened positive for Depression (Mean ≥2.5) giving a prevalence rate of 59.4% 95% C.I. 54.4% to 64.1%. (Table 2 and Figure 2). The Mean Median, SD, Min. Max and interquartile range are presented in Table 3.

Table 4. 2**:** Prevalence of PTSD and Depression

Measure	**Frequency (N=401)**	**Percentage (%)**	**95% C.I)**	
			Lower	**Upper**
1. PTSD (Mean>2.5)	129	32.2	27.7	36.7
2. Depression (Mean>=1.75)	238	59.4	54.4	64.1

Table 4. 3**:** Mean, Median, Standard Deviation, Range and Interquartile Range of PTSD and Depression Scores

Measure	**PTSD Scores**	**Depression Scores**
Mean	2.23	2.30
Median	2.00	2.28
Std. Deviation	0.88	0.81
Minimum	1.00	1.00
Maximum	4.00	4.00
Interquartile Range	1.32	1.20

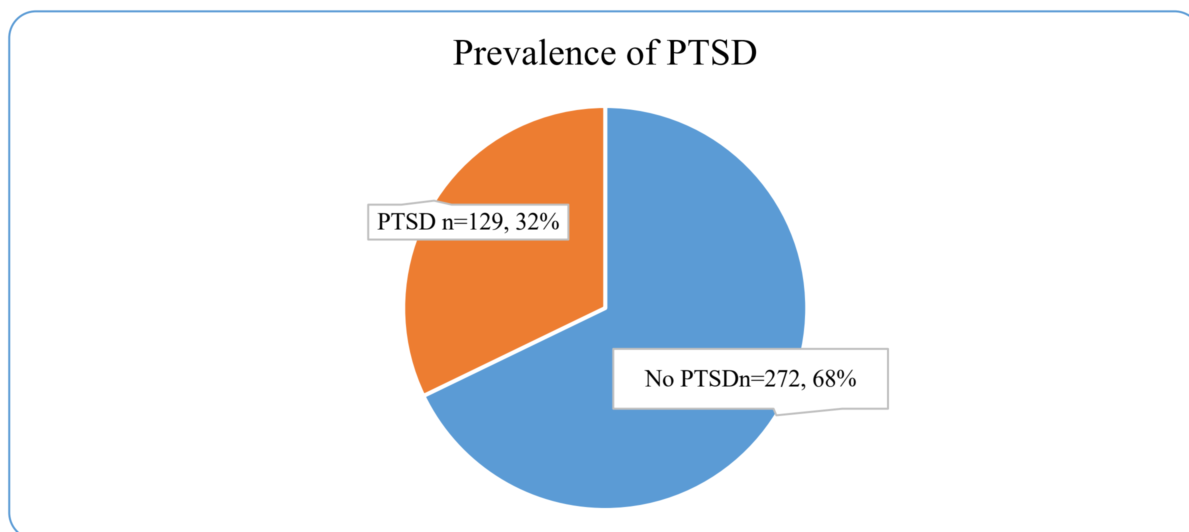


Figure 4. 1: *Prevalence of PTSD*

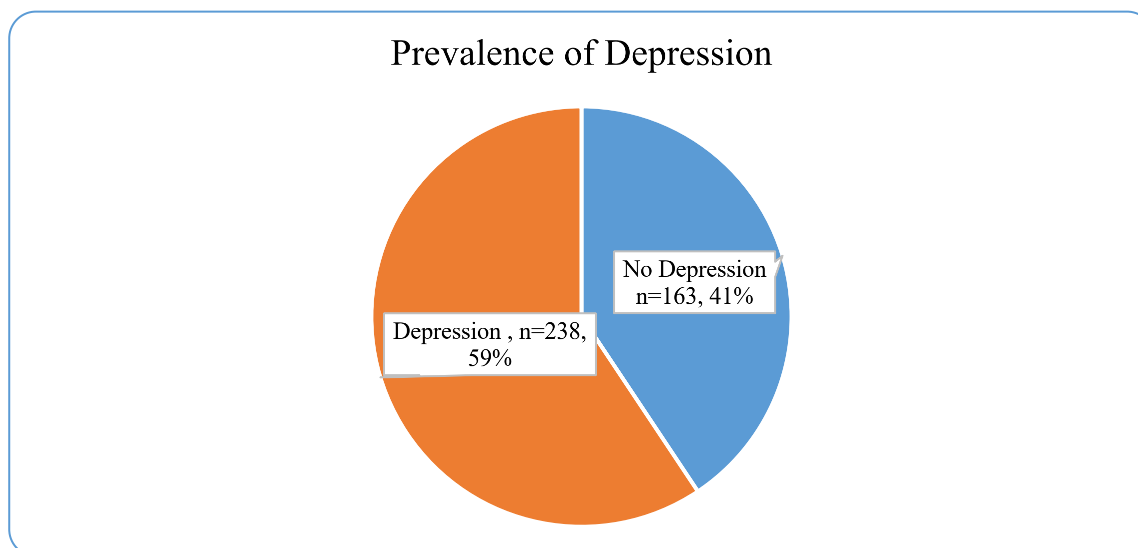


Figure 4. 2: *Prevalence of Depression*

Prevalence Traumatic experiences

Table 4 presents the nature of exposure to traumatic events, the most prevalent exposure to traumatic event was lack of food or water (80.2%) followed by Ill health without access to medical care (79.9%), Lack of shelter (77.9%) and Combat situation (e.g., shelling and grenade attacks) at 55.5%. while the least prevalent was being forced to betray family member, or friend placing them at risk of death or injury (7.5%), being forced to betray someone who is not family or friend placing them at risk of death or injury (7.0%) and being forced to desecrate or destroy the bodies or graves of deceased persons (6.5%)

Table 4. 4: Nature of Exposure to Traumatic Events

Trauma Events	Frequency (N=401)	Percentage (%)
1. Lack of food or water	320	80.2
2. Ill health without access to medical care	318	79.9
3. Lack of shelter	311	77.9
4. Combat situation (e.g. shelling and grenade attacks)	221	55.5
5. Serious physical injury of family member or friend due to combat situation or landmine	199	50.4
6. Witness beatings to head or body	191	49.0
7. Forced evacuation under dangerous conditions	182	46.0
8. Witness torture	179	45.4
9. Extortion or robbery	165	41.6
10. Disappearance or kidnapping of other family member or friend	140	35.3
11. Murder, or death due to violence, of other family member or friend	137	34.3
12. Confiscation or destruction of personal property	121	31.1
13. Beating to the body	114	28.6
14. Witness killing/murder	106	27.0
15. Serious physical injury from combat situation or landmine	107	26.8
16. Other forced separation from family members	107	26.8
17. Knifing or axing	102	25.6
18. Forced to hide	98	24.6
19. Imprisonment	93	23.4
20. Brainwashing	91	22.9
21. Another situation that was very frightening or in which you felt your life was in danger.	85	21.6
22. Forced to physically harm family member, or friend	84	21.2
23. Kidnapped	81	20.5

24. Forced labor (like animal or slave)	77	19.5
25. Witness rape or sexual abuse	70	17.9
26. Forced to physically harm someone who is not family or friend	71	17.8
27. Torture, i.e., while in captivity you received deliberate and systematic infliction of physical or mental suffering	61	15.3
28. Murder, or death due to violence, of child	59	14.8
29. Enforced isolation from others	58	14.6
30. Murder, or death due to violence, of spouse	49	12.3
31. Someone was forced to betray you and place you at risk of death or injury	46	11.5
32. Disappearance or kidnapping of child	44	11.1
33. Disappearance or kidnapping of spouse	41	10.3
34. Forced to destroy someone else's property or possessions	36	9.0
35. Rape	35	8.9
36. Prevented from burying someone	35	8.8
37. Forced to find and bury bodies	32	8.1
38. Other types of sexual abuse or sexual humiliation	30	7.7
39. Forced to betray family member, or friend placing them at risk of death or injury	30	7.5
40. Forced to betray someone who is not family or friend placing them at risk of death or injury	28	7.0
41. Forced to desecrate or destroy the bodies or graves of deceased persons	26	6.5

4.3 Prevalence of Traumatic events recorded

Table 5 and Figure 3 presents the prevalence of traumatic events recorded. Majority of the participants (32.2%) indicated that they had experienced 5-9 traumatic events, followed by 22.4% who reported that they had experienced 10-14 traumatic events, 16.2% reported 15-19 traumatic events, 15.7% reported 0-4 traumatic events and 12.5% reported 20 and above traumatic experiences. The Mean Median, SD, Min. Max and interquartile range of traumatic events are presented in Table 6 and figure 4.

Table 4. 5: Prevalence of Traumatic events recorded.

Cumulative trauma event recorded	Frequency (N=401)	Percentage (%)
0-4	63	15.7
5-9	133	33.2
10-14	90	22.4
15-19	65	16.2
20 and Above	50	12.5

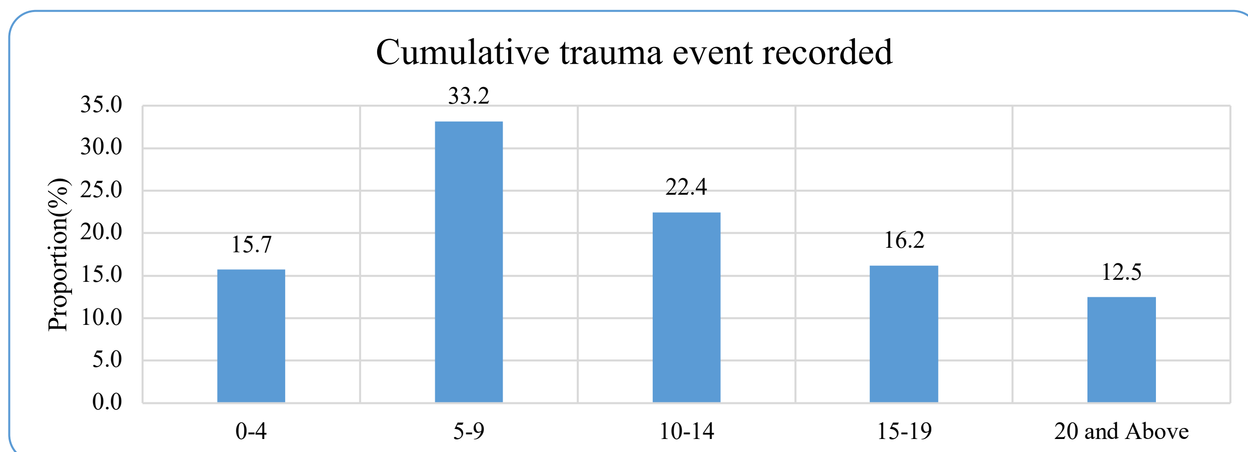


Figure 4. 3: *Prevalence of cumulative trauma event recorded*

Table 4. 6**:** Mean, Median, Standard Deviation, Range and Interquartile Range of Traumatic experiences

Measure	**Value**
Mean	11.0
Median	10.0
Std. Deviation	6.9
Minimum	0.0
Maximum	36.0
Interquartile Range	9.0

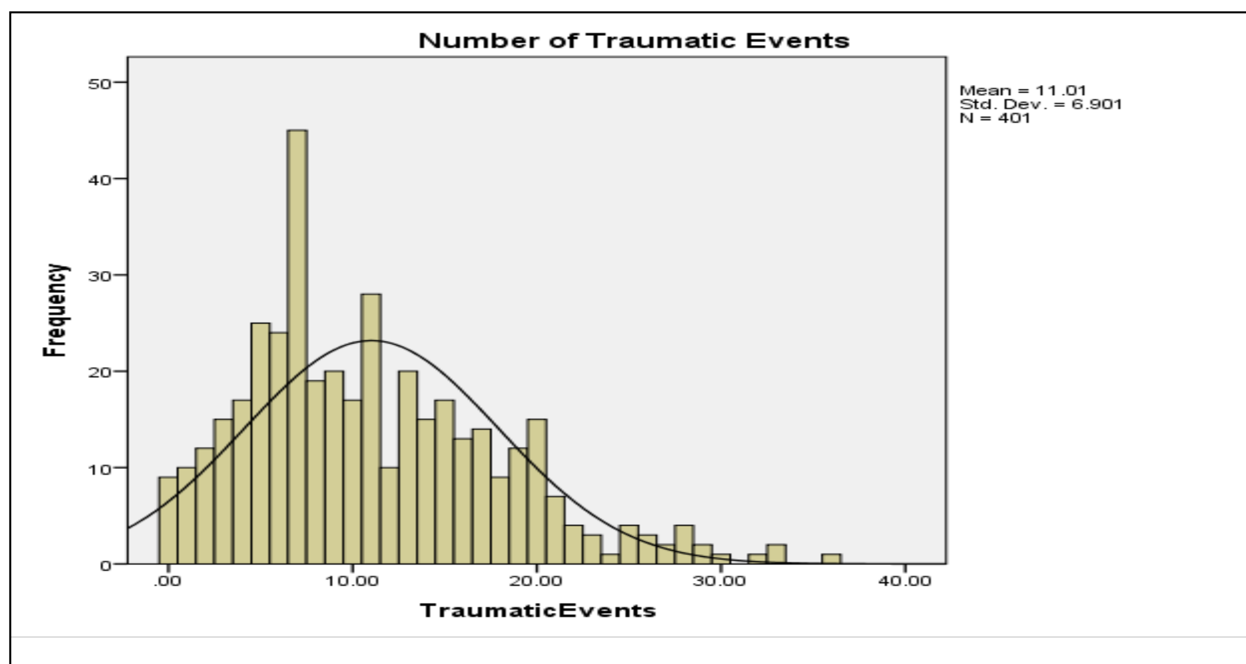


Figure 4. 4: *Histogram of Traumatic Experience*

4.4 Factors associated with PTSD (Bivariate)

Table 7 presents the factors that are associated with PTSD at the bivariate level. Participants who were unemployed were at higher risk of PTSD as compared to those who were employed 36.6% vs. 24.0%, p=0.016. Respondents who had family history of mental illness were significantly at higher risk of PTSD as compared to those without 42.6% vs 28.8%; p=0.010. In terms of number of displacements respondents who had been displaced more than once were at significantly higher risk of PTSD as compared to those who had been displaced once (p<0.001). Respondents who were displaced when they were aged between 19-35 years were at significantly higher risk of PTSD as compared to those who were displaced when they were less than 18 years and those who were displaced when they were aged more than 35 years (p=0.003). Participants who had been displaced for more than 1 year were at significantly higher risk of PTSD as compared to those who had been displaced for less than one year (p=0.006). The number of cumulative traumatic event

was significantly associated with being at risk of PTSD with those experiencing more than 20 events being at higher risk as compared to those with few risk events (p<0.001)

Table 4. 7**:** Factors associated with PTSD

Variable	Category	At Risk of PTSD		χ^2	d.f.	p-value
		No	Yes			
Sex	Male	45(69.2%)	20(30.8%)	0.09	1	0.769
	Female	225(67.4%)	109(32.6%)			
Age	18-25 Years	64(68.1%)	30(31.9%)	4.25	3	0.236
	26-35 Years	94(62.7%)	56(37.3%)			
	36-60 Years	91(70.5%)	38(29.5%)			
	>60 Years	21(80.8%)	5(19.2%)			
Marital Status	Single	15(68.2%)	7(31.8%)	0.67	3	0.880
	Married	191(69.0%)	86(31.0%)			
	Divorced/Separated	37(63.8%)	21(36.2%)			
	Widowed	29(65.9%)	15(34.1%)			
Level of Education	None	175(67.3%)	85(32.7%)	0.44	3	0.933
	Qur'anic	68(70.1%)	29(29.9%)			
	Primary	22(64.7%)	12(35.3%)			
	Secondary and Above	7(70.0%)	3(30.0%)			
Employment status	Employed	98(76.0%)	31(24.0%)	5.77	1	**0.016**
	Unemployed	174(64.0%)	98(36.0%)			
Family History of psychiatric illness	Yes	58(57.4%)	43(42.6%)	6.59	1	**0.010**
	No	213(71.2%)	86(28.8%)			
Number of displacements	Once	69(88.5%)	9(11.5%)	19.20	3	**<0.001**
	Twice	60(61.2%)	38(38.8%)			
	Three Times	66(62.9%)	39(37.1%)			
	More than Three times	76(63.9%)	43(36.1%)			
Age of first displacement	<18 Years	109(72.7%)	41(27.3%)	11.60	2	**0.003**
	19-35 Years	100(58.8%)	70(41.2%)			
	>35 Years	63(77.8%)	18(22.2%)			
Duration of displacement	<1 Year	36(90.0%)	4(10.0%)	10.08	2	**0.006**
	1-3 Years	61(65.6%)	32(34.4%)			
	>3 Years	174(65.2%)	93(34.8%)			
Cumulative Traumatic Event	0-4	44(69.8%)	19(30.2%)	46.91	4	**<0.001**
	5-9	110(82.7%)	23(17.3%)			
	10-14	66(73.3%)	24(26.7%)			

	15-19	35(53.8%)	30(46.2%)
	20 and Above	17(34.0%)	33(66.0%)

4.5 Independent Predictors of PTSD

Table 8 presents the independent predictors of PTSD. Participants who were unemployed were about 2 times more likely to be at risk of PTSD as compared to those who were employed (aOR 1.79; 95% C.I. 1.06-3.04; p=0.030). Respondents who had been displaced more than once were more likely to be at risk of PTSD as compared to those who had been displaced once. (aOR 3.21; 95% C.I. 1.35-7.63; p=0.008); (aOR 2.83; 95% C.I. 1.20-6.67; p=0.017); (aOR 3.15; 95% C.I. 1.35-7.33; p=0.008) for those who had been displaced twice, three times and more than three times respectively. Participants who had been displaced when they were aged 19-35 years were 2.56 times more likely to be at risk of PTSD as compared to those who were displaced when they were aged more than 35 years (aOR 2.56; 95% C.I. 1.31-5.01; p=0.006). No significant differences were observed between those who were displaced when they were less than 18 years and those who were displaced when they were aged more than 35 years. The number of traumatic events was significantly associated with the risk of PTSD. For every unit increase in traumatic event the risk of being at risk of PTSD increased 1.1 times more (aOR 1.09; 95% C.I. 1.05-1.13; p<0.001). No significant association were observed between the risk of PTSD and family history of psychiatric illness and duration of displacement (p>0.05)

Table 4. 8**:** Independent Predictors of PTSD

Variable	**Category**	**At Risk of PTSD**		**a.O.R(95% C.I)**	**p-value**
		No	**Yes**		
Employment status	Employed	98(76.0%)	31(24.0%)	Ref.	
	Unemployed	174(64.0%)	98(36.0%)	1.79(1.06-3.04)	**0.030**
Family History of psychiatric illness	Yes	58(57.4%)	43(42.6%)	1.13(0.66-1.94)	0.653
	No	213(71.2%)	86(28.8%)	Ref.	
Number of displacements	Once	69(88.5%)	9(11.5%)	Ref.	

	Twice	60(61.2%)	38(38.8%)	3.21(1.35-7.63)	**0.008**
	Three Times	66(62.9%)	39(37.1%)	2.83(1.20-6.67)	**0.017**
	More than Three times	76(63.9%)	43(36.1%)	3.15(1.35-7.33)	**0.008**
Age of first displacement	<18 Years	109(72.7%)	41(27.3%)	1.29(0.64-2.61)	0.483
	19-35 Years	100(58.8%)	70(41.2%)	2.56(1.31-5.01)	**0.006**
	>35 Years	63(77.8%)	18(22.2%)	Ref.	
Duration of displacement	<1 Year	36(90.0%)	4(10.0%)	Ref.	
	1-3 Years	61(65.6%)	32(34.4%)	2.25(0.67-7.54)	0.187
	>3 Years	174(65.2%)	93(34.8%)	2.10(0.66-6.72)	0.210
Number of traumatic events	Mean (SD)	9.6(5.8)	14(8.0)	1.09(1.05-1.13)	**<0.001**

4.6 Factors associated with Depression (Bivariate)

Table 9 presents the factors that are associated with depression at the bivariate level. Respondents who were aged more than 26 years and above were at significantly higher risk of depression as compared to those who were aged between 18-25 years (p=0.029). Participants who were single had lower risk of depression as compared to those who were married, divorced/separated and widowed. Respondents who were not employed were at higher risk of depression as compared to those who were employed. Participants who had family history of psychiatric illness were significantly at higher risk of depression as compared to those without (p=0.020). Participants who had been displaced more than once were at significantly higher risk of depression as compared to those who had been displaced once (p=0.012). Respondents who were displaced when they were less than 18 years were at lower risk of depression as compared to those who were older (p=0.042). The cumulative number of experiencing traumatic event was significantly associated with the risk of depression (p=0.001). The more traumatic events exposed to the higher the chances of being at risk of depression.

Table 4. 9: Factors associated with Depression

Variable	Category	At Risk of Depression		χ^2	d.f.	p-value
		No	Yes			
Sex	Male	29(44.6%)	36(55.4%)	0.59	1	0.444
	Female	132(39.5%)	202(60.5%)			
Age	18-25 Years	47(50.0%)	47(50.0%)	9.02	3	**0.029**
	26-35 Years	62(41.3%)	88(58.7%)			
	36-60 Years	48(37.2%)	81(62.8%)			
	>60 Years	5(19.2%)	21(80.8%)			
Marital Status	Single	14(63.6%)	8(36.4%)	7.19	3	0.066
	Married	115(41.5%)	162(58.5%)			
	Divorced/Separated	19(32.8%)	39(67.2%)			
	Widowed	15(34.1%)	29(65.9%)			
Level of Education	None	97(37.3%)	163(62.7%)	5.90	3	0.117
	Qur'anic	43(44.3%)	54(55.7%)			
	Primary	16(47.1%)	18(52.9%)			
	Secondary and Above	7(70.0%)	3(30.0%)			
Employment status	Employed	61(47.3%)	68(52.7%)	3.47	1	0.062
	Unemployed	102(37.5%)	170(62.5%)			
Family History of psychiatric illness	Yes	31(30.7%)	70(69.3%)	5.39	1	**0.020**
	No	131(43.8%)	168(56.2%)			
Number of displacements	Once	34(43.6%)	44(56.4%)	10.89	3	**0.012**
	Twice	51(52.0%)	47(48.0%)			
	Three Times	42(40.0%)	63(60.0%)			
	More than Three times	36(30.3%)	83(69.7%)			
Age of first displacement	<18 Years	70(46.7%)	80(53.3%)	6.33	2	**0.042**
	19-35 Years	69(40.6%)	101(59.4%)			
	>35 Years	24(29.6%)	57(70.4%)			
Duration of displacement	<1 Year	18(45.0%)	22(55.0%)	1.76	2	0.415
	1-3 Years	42(45.2%)	51(54.8%)			
	>3 Years	102(38.2%)	165(61.8%)			
Cumulative Traumatic Event	0-4	34(54.0%)	29(46.0%)	18.54	4	**0.001**
	5-9	63(47.4%)	70(52.6%)			
	10-14	37(41.1%)	53(58.9%)			
	15-19	17(26.2%)	48(73.8%)			
	20 and Above	12(24.0%)	38(76.0%)			

4.7 Independent Predictors of Depression

Table 10 presents the independent predictors of depression. Participants who were unemployed were about 2 times more likely to be at risk of depression as compared to those who were employed (aOR 1.72; 95% C.I. 1.07-2.77; p=0.026). The risk of being depressed was 3.53 times (aOR 3.53; 95% C.I. 1.60-7.79; p=0.002) and 3.29 (aOR 3.29; 95% C.I. 1.36-7.97; p=0.008) times more among those who had experienced 15-19 and 20 and above traumatic respectively as compared to those who had experienced 0-4 traumatic events.

Table 4. 10**:** Independent Predictors of Depression

Variable	**Category**	**At Risk of Depression**		**a.O.R(95% C.I)**	**p-value**
		No	**Yes**		
Age	18-25 Years	47(50.0%)	47(50.0%)	Ref.	
	26-35 Years	62(41.3%)	88(58.7%)	1.13(0.60-2.13)	0.699
	36- and Above	53(34.2%)	102(65.8%)	1.25(0.61-2.59)	0.541
Marital Status	Single	14(63.6%)	8(36.4%)	Ref.	
	Married	115(41.5%)	162(58.5%)	1.61(0.59-4.40)	0.357
	Divorced/Separated	19(32.8%)	39(67.2%)	2.23(0.71-6.97)	0.168
	Widowed	15(34.1%)	29(65.9%)	1.48(0.44-4.97)	0.529
Employment status	Employed	61(47.3%)	68(52.7%)	Ref.	
	Unemployed	102(37.5%)	170(62.5%)	1.72(1.07-2.77)	**0.026**
Family History of psychiatric illness	Yes	31(30.7%)	70(69.3%)	1.34(0.79-2.27)	0.283
	No	131(43.8%)	168(56.2%)	Ref.	
Number of displacements	Once	34(43.6%)	44(56.4%)	Ref.	
	Twice	51(52.0%)	47(48.0%)	0.61(0.32-1.17)	0.138
	Three Times	42(40.0%)	63(60.0%)	0.94(0.50-1.78)	0.860
	More than Three times	36(30.3%)	83(69.7%)	1.52(0.80-2.87)	0.200
Age of first displacement	<18 Years	70(46.7%)	80(53.3%)	Ref.	
	19-35 Years	69(40.6%)	101(59.4%)	1.17(0.68-2.01)	0.573
	>35 Years	24(29.6%)	57(70.4%)	1.68(0.77-3.64)	0.190
Cumulative Traumatic Event	0-4	34(54.0%)	29(46.0%)	Ref.	
	5-9	63(47.4%)	70(52.6%)	1.52(0.79-2.91)	0.213
	10-14	37(41.1%)	53(58.9%)	1.76(0.88-3.54)	0.111
	15-19	17(26.2%)	48(73.8%)	3.53(1.60-7.79)	**0.002**
	20 and Above	12(24.0%)	38(76.0%)	3.29(1.36-7.97)	**0.008**

4.8 Association between PTSD and Depression

Table 11 presents the results of association between PTSD and depression. The risk of being at risk of PTSD was 3.35 times higher among the participants who were at risk of depression as compared to those who were not at risk (OR 3.35; 95% C.I. 2.08-5.39; p<0.001).

Table 4. 11**:** Association between PTSD and Depression

		PTSD		**O.R(95% C.I)**	**p-value**
		Not at Risk	**At Risk**		
Depression	Not at Risk	134(76.8%)	29(23.2%)	Ref.	
	At Risk	138(64.4%)	100(35.6%)	3.35(2.08-5.39)	**<0.001**

Table 12 and figure 5 presents the prevalence of depression, PTSD and comorbid depression and PTSD. 33.4% of the respondents were neither at risk of depression and PTSD. 24.9% were at risk of both depression and PTSD, 34.4% were at risk of depression only while 7.2% were at risk of PTSD.

Table 4. 12**:** Prevalence of Risk of PTSD, Depression and Comorbid Depression and PTSD

Variable	**Frequency(N=401)**	**Percentage (%)**
Not at Risk	134	33.4
At risk of both PTSD and Depression	100	24.9
At risk of Depression	138	34.4
At Risk of PTSD	29	7.2

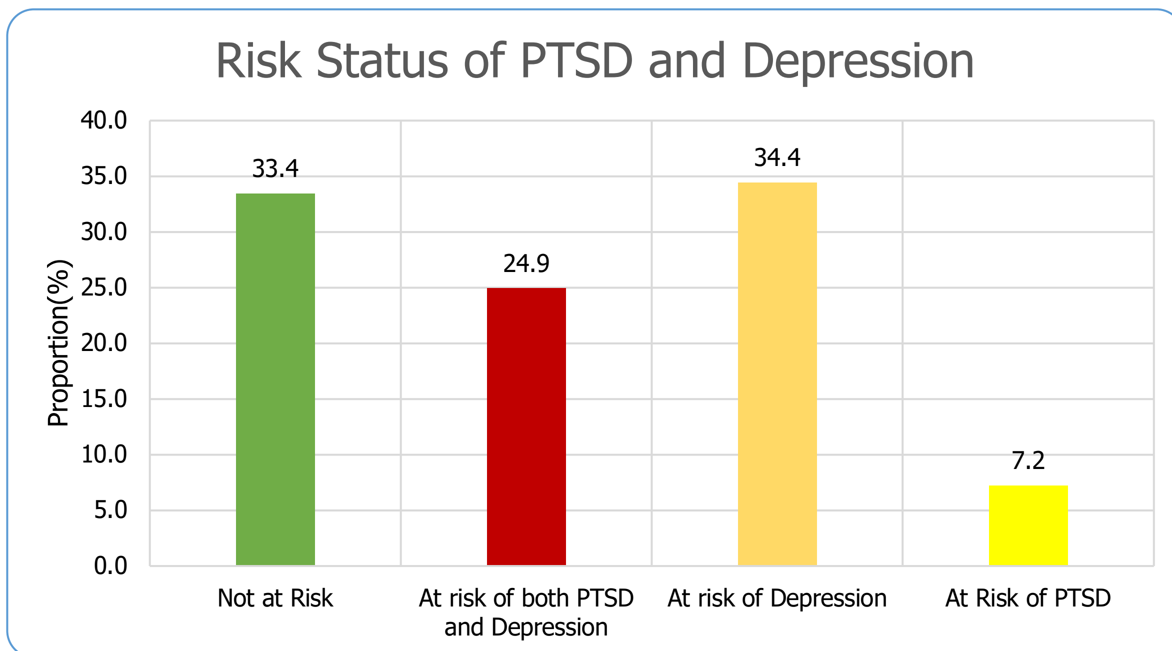


Figure 4. 5: *Risk Status of PTSD and Depression*

CHAPTER FIVE: DISCUSSION

5.1: Introduction

This chapter entails a discussion of the study findings, study conclusion and finally recommendation based on the findings

5.1.1 Sociodemographic characteristics of respondents

Nearly 60% of respondents were between 18 to 35 years, and this is in line with that finding of UN Population estimate survey in Somalia, which found that 75% of Somali population are less than 30 years of age (UNFPA, 2014). Majority of study participants were women (84%). Women and children are usually represented with high proportion in IDP camps in any given time, and this linked to socioeconomical factors; where men mainly work far from home as breadwinner, or due to local conflict dynamics (IDMC, 2020). More than two third of participants were married (69%), and also two third (65%) of participants had never attended school, most of study subjects (67%) were unemployed. Similarly, study by Feyera et al (2015), showed that three quarter (74.6 %) of respondents were in the age between 18–40years with median age of 33, More than half (55.6 %) of the respondents were married. Nearly half of respondents never attended school, and two third of respondents (72%) were unemployed.

5.1.2 Prevalence of PTSD and Depression

This study revealed high levels of psychiatric disorders among the IDP population in Mogadishu. 32% of respondents met symptom criteria for PTSD and 59% of respondents met symptom criteria of depression. This finding is lower than level of psychiatric morbidities (PTSD & Depression) among IDPs in Uganda, whereby 54% had probable PTSD and 67% had depression (Roberts et al., 2008). The rate of depression and posttraumatic stress disorder in this study, can be compared on the finding of study in South Sudan with rates of PTSD and Depression, 36%, 50% respectively (Roberts et al., 2009). On the other hand, the finding of this study is higher

than in studies done in Georgia and Sri Lanka with prevalence of PTSD 23%, 2.4% and depression rates of 14%, 5% respectively (Makhashvili et al., 2014; Siriwardhana et al., 2013). The discrepancy rates of war-related mental health conditions, might be explained due to differences in study tools and methodology, the characteristic of individual communities with nature of exposed psycho-trauma.

5.1.3 Sociodemographic factors and Prevalence of PTSD and Depression

In this study we didn't find statistically significant association between gender and psychiatric morbidity, a finding which is inconsistent with that of general consensus, with most of studies showing that females have more posttraumatic disorder rates than male (Alpak et al., 2015; Oruc et al., 2009; Roberts et al., 2008). However, our finding is in line with studies in Nigeria and Iraq, which couldn't find significant difference in association between gender and stress related disorders (AlShawi, 2018; Sheikh et al., 2014).

Depressive disorder was found to be significantly associated with the age. those who were aged more than 26 years were at significantly higher risk of depression as compared to those who were aged between 18-25 years (p=0.029). this finding is consistent with study in Sri Lanka, were older subjects had more depressive symptoms than young respondents. (Husain et al., 2011). Other study found that subjects who are older than (36.6 years) had more psychiatric diagnoses (Depressive disorder) when compared with younger participants (p = .024) (Elhabiby et al., 2014). This could be explained that older subject usually experiences longer exposure period of war related trauma (Husain et al., 2011)

This study couldn't find significant correlation between marital status and psychiatric disorders. This finding is consistent with study finding of Syrian refuges in Turkey (Acarturk et al., 2017).

However, Housen et al (2017) found that being divorced or widowed were associated with risk of developing depressive disorder and PTSD.

In our study unemployment was found to be significantly associated with depression and PTSD (aOR 1.79; 95% C.I. 1.06-3.04; p=0.030). unemployment has been found to be associated with poor mental health outcome in IDP setting due to scarcity of resources (Siriwardhana et al., 2013).

Having family history of psychiatric disorder were significantly at higher risk of depression and PTSD as compared to those without (p=0.020) (p=0.010) in bivariate analysis, but failed to show same finding in multivariate analysis. This finding replicates finding in study done in turkey were they found presence of mental disorders among family members significantly correlates with development of PTSD (p=0.021) (Alpak et al., 2015).

5.1.4 Displacement characteristics and Trauma events with Prevalence of Psychiatric Morbidity

Respondents who had been displaced more than once were more likely to be at risk of PTSD as compared to those who had been displaced once. (aOR 3.21; 95% C.I. 1.35-7.63; p=0.008). this finding were similar to those of Madoro et al (2020), who found significant association between PTSD and number of displacement. The finding also conforms with that of another study which showed being displaced two or more times (compared to once or never displaced) was associated with depression (aOR 2.22 [95% CI 1.70–2.89] and PTSD (aOR 1.81 [95% CI 1.18–2.76]) (Roberts et al., 2008)

In this study participants who had been displaced when they were aged 19-35 years were 2.56 times more likely to be at risk of PTSD as compared to those who were displaced when they were aged more than 35 years (aOR 2.56; 95% C.I. 1.31-5.01; p=0.006). In regards of

depression, respondents who were displaced when they were less than 18 years were at lower risk as compared to those who were older (p=0.042). This study finding has not been replicated in other studies. However, Essizoglu & Keser (2014) found higher PTSD rates among IDP who were at 1-6 years of age during the internal displacement, when compared those who were age group of 7-14 years (X2=6.962).

Participants who had been displaced for more than 1 year were at significantly higher risk of PTSD as compared to those who had been displaced for less than one year (p=0.006), same significant association was not found in depression (p=0.415). This finding conforms with that of Mahmood et al (2019), as their study showed the risk of psychiatric morbidity increase with the time spent in camps or settlements. This could be explained presence of post-migration risk factors, including stressful experiences within the camp and also bad living conditions in the camp (Acarturk et al., 2017).

Dose response relationship between trauma exposure and psychiatric morbidity is observed in this study, the more traumatic events exposed to the higher the chances of being at risk of psychiatric disorders. Number of traumatic exposures is found to be predictive to both mental health conditions, (aOR 1.09; 95% C.I. 1.05-1.13; p<0.001), (aOR 3.53; 95% C.I. 1.60-7.79; p=0.002). this finding is consistent with other studies which found significant correlation between poor mental health outcome and cumulative trauma exposure (Essizoglu & Keser, 2014; Feyera et al., 2015; Madoro et al., 2020; Mahmood et al., 2019; Roberts et al., 2008)

5.2 Conclusion

This study revealed high levels of Depressive disorder and Post-traumatic stress disorder among internally displaced persons in Mogadishu. Furthermore, this study provide evidence to show IDPs' susceptibility to trauma exposure and lack of essential services and goods. The most

prevalent traumatic events were lack of food or water (80.2%) followed by Ill health without access to medical care (79.9%), Lack of shelter (77.9%) and Combat situation (e.g., shelling and grenade attacks) at 55.5%. Important predictive factors in development of psychiatric morbidity were unemployment, cumulative traumatic exposure, frequency and duration of displacement.

5.3 Study Limitations

1. Overall security threats in Mogadishu.

2. Recall bias due to nature of the study, which is cross-sectional design

3. Women overrepresentation in study may lead gender bias.

5.4 Recommendations

1. Provision of screening and necessary intervention to IDPs suffering from PTSD and depression, as well as establishing a referral system for psychiatric disorders.

2. Governmental and nongovernmental agencies, who works on IDPs welfare, should provide an inclusive social support and protection agenda, to alleviate psychosocial distress and prevent further exposure of postmigration trauma within the camp.

3. Mental health and psychosocial support services is nonexistent in most of camps. Incorporating MHPSS service into preexisting health service in the camps may improve displaced people's functioning and psychological well-being.

4. Long-term solutions to the IDP situation, including substantial resolution to the conflict in Somalia, and prompt responses to environmental hardships would accelerate a return of IDPs to their homes to rebuild their lives.

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Budget

Table 3.4: Budget

#	Item Description		Cost (ksh)
1	Transport	Nairobi - Mogadishu	110,000
		Within Mogadishu	
2	Running costs		40,000
3	Printing of data collection forms		7000
4	Printing and binding of manuscripts and proposal		5000
5	Statistician		40000
6	Miscellaneous		7000
7	ERC Review fee		2000
8	Communication costs		2000
9	Research tools (HTQ & HSCL25)		7500
10	Research Publication		100,000
	Total		320,500

APPENDICES

Appendix 1: Informed consent for study participants

INFORMATION AND CONSENT FORM FOR STUDY PARTICIPANTS

Name of Study: "Prevalence of Post-traumatic Stress Disorder and Depression amongst Internally Displaced Persons in Mogadishu."

Principal Investigator: Dr. Mustafa Abdulrahman Ali

Consent explanation (To be read and questions answered in a language in which the study subject is conversant; English or Somali, and those who cannot read will be thoroughly explained to).

My name is Dr. Mustafa Ali; I am a pursuing a Masters in Psychiatry at University of Nairobi. I am doing a study entitled "Prevalence of Post-traumatic Stress Disorder and Depression amongst Internally Displaced Persons in Selected Mogadishu" as part of my degree award fulfillment. My supervisors are Dr. Mburu, Dr. Mutavi and Prof. Mathia who are all Lecturers in the Department of Psychiatry, University of Nairobi.

The aim of this study is to determine the burden and associated factors of PTSD and Depression among IDPs in Mogadishu. This study will be conducted by me under supervision of my supervisors in selected Mogadishu districts. This is a medical research and you are required to understand the following which apply to all in medical research.

1. Your participation is completely voluntary and you may withdraw consent at any time in the course of the interview.
2. Refusal to participate will not in any way affect your health services which you are entitled.
3. After reading the explanation, don't hesitate to ask any questions in case you need clarifications.

4. I will assess presence of PTSD and Depression by using an instrument which will take about 30 minutes of your time.
5. There is no right or wrong answer.
6. No invasive procedures such as drawing blood will be involved and no risks will be posed to you except that you may experience an emotional disturbance through asking you emotional questions.
7. All information obtained from this study will remain confidential and your privacy will be upheld. Your name will only appear on the consent form which will be signed and kept separately from the study documents for legal purposes and for identification in case you will be found with psychological problems that need follow up.
8. There will be no material gain from this study. However, the overall study may be of benefit to IDPs who suffering depression / PTSD and in general in terms of policy implementation and better intervention and care for displaced people
9. During interviews, research participants who are found to have mental or physical problem will be provided with immediate counseling and referred for treatment and follow-up services in the appropriate departments.
10. Results of the study can be availed to you upon request.

If you have any questions related to this study, or your health you can call me on my telephone number 0743046838 or my lead supervisors at the department of psychiatry, University of Nairobi or KNH/ UON Ethics and Research Committee at Kenyatta National Hospital on telephone number **2726300 Ext 44102**or P.O BOX **20723 -00202**, Nairobi.

Consent Form (English version)

I, ……………………………………………………………………the undersigned do hereby volunteer to participate in this study. The nature and purpose have been fully explained to me by Dr. Mustafa Ali.

The role I play by participating in the interviewee is to help the investigators collect information about depression and posttraumatic stress disorder. This information may or may not be useful in designing better ways to improve mental wellbeing in the future. My questions, if any, have been answered to my satisfaction. The Kenyatta National Hospital Research and Ethics Board, may be contacted by research subjects to discuss their rights on P.O Box 20723-0020 Nairobi or call on telephone number 02726300 Ext 44102

Participant's Signature

_______________________Date__________________________

Signature …………………

Researcher __________________________Date ……………………….

Signature ……………………

Appendices II: Consent Form (Somali version)

Lifaaqa 2: Wargalin Ogalaansho dadka ka qeybgalaya cilmi baarista

Foomka Macluumadka and Ogolansho Weydiinta dadka ka qeybgalaya cilmi baarista

Cinwanka Cilmi Baarista: "Xadiga iyo waxyabaha la xariiro xanuunka PTSD and Niyad Jabka e ku dhaca dadka kaso barakacay deganadoda"

Baaraha: Mustafa Abdurahman Ali

Sharaxaada ogalaanshaha (waxa logu aqrindona su'alaha, si ey ugu jawaban, luuqad ey yaqaanan dadka ka qeyb qadanaya cilmi barista; Ingiriis ama Somali, dadka aan aqoon sida wax loo aqriyo wa loo aqrin doona wana la fahansiin)

Magacaygu wa Mustafa Ali; waxan diyarinaya darajada labaad e cilmiga e loo yaqano Masterka madada Cilmiga cafimaadka maskaxda, waxaana dhigta Jamacadda Nairobi. Waxan sameynaya cilmi baris o cinwankedu yahay "Xadiga iyo waxyabaha la xariiro xanuunka PTSD and Niyad Jabka e ku dhaca dadka kaso barakacay deganadoda" cilmi baaristani wexey qeyb ka tahy oofinta wajibadka qeybta labaad waxbarashada sare. Waxa kor joogto ka aha cilmi baristan maclimiinta kala ah Dr. mburu, Dr. Mutavi, iyo Dr. Mathia kuwaaso dhamaantod ah baryaal sare o katirsan Jamacadda Nairobi.

Ujeedada cilmi baristani wa in la ogaado culeyska iyo waxyabaha la xariiro xanuunka PTSD iyo Niyadjabka ku dhaca dadka barakacayasha ah, cilmi baristan waxan ka sameyn doona qaar kamida degmoyinka magalada Muqadishu, waxana fulin doono aniga, waxana kashan doona kormeero yasheeda. Midani wa cilmi baaris cafimaad, horaan waxa lagaga bahanyahy inaa fahanto qodobada soo socdo:

1. Ka qeybgalka wa mid iska ah, waxadka ka noqon garta ogalanshaha waqti walba inta u socodo wareesiga

2. Hadii aad diido ka qeybgalka cilmi baristan ma saameyn doonto daryeelka cafiimadka aad xaqa u lahyd.

3. Marka aad aqriso sharaxaada, haka labalabeen in aad su'aal weydiso wa hadi aad u bahaato sharaxaad dheeri ah.

4. Waxan qiimayn doona xaladada nafsaniga ah aniga o isticmali doono Su'aal-weydimaha wexeyna qadan donta mudo dhan 30 daqiiqo

5. Majirto sual sax ah ama qalad ah.

6. Majirto wax brosiijur xanunleh o la sameynayo sida dhiig ka qaadish, kaliya waxan wax ka ogaan doona xalada nafsaniga ah iyo hadii u jiro jahwareer shacuurta ah

7. Dhamaan maclumadka laga helo cilmi baristan wexey ahan donan kuwa la qariyo, sido kale adiga xogtada wan ilalin doona. Magacaga o kaliya ayaa kaso muqan doona foomka

ogalanshaha, kaso aad saxixi doonto lana dhigi doona meel gaar ka ah dokumentiyada kale e cilmi barista sababo la xariiro sharciga.

8. Majiri doonto wax faaido maadi ah o laga heli doon cilmi baristan. Si kasto ey ahataba, balse faaidada guud e cilmi barisetan wexey noqonta kata in lagarto culeysyada nafsaniga ah e heesto barkacyasha taaso keeni karto in wax laga qabto mustaqbalka dhow.

9. Inta u socdo wareesiga qofki u baahdo daryeel cafimaad, mid maskaxeed mise mid jareed, waxa loo sameyno doona la talin waxana loo diri doon dawany xarumaha bixiyo adeega u ubahanyahy.

10. Hadi aad u bahato natijada cilmi baristan waad heli karta hadaad so dalbato.

Hadi aad qabto wax suaal ah oo la xariira cilmi baristan ama cafimaadkaga waxaad iga so wici karta namberkan 0743046838 ama kormeero yasha kasocdo qeybta dhimirka Jamacadda Nairobi ama Guddiga Baadhitaanka iyo Anshaxa KNH/UON e xaruntodu tahay cisbitalka Kenyatta National Hospital, talefone namber 2726300 Ext 44102or P.O BOX 20723 -00202, Nairobi.

Consent Form (Somali version)

Anigo ah, ………………………………………………………………….. qofka hoos ku saxiixan waxan cadeynaya in si tabaruc ah uga qeybgalayo cilmi baristan. Nooca iyo ujedada waxaa si fican igu sharaxay Dr. Mustafa Ali.

Doorka aan ka ciyaarayo wa in aan kaqeyb qaato wareysiga si aan uga caawiyo cilmi baraha inu helo xog ku saabsan diiqadda ama niyad jabka iyo jahwareerka posttraumatic stress. Macluumaadkaan waxaa laga yaabaa inuu anfaco ama inuusan anficin qaabeynta habka hormarinta cafimaadka maskaxda e mustaqbalka. Su'aalahaydii, haddii ay jiraanba, ayaa looga jawaabay qanacsanaanta aan qabo. Guddiga Baadhitaanka iyo Anshaxa ee Isbitaalka Qaranka ee Kenyatta, waxaa laga yaabaa inuu la xiriiro maadooyin cilmi baaris ah si uu ugala hadlo xuquuqdooda Sanduuqa P.O Box 20723-0020 Nairobi ama wac lambarka taleefanka 02726300 Ext 44102

Saxiixa ka qeybgalaha

______________________Date_________________________

Saxiix …………………

Cilmi baraha _________________________Date ……………………….

Saxiix ……………………………………………

Appendices III: Socio-demographic and Displacement History Questionnaire

1. Sex

   Male: ☐ Female: ☐

2. Age

   18-25: ☐ 26-35: ☐ 36-60: ☐ >60: ☐

3. Marital Status

   Single: ☐ Married: ☐ Separated: ☐ Divorced: ☐ Widowed ☐

4. Level of Education

   None: ☐ Quranic: ☐ Primary: ☐ Secondry: ☐ Tertiary ☐

5. Employments Status

   Employed: ☐ Unemployed: ☐ Student: ☐

6. Presence of family History of Psychiatric illness

   Yes: ☐ No: ☐

7. Number of Displacements

   Once: ☐ Twice: ☐ Three Times: ☐ More Than Three Times: ☐

8. Age of first Displacement

<18 year: ☐ 19-35 years: ☐ >35 years: ☐

9. Duration of Displacement

10. <1 year: ☐ 1-3 years: ☐ >3 years: ☐

Appendices IV: HARVARD TRAUMA QUESTIONNAIRE (DSM-V), and Hopkin Symptom Checklist-25

INSTRUCTIONS

We would like to ask you about your past history and present symptoms. This information will be used to help us provide you with better medical care. However, you may find some questions upsetting. If so, please feel free not to answer. This will certainly not affect your treatment. The answer to the questions will be kept confidential.

PART 1: TRAUMA EVENTS

Please indicate whether you have experienced any of the following events (check YES or NO)

		Yes	No
1.	Lack of shelter		
2.	Lack of food or water		
3.	Ill health without access to medical care		
4.	Confiscation or destruction of personal property		
5.	Combat situation (e.g. shelling and grenade attacks)		
6.	Forced evacuation under dangerous conditions		
7.	Beating to the body		
8.	Rape		
9.	Other types of sexual abuse or sexual humiliation		
10.	Knifing or axing		
11.	Torture, i.e., while in captivity you received deliberate and systematic infliction of physical or mental suffering (If YES, see Appendix)		

12.	Serious physical injury from combat situation or landmine		
13.	Imprisonment		
14.	Forced labor (like animal or slave)		
15.	Extortion or robbery		
16.	Brainwashing		
17.	Forced to hide		
18.	Kidnapped		
19.	Other forced separation from family members		
20.	Forced to find and bury bodies		
21.	Enforced isolation from others		
22.	Someone was forced to betray you and place you at risk of death or injury		
23.	Prevented from burying someone		
24.	Forced to desecrate or destroy the bodies or graves of deceased persons		
25.	Forced to physically harm family member, or friend		
26.	Forced to physically harm someone who is not family or friend		
27.	Forced to destroy someone else's property or possessions		
28.	Forced to betray family member, or friend placing them at risk of death or injury		
29.	Forced to betray someone who is not family or friend placing them at risk of death or injury		
30.	Murder, or death due to violence, of spouse		
31.	Murder, or death due to violence, of child		
32.	Murder, or death due to violence, of other family member or friend		
33.	Disappearance or kidnapping of spouse		
34.	Disappearance or kidnapping of child		

35.	Disappearance or kidnapping of other family member or friend		
36.	Serious physical injury of family member or friend due to combat situation or landmine		
37.	Witness beatings to head or body		
38.	Witness torture		
39.	Witness killing/murder		
40.	Witness rape or sexual abuse		
41.	Another situation that was very frightening or in which you felt your life was in danger. Specify:		

PART 5: TRAUMA SYMPTOMS DSM V

The following are symptoms that people sometimes have after experiencing hurtful or terrifying events in their lives. Please read each one carefully and decide how much the symptoms bothered you in the past week.

		(1) Not at all	(2) A little	(3) Quite a bit	(4) Extremely
1.	Recurrent thoughts or memories of the most hurtful or terrifying events				
2.	Feeling as though the event is happening again				
3.	Recurrent nightmares				
4.	Feeling detached or withdrawn from people				
5.	Unable to feel emotions				
6.	Feeling jumpy, easily startled				
7.	Difficulty concentrating				
8.	Trouble sleeping				

9.	Feeling on guard				
10.	Feeling irritable or having outbursts of anger				
11.	Avoiding activities that remind you of the traumatic or hurtful event				
12.	Inability to remember parts of the most hurtful or traumatic events				
13.	Less interest in daily activities				
14.	Feeling as if you don't have a future				
15.	Avoiding thoughts or feelings associated with the traumatic or hurtful events				
16.	Sudden emotional or physical reaction when reminded of the most hurtful or traumatic events				
17.	Feeling that the world is a very dangerous place				
18.	Feeling that you are a bad person				
19.	Blaming yourself for the traumatic event				
20.	Strong feeling of fear, horror, anger, guilt or shame when thinking about the traumatic event				
21.	Difficulty feeling love or happiness				
22.	Taking risks that may harm yourself or others				
23.	Feeling like you have been damaged as a person by the traumatic event				
24.	Feeling as if something reminds you of the trauma but it feels like a dream, that it is not happening to you, and/or that it is not real				
25.	Feeling people or objects around you are not real or strange				

PART 5.2: SCORING PART 5 – TRAUMA SYMPTOMS
DSM-V

1. Assign the following numbers for each answered item.

1 = *"Not at all"*

2 = "A little"

3= "Quite a bit"

4= *"Extremely"*

2. Add up item scores and divide by the total number of the answered items.

DSM-5 Trauma Symptom Score = ITEMS 1-25/25

SCORE > 2.5 * CHECKLIST POSITIVE FOR PTSD

Hopkin Symptom Checklist-25

Listed below are symptoms or problems that people sometimes have. Please read each one carefully and describe how much the symptoms bothered you or distressed you in the last week, including today. Place a check in the appropriate column.

	PART II **DEPRESSION SYMPTOMS**	**Not at all**	**A little**	**Quite a bit**	**Extremely**
1.	Feeling low in energy, slowed down				
2.	Blaming yourself for things				
3.	Crying easily				
4.	Loss of sexual interest or pleasure				
5.	Poor appetite				
6.	Difficulty falling asleep, staying asleep				
7.	Feeling hopeless about future				
8.	Feeling blue				
9.	Feeling lonely				
10.	Thought of ending your life				
11.	Feeling of being trapped or caught				
12.	Worry too much about things				
13.	Feeling no interest in things				
14.	Feeling everything is an effort				
15.	Feeling of worthlessness				

SCORING

Responses are summed and divided by the number of answered items to generate the following scores:

2. For the responses to each item, assign the following numbers:

1 = *"Not at all"*

2 = "A little"

3= "Quite a bit"

4= *"Extremely"*

2. Add up item scores and divide by the total number of the answered items.

DSM IV Depression Score= ITEMS 1-15/15

Individuals with scores on depression or total greater than 1.75 are considered symptomatic.

Note: ≥ 1.75 is now considered a scientifically valid cut-off point.

Lifaqa III: Weydiyaha maclumaadka bulshada iyo taarikhda barakaca (Somali Version)

1. Jinsi

   Lab: ☐ Dhidig: ☐

2. Da'da

   18-25: ☐ 26-35: ☐ 36-60: ☐ >60: ☐

3. Xaaladda Guurka

   Doob: ☐ Xaas: ☐ Kala tag: ☐ Furiin: ☐ Laga Dhintay ☐

4. Heerka Waxbarasho

   Waxba baran: ☐ Dugsi Quran: ☐ Dugsi Hoose: ☐ Dugsi Sare: ☐ Jamacadd ☐

5. Xalada Shaqada

   Shaqeeya: ☐ Shaqo la'an: ☐ Ardey: ☐

6. Jiritanka xanuun dhanka dhimirka ah qoyska dhaxdisa

   Haa: ☐ May: ☐

7. Tirada Barakaca

   Hal mar: ☐ Labo mar: ☐ Sadax mar: ☐ Wax ka badan sada mar: ☐

8. Da'da qofka marki ugu horeysay o ey barakaceyn

<18 sano: ☐ 19-35 sano: ☐ >35 sano: ☐

9. Mudada u qofka barakaca u yahay

10. <1 sano: ☐ 1-3 sano: ☐ >3 sano: ☐

Appendices V: HARVARD TRAUMA QUESTIONNAIRE (DSM-V), and Hopkin Symptom Checklist-25 (Somali Version)

HARVARD TRAUMA QUESTIONNAIRE (DSM-V)
Tusaha

Waxaan jeclaan lahayn inaan ku weydiinno taariikhdaadii hore iyo astaamahaaga hadda. Macluumaadkaan waxaa loo adeegsan doonaa in ay naga caawiso sidii aan ku siin lahayn daryeel caafimaad oo wanaagsan. Si kastaba ha noqotee, waxaad ka heli kartaa su'aalo qaar o murugo leh. Hadey sida tahay, fadlan xor ayaa u tahay inaadan jawaabin. Runtii tani saameyn kuma yeelan doonto daweyntaada. Jawaabta su'aalaha waxaa noqon doonta mid la qariyo.

QAYBTA 1AAD: Dhacdooyinka Xanuunka leh

Fadlan sheeg haddii aad la kulantay mid ka mid ah dhacdooyinka soo socda (calaamadee HAA ama MAYA)

		Haa	Maya
1.	Hoy la’an		
2.	Cuno ama biyo la’an		
3.	Caafimaad dari iyadoon adan helin daryeel caafimaad		
4.	La wareegista ama baabi'inta hantidada shaqsiyeed		
5.	Xaalad dagaal (tusaale, duqeynta iyo weerarada bambaanooyinka)		
6.	Barakac khasab ah iyado xaladu adagtahy		
7.	Jir dil		
8.	Kufsi		
9.	Noocyada kale e xadgudubka ama ceebeynta jinsiga ah		
10.	Tooreyn ama fashayn		
11.	Jirdil, taaso ah., intii lagu heestay maxaabiis ahaan iyado si ulakac ah ama nidaamsan lagugugesty silicin xaga jirka ah ama xaga maskaxda (Hadday HAA tahay, eeg lifaaqa)		
12.	Dhaawac halis ah oo jirka ka soo gaarta xaalada dagaalka ama miinada dhulka lagu aaso		
13.	Xabsi galin		
14.	Shaqaale qasab ah (sida xayawaan ama addoon)		
15.	Baad ama dhac		
16.	Ka dhaadhicin fikir qaldan		
17.	Ku qasbid ina dhumato		
18.	Afduubid		
19.	kale tag kale o qasab ah e xubnaha kale e qoyska		

20.	Ku qasbid in aad radiso ama duugto meyd		
21.	Go'doomin qasab ah		
22.	In qof ayaa lagu qasbo inuu ku khiyaaneeyo isla markaasna khater dhimasho ama mid dhawac ku galiyo		
23.	In lagu diido in qof a dugatid		
24.	In lagugu qasabay inaa si xun u gafto ama burburiso meydadka ama qabuuraha dadka dhintay		
25.	In lagugu qasabey inaa dhaawac u geysato xubin kamida qoyskaga, ama saaxiibka		
26.	In lagugu qasabey inaa dhaawac u geysato qof aan ka mid aheyn qoyskaga, ama saaxibada		
27.	Ku qasbid burburin hantida qof kale		
28.	In lagugu qasbo ina qiyanto qof familka kamid ah ama saxiibka taaso ey ka dhalan kartey qater dhimasho ama mid dhawac		
29.	In lagugu qasbo ina qiyanto qof familkaaga ama saxiibka aan aheyn ah taaso ey ka dhalan kartey qater dhimasho ama mid dhawac		
30.	Dil malo geystay ama maku dhintay rabshadaha dhacya ninkaga ama xaaskaga.		
31.	Dil malo geystay ama maku dhintay rabshadaha dhacya cunugaga		
32.	Dil malo geystay ama maku dhintay rabshadaha dhacya qof qoyska kamid aha ama saxiibka		
33.	Xaaskaga ama ninkaga mala wayay ama mala afduubtay		
34.	Cunugaga mala wayay ama mala afduubtay		
35.	Qof kamid ah qoys kaga ama saxibkaa mala wayay ama mala afduubtay		
36.	Dhaawac halis ah o soo gara xubin qoyska ka mid ah ama saaxiib taasoo ay ugu wacan tahay xaalad dagaal ama miinada dhulka lagu aaso		
37.	Mala kulantey qof laga garacayo jirka ama madaxa		
38.	Mala kulantey qof la jir dilayo		
39.	Mala kulantey qof la'dilayo		
40.	Mala kulantey qof la kufsanayo ama si jisi ah loogu xad gudbayo		
41.	Xaalad kale oo aad kuu cabsi galisay ama aad dareentay in noloshaadu qatar gashay Ka hadal:		

QAYBTII 4AAD: CALAAMADAHA TARAMADA

DSM-IV

Waxyaabaha soo socdaa waa astaamaha ama calamadaha ey mararka qaarkood dadka yeeshaan kadib markay la kulmaan dhacdooyin xanuun badan ama naxdin leh. Fadlan mid walba si taxaddar leh u aqri oo go’aanso inta ay le'eg tahay astaamaha aad isku aragtay kuwaso aad dhibsatey labadii usbuuc e u dambeysay.

		(1) Gabi ahanba maya	(2) In yar	(3) Xoga	(4) In badan
1.	Ka fikirka ama xusuusta dhacdadi ugu waxyeellada badaneed ama ugu argagaxa badneed o so noqnoqdo				
2.	Dareemida sidii in dhacdadu mar labaad dhaceyso				
3.	Qarow ama riyo cabsi leh o so noqnoqata				
4.	Dareemid go'doon ama inaa dadka ka dhax baxdo				
5.	Inaad dareemi wayso shacuurtada				
6.	In si fudud aad u naxdo				
7.	Iney kugu adkaato inad wax dhuuxdo/ ama diirada saarto				
8.	Hurdada o dhib kugu noqoto				
9.	Inaa dareento ina ku jirto wardiyo iyo fojegnaan dheeri ah				
10.	In dareento caro fara badan				
11.	Ka fogaanshaha nashaadaadka ku xasuusinaya masiibada ama dhacdada waxyeelada leheed				

12.	Inaad awoodi weyso inaad xusuusato qaybo ka mid ah dhacdadi ugu waxyeelada badaneed ama ugu naxdinta badneed				
13.	Xiisa yare la xariirta nashaadaadka maalinlaha ah				
14.	Inaad dareento in adan mustaqbal laheyn				
15.	Ka fogaanshaha fikradaha ama dareennada la xidhiidha naxdinta ama dhacdadi xanuunka laheed				
16.	Falcelin lama filaan ah ama fal jidh ahaaneed markii la xusuusiyo dhacdooyinka ugu waxyeellada badana ama naxdinta laha				
17.	Dareemida in dunidu tahay meel aad khatar u ah				
18.	Dareemid inaa tahy qof xun				
19.	Inaad naftada ku edaysid dhacdadi xununka laheed e kugu dhacdey				
20.	Inaa daareento dareen xogan oo cabsi leh, argagax, xanaaq, dambi, ceeb, markasto o uu kugu so dhaco fakarka dhacdadi naxdinta leheed				
21.	Iney kugu adkaato ina dareento jeceyl ama farxad				
22.	Qaadashada khataraha taaso wax yeleyn karto naftaada ama dadka kale				
23.	Dareemida in si shaqasi ah uu ku wax yeleyay dhacdadi naxdinta laheed				
24.	Dareemida inay wax uun ku xasuusinayaan dhaawacyada laakiin waxay u muuqdaan sidii riyo, inaanay kugu dhicin, ama /ama aysan run ahayn				
25.	Dareemida in dadka ama walxaha ku hareereysan ineysan dhab ahyn ama qariib yihiin.				

Qeebta 5.2: Xisaabinta Qeybta 5aad, Calamadaha Taramada
DSM-V

1. U qoondee lambarada soo socda shay kasta oo laga jawaabey.

1 = *" Gabi ahanba maya"*

2 = "In yar"

3= "Xoga"

4= *"In badan"*

2. Isku dar dhibcaha sheyga una qaybi tirada guud ee walxaha laga jawaabay.

DSM-5 Dhibcaha Calamadaha Taramada = Sheyga 1-25/25

DHIBCAHA> 2.5 * WEXEY TUSINAYSA INUU JIRO XANUNKA PTSD

HOPKINS SYMPTOM CHECKLIST-25 (Somali Version)

HSCL-25

Hoos waxaa lagu taxay astaamaha ama dhibaatooyinka dadku mararka qaarkood leeyihiin. Fadlan midwalba si taxadar leh u aqri oo sharax inta aad isku aragtay ama ku dhibtootay usbuucii la soo dhaafay, oo ay ku jirto maanta. Sax ku qor khaanadda ku habboon.

	Astaamaha Niyada jabka	(1) Maya	(2) In yar	(3) Xoga	(4) In badan
1.	Ina dareento tabar dari iyo gaabis				
2.	Inaad naftada ku dhalecayso wax yabaha qaar				
3.	Inaad si fudud u oydo				
4.	Iney lunta xiisaha iyo raaxada sariirta				
5.	Cunto xumo				
6.	Inaa huradada ey kugu adkaato				
7.	Dareemid rajo xumo mustaqbalka ah				
8.	Dareemid murugo				
9.	Dareemid cidlo				
10.	Ku fakarid inaad nafta iska qaado				
11.	Inaa dareento inaad dabin ku dhacdey				
12.	Inaad wax badan walwasho				
13.	Inadan waxba daneen				
14.	Dareemida in wax walba ey dadaalyihiin				
15.	Dareen qiimo daro				

DHIBCEYNTA

Isugeynta jawabaha waxa lo qeybin donaa tirade inta shey e laga jawabey si loo so saaro dhibcaha so socdo:

Jawaabaha shay kasta, ku sumad lambarada soo socda:

1 = *" Gabi ahanba maya"*

2 = *"In yar"*

3= *"Xoga"*

4= *"In badan"*

2. Isku dar dhibcaha sheyga una qaybi tirada guud ee walxaha laga jawaabay

Dhibcaha Niyad jabka e DSM !V= Shey 1-15/15

Shakhsiyaadka leh dhibco murugo ama wadar ahaan ka weyn 1.75 waxaa loo tixgeliyaa inay leyihiin astamaha cudurka niyadjabka

Appendix VI: Lists of IDP camps

S/N	Name of the IDP camps	District
1	Carwo	Hodan
2	Carwo 2	Hodan
3	Carwo 3	Hodan
4	Afaraad	Hodan
5	Manaas	Hodan
6	Tarabuunka	Hodan
7	Ceel garas	Hodan
8	Bidan Dhere 2	Hodan
9	Ceel garas 2	Hodan
10	Ala aamin 3	Hodan
11	Shabelle 1	Hodan
12	Sigale 4	Hodan
13	Wanaagsan 2	Hodan
14	Jaamacada 1	Hodan
15	Sarah dhaadheer	Hodan
16	Abti doon	Hodan
17	Al Baraka	Hodan
18	Ceel garas 1	Hodan
19	Gargilis	Hodan
20	Barkulan	Hodan
21	Saad	Hodan
22	Naafac	Hodan
23	Nice	Hodan
24	Xaqsoor	Hodan
25	Saraha gabgaabka	Hodan
26	Sabool koriye	Hodan
27	Sh. Xasan Barasane	Hodan
28	Zone K	Hodan
29	Dhalwo 2	Hodan
30	Iman sharmake	Hodan
31	Xaqsoor	Hodan
32	Reebow	Hodan
33	Bur go'an 1	Hodan
34	Buulo tikniko	Hodan
35	Barakaale	Hodan
36	Dugsi sare benadir	Hodan
37	Kool	Hodan
38	Imaansade	Hodan
39	Kafayo	Hodan

40	Barwaqo yarey	Hodan
41	Alafuto 2	Hodan
42	Reebow	Hodan
43	Yusuf	Hodan
44	Karkuus	Hodan
45	Darusalaam 1	Hodan
46	Alhamdu	Hodan
47	Safa	Hodan
48	Malayley	Hodan
49	Bosniya	Hodan
50	Bardheere	Hodan
51	Vinti uno	Hodan
52	Alafuto 2	Hodan
53	NRC	Hodan
54	Gargilis	Hodan
55	Wanagsan 2	Hodan
56	Warsame	Boondhere
57	Ceelbuur 3	Boondhere
58	Ceelbuur 4	Boondhere
59	Cuuriyaamiinta	Boondhere
60	Tawakal 3	Boondhere
61	Tawakal 2	Boondhere
62	Sikurusiyun	Boondhere
63	Liibaan	Boondhere
64	Wazarada Caafimaadka	Boondhere
65	Al-wali	Boondhere
66	Buulo Maqaarey	Boondhere
67	Elman	Boondhere
68	Dulmidid	Boondhere
69	Jeneral Da’ud	Boondhere
70	Sabir	Boondhere
71	Badbaado	Dharkenlay
72	Korsan	Wadajir
73	Cosab	Wadajir
74	Siliga	Wadajir
75	Indholayaasha 1	Wadajir
76	Rajo	Wadajir

Appendices VII: Curriculum Vitae

Contact Details

Name: Mustafa Abdulrahman Ali

Nationality: Somali

Sex: Male

Address: + 25215514734

E-mail: mustafxabeeb@gmail.com

Date of Birth: 1992

Place of Birth: Mogadishu

Marital Status: Single

Career Objectives: To widen my professional horizon by providing effective mental health service, seeking new adventure where my knowledge, skills could be utilized to the maximum.

Educational Qualifications

2015-2016 Certificate of Attendance, e-learning mental health training course, Mersey Care NHS Liverpool, UK.

2009-2015: Bachelor of Medicine and Surgery (MBBS), Banadir University, Mogadishu,

2006-2009: Mamur Primary and secondary School – Mogadishu, Somalia

Work Experience

2015 to date: Medical Officer at Habeb Public Mental Hospital

Responsibilities: providing counseling and therapeutic sessions with inpatients, formulating diagnoses and management patients with mental disorder.
2016 to date: Assistant lecturer at Benadir University,
Responsibilities: delivering lectures, tackling students with difficulty topics.

SKILLS

Language:

Somali, English, Arabic.

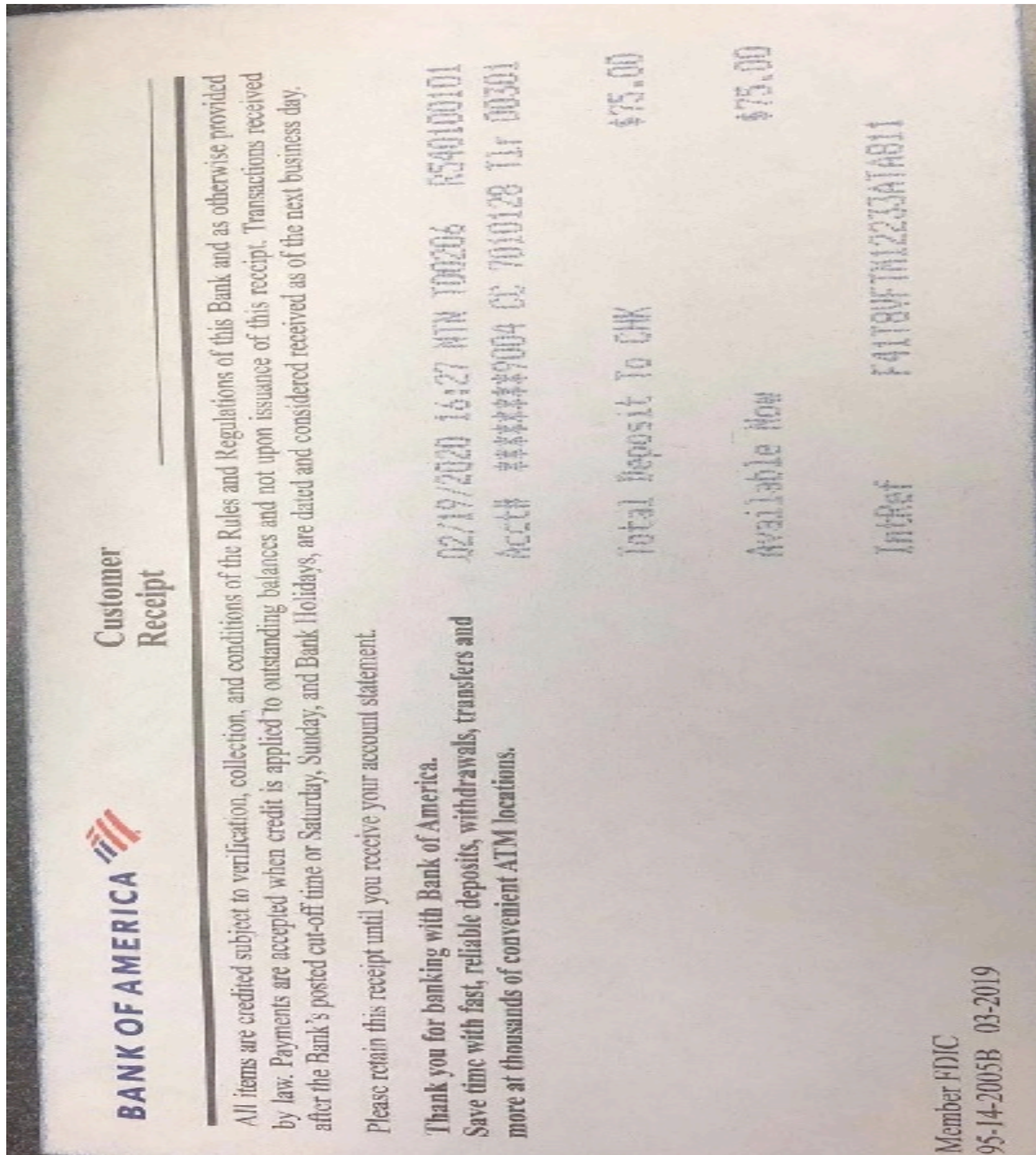
Computer application.

MS word, excel etc.

Team work and good communication

Basic life support

Appendices VIII: Receipt for Study Tool



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02/19/2020 16:27 MTN TD0206 R5401D0101
Acct# ***********9004 Cl 7010128 TLr 00301

Total Deposit To CHK $75.00

Available Now $75.00

IntRef F41T8VF7N1223JATAB11

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