T.C.
REPUBLIC OF TURKEY
HACETTEPE UNIVERSITY
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MENTAL HEALTH AND QUALITY OF LIFE ASSESSMENT AMONG ADULT INTERNALLY DISPLACED PERSONS (IDPs) IN TRIPOLI CITY LIBYA

Dr. Mohamed SRYH

Public Health Program
PHILOSOPHY OF DOCTORAL (PhD) THESIS

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APPROVAL PAGE

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This thesis study has been approved and accepted as a PhD dissertation in "Public Health Program " by the assesment committee, whose members are listed below, on 10th January 2019.

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28 Ocak 2019

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YAYIMLAMA VE FİKRİ MÜLKİYET HAKLARI BEYANI

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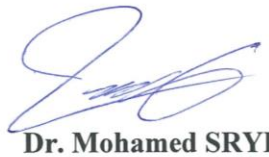
ETHICAL DECLARATION

In this thesis study, I declare that all the information and documents have been obtained in the base of the academic rules and all audio-visual and written information and results have been presented according to the rules of scientific ethics. I did not do any distortion in data set. In case of using other works, related studies have been fully cited in accordance with the scientific standards. I also declare that my thesis study is original except cited references. It was produced by myself in consultation with supervisor Prof. Dr. L. Hilal Özcebe and written according to the rules of thesis writing of Hacettepe University Institute of Health Sciences.



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ABSTRACT

Sryh, M., Mental Health and Quality Of Life Assessment among Adult Internally Displaced Persons (IDPs) in Tripoli City Libya, Hacettepe University Graduate School of Health Sciences Program of Public Health Doctor of Philosophy Thesis, Ankara, 2019. Internal displacement in Libya is one of the main results of armed conflicts since 2011. Displacement is associated with important problems such as increase in mental health, communicable and non communicable diseases, and decrease in accessibility to health service. Displacement adversely affects the quality of life of Internally Displaced Persons (IDPs). Our descriptive study aims to assess the percentage of mental disorders, the level of the quality of life and associated socio-economic factors among IDPs in private residents and camps in Tripoli city Libya. In this study, 469 IDPs were reached in Tripoli city, Libya (227 IDPs in private residency and 242 IDPs in camp residency). The questionnaires including socio-economic characteristics, health status, Depression Anxiety Stress Scale (DASS 42) and Quality of Life Scale (SF-36) were filled by IDPs under observation. Two models were used in the analysis; bivariate model and logistic regression model. Among private residents 51.8% were males, 41.0% of them aged 25-34, the mean score for SF 36 Physical Sub dimension (PQOL) and standard deviation (Sd) was found as 69.72±20.85 ($p<0.001$) and the mean score for SF 36 Mental Sub dimension (MQOL) and Sd was 62.28±17.87 ($p<0.001$). Among camp residents 33.2% were males, 32.6% of them aged 18-24, they had mean score and Sd 59.43±17.86 for PQOL ($p<0.001$) and mean score and Sd 55.56±17.20 for MQOL ($p<0.001$). Camp resident IDPs had higher mental disorders and lower score of quality of life domains than private resident IDPs. Among IDPs; statistically significant association was found between low level of quality of life and camp residency, the presence of chronic disease and mental disorders.

Keywords: Anxiety, Chronic disease, DASS 42, Depression, Internal displacement, Mental health, Quality of life, SF 36, Stress.

ÖZET

Sryh, M., Libya'nın Trablusgarb Şehrinde Yetişkin Yer Değiştiren Kişiler Arasına Ruh Sağlık Ve Yaşam Kalitesi Değerlenderme. Hacettepe Üniversitesi Sağlık Bilimleri Enstitüsü Halk Sağlığı Programı Doktora Tezi, Ankara, 2019.
libya'da yaşam yerinden edilme, 2011 yılından beri silahlı çatışmaların en temel sonuçlarından biridir. Yerinden edilmeler, ruhsal sağlık sorunlarının, bulaşıcı ve bulaşıcı olmayan hastalıkların artması ve sağlık hizmetlerine erişilebilirliğinin azalmasıyla ilişkilidir. Yaşam yerinden edilme, yaşam kalitesini olumsuz olarak etkilemektedir. Tanımlayıcı tipteki çalışmamızda, Libya'daki Trablusgarp kentinde kamplarda ve özel ikamet konularında yaşayan yerinden edilen kişiler arasında, ruhsal bozuklukların görülme yüzdesi, yaşam kalitesi düzeyi ve ilişkili sosyoekonomik faktörlerin değerlendirilmesi amaçlanmıştır. Bu çalışmada, Libya'da Trablusgarp kentinde yerinden edinmiş 469 kişiye (özel ikamet konutlarında 227 kişi ve kamplarda 242 kişi) ulaşılmıştır. Sosyoekonomik özellikler, sağlık durumu, Depresyon Anksiyete Stres Ölçeği (DASS 42) ve Yaşam Kalitesi Ölçeği (SF-36) yer alan anket formu yerinden edilmiş kişiler tarafından gözlem altında doldurulmuştur. Analizde iki yöntem kullanılmıştır: Çapraz tablolar ve lojistik regresyon modelleri. Özel ikamet konutlarında görüşülen kişilerin %51,8'i erkek ve % 41,0'ı 25-34 yaş grubunda olup, SF36 Fiziksel Alt Boyut puan ortalaması (SF36 FS) ve standart sapması (Ss) 69,72 ± 20,85 ($p < 0,001$) ve SF36 Mental Alt Boyut puan ortalaması (SF36 MS) ve Ss 62,28 ± 17,87 ($p<0,001$) olarak bulunmuştur. Kampta görüşülen kişilerin %33,2'si erkek ve %32,6'sı 18-24 yaş grubunda olup, SF 36 FS puan ortalaması ve Ss 59,43 ± 17,86 ($p<0.001$) ve SF 36 MS puan ortalaması ve Ss 55,56 ± 17,20 ($p < 0,001$) olarak bulunmuştur. Kamplarda görüşülen yerinden edilmiş kişilerde, özel ikamet konutlarında yaşayanlara göre ruhsal bozukluklar daha fazla görülmekte ve yaşam kalitesi daha düşük düzeydedir. Yerinden edilmiş kişilerde düşük yaşam kalitesi düzeyiyle, kampta yaşamak, kronik hastalık ve ruhsal bozukluk olması arasında istatistiksel olarak anlamlı bir ilişki bulunmuştur.

Anahtar Kelimeler: Anksiyete, DASS 42, Depresyon, Kronik hastalık, Libya, Ruh sağlığı, SF 36, Stres, Yaşam kalitesi, Yerinden edilme.

CONTENTS

LIST OF ABBREVIATIONS

ARI	Acute Respiratory Infections
CI	Confidence Interval
DALYs	Disability-Adjusted Life-Years
DASS	Depression Anxiety Stress Scale
DC	Data Collector
DRC	Democratic Republic of the Congo.
DSM	Diagnostic and Statistical Manual
DTM	Displacement Tracking Matrix
Dx	Diagnosis
GH	General Health
HIV-AIDS	Human Immunodeficiency Virus-Acquired Immune Deficiency Syndrome
HRQOL	Health Related Quality of Life
ID	Identification
IDMC	Internal Displacement Monitoring Center
IDP	Internally Displaced People
LD	Libyan Dinar (Currency)
MCS	Mental Compound Summary
MH	Mental Health
MOS	Medical Outcomes Study
MQOL	Mental Quality of Life
N	Number
NE	Not Entered
NTC	National Transitional Council
OCHA	United Nations Office for the Coordination of Humanitarian Affairs
PCS	Physical Compound Summary
PF	Physical Function
PQOL	Physical Quality of Life
PROMIS	The Patient Reported Outcomes Measurement Information System
PRS	Protracted Refugee Situation
PTSD	Post Traumatic Stress Disorder
QOL	Quality of Life
RAND	Research And Development
RLEP	Role Limitation due to Emotional Problems
RLPH	Role Limitation due to Physical Health Problems

SF	Social Function
SF-36	Short Form-36
St.d	Standard Deviation
UN	United Nations
UNHCR	United Nations High Commissioner for Refugees
WHO	World Health Organization
YLDs	Years Lived With Disability

FIGURES

TABLES

1. INTRODUCTION

1.1. Context

Libya is a North African country with an estimated 6,411,776 population (2015), with a population density of 3.55/km^2 and a 14,854 $ Gross Domestic Product Per capita (2015) and 46.4 billion barrel of reserved crude petroleum oil (1,2).

As a part of the (Arab spring), conflicts erupted on February 2011 led to bloody clashes that spread nationwide, and changed into an armed conflict. The conflict continued for 6 months and ended on 20 August in the same year. In May 2014 fighting broke out again in the main cities of Libya; Tripoli and Benghazi and their territories. The escalation of the conflict resulted in evacuation of the United Nations (UN) related agencies and most of the diplomatic delegations, and the conflict still continued on. In May 2016 armed clashes renewed in the city of Sirte against Islamic State militants. Along those years of armed clashes all over the country hundreds of thousands of Libyans were internally displaced and hereby mentioned as Internally Displaced Persons (IDPs) (3).

During the 2011 conflict it was estimated that at least half a million (500,000) people were internally displaced, these were mostly concentrated at the conflict affected cities such as Misurata, Ajdabiya, Nafousa mountains, Tawarga, Bani Walid and Sirt, soon at the end of October 2011 and when the opposition forces presented by National Transitional Council (NTC) declared the countries liberation most of the displaced people returned home, and by the late 2011 the estimated number of IDP was about 154,000 totally all over the country (4).

Later on conflicts started at May 2014 led to another waves of internal displacement. According to Internal Displacement Monitoring Centre (IDMC) more than 434,000 internally displaced people as of July 2015 was monitored in Libya, many of them were displaced more than once and most of them were living in governmental schools, makeshift camps and abundant governmental buildings (4).

Armed conflicts had a great impact on mental and psychosocial state among the effected society. Armed conflict related stress increased the risk of Post Traumatic Stress Disorder (PTSD), substance abuse and depression, where the

prevalence of such disorders increased from 1-3% among normal populations up to 30-40% among armed conflict effected populations, where they may experience symptoms such as sleeplessness, irritability, hopelessness and hypervigilance, symptoms which can be seriously affecting the individual's ability to carry on his normal functions. Effected people are not classified normally as having a psychiatric disorder but may experience different psychosocial disorders as domestic violence, criminal activities, educational dropouts and other antisocial behaviours, where a large part of the effected people may suffer nightmares, anxiety and stressful feelings that can be transient and recover over time (5).

In Libya, and due to decades of neglect, and adding the impact of 2011 and the ongoing 2014 conflict, made the mental health system in progressive weakness, with only one psychiatrist per 200,000 citizens, and only two main psychiatry hospitals in Tripoli and Benghazi (6). In addition, the access to health care services was greatly diminished in Libya; the portion of population affected by the conflict, the size of geographical area involved, the number of non functioning health facilities and the lack of sufficient human resources were the factors that affected healthcare services accessibility, these factors affecting all regions in Libya to different degrees, and these factors were highly linked to the conflict and displacement (7).

Our study aims to assess the proportion of mental disorders among IDPs in Tripoli city Libya, and to assess the burden of mental disorders on the quality of life, and looking for the demographic, social and economic factors that can affect the mental health status among IDPs, emphasizing on type of residency, utilization of health services and general health condition.

1.2. Research Objectives

1.2.1. General Objectives

- Assessment of Mental Health condition among adult IDPs in Tripoli city Libya according to their type of residency.
- Assessment of Health Related Quality of Life (HRQOL) among adult IDPs in Tripoli city Libya according to their type of residency.

1.2.2. Specific Objectives

- Identification of proportion of mental disorders among adult IDPs in Tripoli city Libya according to their type of residency.
- Identification of demographic factors that affect mental health and HRQOL among adult IDPs in Tripoli city Libya according to their type of residency.
- Identification of socio-economic factors that affect mental health and HRQOL among adult IDPs in Tripoli city Libya according to their type of residency.
- Identification of the effect of general health condition on mental health and HRQOL among adult IDPs in Tripoli city Libya according to their type of residency.
- Identification of the effect of utilization of healthcare services on mental health and HRQOL among adult IDPs in Tripoli city Libya according to their type of residency.
- Identification of the effect of type of residency and mental health on HRQOL among adult IDPs in Tripoli city Libya.

Contribution

- The research will provide a sound evidence for decision makers in order to set up priorities, and allocate resources according to healthcare needs.
- The research will provide further deep information about IDPs; the information can be beneficial for researchers and academics designing future researches.

2. LITERATURE REVIEW

2.1. Libya

2.1.1. Geopolitics

Libya is a North African country with an estimated 6,374,616 population (2017) (1), with a population density of 4/km^2 and a 9,800 $ Gross Domestic Product Per capita (2017) and 46.4 billion barrel of reserved crude petroleum oil (2,3). The small population with an enormous natural resources and strategic geographical position made Libya a point of political tension since the discovery of the petroleum oil reserve the year 1956 (4).

2.1.2. Libyan Conflict

In the year 2011, and immediately after the beginning of what was known as "Arabic spring" in neighboring Tunisia and Egypt, called against the dictatorship in Libya started to rise up until February 2011 when the public demonstrations spread all over the country led to clashes between security forces and anti-government rebels, resulted in an armed conflict that ended in October 2011, and the start of a new era with the establishment of a new democratic and elected political regime that lasted for the following two years (4).

By the year 2014, and when the some parties lost control over the national parliament known as "The General National Congress", they started a new wave of conflicts against GNC loyal forces all over the country, with the support of the neighboring countries that were threatened by the Arabic spring ideology, the conflicts have been still carrying on up to the current day (8).

Through a total of three years of armed conflicts, more than two million people was effected by the conflict either directly or indirectly, by the destruction of the public and private facilities, the destruction of the country's infrastructure, reduced national economy, reduced accessibility to governmental services, healthcare services, water, proper sanitation and education, Some people have suffered from internal and external displacement, inequality, family destruction and negative impacts of international migration. All of these affected the health status of

the whole society negatively, and in many aspects including communicable and non communicable diseases, maternal and child health and psychosocial aspects, apart from the thousands of deaths and injured people resulted from the armed conflict (7).

2.2. Forced Displacement and IDP

2.2.1. IDPs definition, statistics

Oxford Dictionary defines forced displacement as *"The enforced departure of people from their homes, typically because of war, persecution, or natural disaster"*, while UN define it as *"The displacement of people refers to the forced movement of people from their locality or environment and occupational activities. It is a form of social change caused by a number of factors, the most common being armed conflict. Natural disasters, famine, development and economic changes may also be a cause of displacement."* (9,10).

On the other hand, and according to the United Nations Refugee Agency Internally displaced persons (IDPs) 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."* According to this descriptive definition, IDPs are still considered full citizens with full rights that guaranteed by their citizenship without any special consideration, similar to other habitual residents of their country. And thus the local authorities should take all the needed efforts to prevent forced displacement and to protect IDPs (11).

On the other hand, forced displacement has another form of victims; they are refugees and defined as follows: "*A refugee is someone who has been forced to flee his or her country because of persecution, war or violence. A refugee has a well-founded fear of persecution for reasons of race, religion, nationality, political opinion or membership in a particular social group. Most likely, they cannot return home or are afraid to do so. War and ethnic, tribal and religious violence are leading causes of refugees fleeing their countries"* (12).

Forced displacement carries a serious health hazards specially among vulnerable groups, starting from the emotional and psychological trauma due to changing social environment, moving to the physical harms caused by scarcity of food and difficult access to clean water, sanitation and healthcare services, adding to that living in an overcrowded conditions leads to higher chance of transmission of different infectious diseases, displaced people are also at high risk of sexual exploitation, unsafe sexual practice, gender based violence and mental health problems (13).

According to World Disaster Report 2012 there are more than 72 million people globally are forced migrants and displaced because of violence and disasters, the number represents 1% of the total global population, 60% of them which is almost 43 millions are displaced because of violence and conflicts, part of them are internally displaced people IDPs who counts for more than 26 million people (14).

In Libya during the 2011 conflict it was estimated that at least half a million (500,000) people were internally displaced as a result of clashes between pro-government and opposition fighting forces, these were mostly concentrated at the conflict affected cities such as Misurata, Ajdabiya, Nafousa mountains, Tawarga, Bani Walid and Sirt, soon at the end of October 2011 and when the opposition forces presented by National Transitional Council (NTC) declared the country liberation most of the displaced people returned home, and by the late 2011 the estimated number of IDP was about 154,000 totally all over the country, many of them were displaced more than once and most of them are living in governmental schools, makeshift camps and abundant governmental buildings (15).

Later on conflicts started at June 2014 led to another waves of internal displacement, according to internal displacement monitoring centre (IDMC) more than 197,000 internally displaced people as of December 2017 were monitored in Libya, 29,000 of them were considered as new displacement in 2017 (16).

According to Libya Displacement Tracking Matrix report, it is estimated that there were 179,400 IDPs in Libya by April 2018 compared to 240,188 IDPs in April 2017, most of them were displaced due to fear from general conflict and the presence of armed groups, and 71% of them lived in self-paid rented accommodation. On the

other hand there were 372,022 returnees in Libya in 2018 compared to 249,298 in 2017 and 92% of them returned to their previous houses (17).

2.2.2. IDPs demographic characteristics

According to Desk Research of the Surveys of IDPs conducted in Ukraine 2017, age groups of IDPs where 0-17, 18-59, 60+ and they represents 18%, 60%, 22% respectively. Among all survey respondents there were 56% females and 44% males, and their level of education showed Primary / Unfinished Secondary 2%, Secondary Academic 11%, Secondary Vocational 39%, Unfinished Higher 11% and Higher 37% (18).

Based on the same DTM report, the report data indicated that about 51% of the IDP population in Libya were children aged between 0-18 years old, 39% of IDP population are adults aged between 19-59 years old, and 10% are adults more than 60 years. Among all age categories the report indicated that males formed 49% of IDP population while females formed 51% (17). In addition, results presented at UNHCR Statistical Yearbook 2014 showed that among UNHCR people of concern (including refugees and IDPs) 50% of them were females, and 51% of total population were children under age of 18, 46% of them were adults between 18 and 59 years, and less than 3% aged 60 years or older (19).

Compared to the neighboring Arab countries, Libya has one of the best literacy rates; as by 2015, 91% of people aged 15 and over can read and write, among them 96.6% male and 85.6% female (20). During 2011 conflict 41% of schools reported sustained damage, 26% of those reported a considerable level of damage, 12% of those reported being occupied by IDPs and 12% were occupied by armed or humanitarian groups. Through the 2014 conflict 21% of displaced school aged children did not attend at school, due to closed schools, insecurity, schools used as a shelter for IDPs (21).

2.2.3. IDPs Socio-Economic Condition

IDPs Livelihood

Internal displacement has a negative economic impact, as IDPs often have to change their place of living they have to leave their livelihoods behind, and lose their incomes. Thus IDPs are exposed to increasing level of unemployment, disrupting wage levels and increased need for economic and social protection (22).

Morales (2016) concluded that internal displacement carries a large short term impact on local wages across Colombian municipalities. Initial reduction of wages resulted due to sudden increase of labour supply, where IDPs were offered jobs at informal sector where minimum wages did not bind. He found that due to labour reallocation these effects seemed to disperse in the longer-run analysis (23).

Alhasan (2007) studied the economic impact of population displacement from south Sudan to North Sudan, the study resulted that IDPs struggled a state of economic frustration, ambition pushed them to over cross their low economic state by further education or looking for a new job. She added that 29.5% of studied IDPs worked as regular officers and 36.6% of them worked in daily job, compared to their initial agriculture and grazing based livelihood. She linked positively the years of displacement and the higher wages (24).

The Assessment Capacities Project Libya Report (2015) stated that income options for the Libyan IDPs have been severely affected, inability to cash out their salaries and the non-functioning banking system were the main causes of income shortage, and lack of job opportunity is reported as another challenge. Relative support or savings were the main source of income in around third of IDPs (21).

Libya's IDP & Returnee Round 8 Report (2017) stated that public employment, small businesses or trading, and aid were the three most cited sources of income for IDPs. Daily labour, private employment and farming have been mentioned as another source of income. Minimum number of IDPs mentioned that borrowing money was their only source of income (25).

IDPs Type of Residency

Albadra et al. (2018) conducted a thermal survey in two refugee camps in Jordan, they found that the refugees were very unsatisfied with the thermal conditions in their shelters, and they stated that shelters were not able to provide a healthy living conditions as they were not effective to protect inhabitants from outdoor weather conditions (26).

UNHCR Health in Camps Emergency Handbook explains that refugee camps carry a serious health hazards, it stated that vaccine preventable and communicable disease are the main causes of death in emergency situations. Reproductive health problems, gender based violence and armed conflict injuries are more likely to occur in refugee camps. Refugee population is more exposed to social stigmatization, discrimination and xenophobia. Camp residents have barriers to access health care services, and they are more prone to malnourishment which may affect the normal growth and development (27).

The Libya's IDP & Returnee Round 8 Report (2017) provides detailed information about Libya's IDPs type of residency and housing, it stated that 86% of IDPs were reported to be in private accommodation and the remaining 14% were reported to be residing in public or informal shelter settings. 87% of IDPs in private shelter were in self-paid rented accommodation. 8% were hosted with relatives, 3% were in rented accommodation paid by others and the remaining 2% were hosted with other non-relatives. 29% of IDPs in public shelter settings were reported to be in unfinished buildings. 24% were reported to be in informal settings such as tents, caravans, and makeshift shelters and 24% in other public buildings. 11% were residing in schools, 10% in deserted resorts and the remaining 2% were reported to be squatting on other peoples' properties (25).

Cause of Displacement

Internal Displacement Monitoring Centre (2015) published a briefing paper aims to understand the root causes of displacement, they concluded various terms used to discuss causes of displacement, including: Root cause, cause, driver, stressor, trigger, shock and hazard. They proposed to use the terms "drivers" and "triggers" for that purpose (28).

They define drivers as follows: "*Drivers refer to the less visible factors that pre-date and contribute to the immediate and more visible trigger*." Drivers Synonyms are: Root cause, push factor, stressor and they include:

1- Political drivers: for example, poor urban planning and corruption.
2- Social drivers: such as limited education opportunities; inter-communal tensions.
3- Economic drivers: including poverty and lack of access to markets,
4- Environmental drivers: including desertification and damming of tributaries.

On the other hand triggers defined as "*the more visible events in the wider environment that threaten people's security. Triggers may or may not lead to displacement as people evaluate the level of threat posed by an event to their immediate physical and economic security and their capacity to flee their homes.*" Triggers include conflict and natural hazard (28).

Vinck (2011) studied displacement and IDPs in Central Mindanao Philippines, he resulted that in Mindanao the main driver of displacement was violent conflict, where the majority of participants households reported that displacement caused by movement of armed groups, or by ridos (clan feuds), the rest of participant identified other causes such as natural disasters (2%) or economic factors (3%), as the causes of displacement. He added that displacement due to armed groups was often linked to sufferance, economic hardship, loss of housing and interrupted education (29).

Libya's IDP & Returnee Round 8 Report (2017) provides numbers about drivers of internal displacement among IDPs in Libya; the report considers threat or fear from general conflict and the presence of armed group to be the main factor driving initial displacement of the majority (91%) of IDPs. Where 7% of IDPs reported that other security related issues such as political affiliation to be the cause of displacement, and 2% of IDPs were displaced because of economic factors (25).

Displacement Tracking Matrix Round 3 Report (2016) summarized the top cities of origin of IDPs in Libya as follows: Benghazi (46.8%), Sirte (13.2%) and Tawerga (12.2%) by February 2016. Although causes of displacement among these cities are similar, the event and timing of displacement is different at each city (30).

Tawerga is a city in the North of Libya that inhabited by 40,000 people, nearly all black-skinned, all of them were forced out of their city by the year 2011 by the end of civilian war (31). Benghazi is the second most populous city in Libya, and because of the conflict erupted in 2014, hundreds of thousands of its people have been displaced seeking for safety in Tripoli city and its surrounding. Political opinion or perceptions of supporting a specific group were the main causes of displacement. The main areas of displacements from Benghazi are Tripoli, Misrata, Az- Zawya, Sibrata, Al Khums, Zlitan and other scattered areas inside Libya (32). In the year 2016 the fighting erupted in Sirt city resulted in displacement of more than three quarters (90,449) of the city residents, most of them continue to seek refuge in Tripoli, Bani Walid, Tarhuna, Misratah and Al Jufrah (33).

Duration of Displacement

The definition of short and long term forced displacement is a topic of controversy, where determination of how many people are in prolonged displacement and what is the duration of their displacement is a difficult mission, since the displaced population are a dynamic group in continuous changes, these changes include repatriation, multiple displacements, new waves of displacement, different degrees of integration and the imperfect national and international displacement tracking systems. UNHCR defines Protracted Refugee Situation (PRS) as "*situations where 25,000 refugees or more have been in exile for 5 years or more after their initial displacement, without immediate prospects for implementation of durable solutions*". While Humanitarian Policy Group Commissioned Report defines protracted displacement as "*a situation in which refugees and/or IDPs have been in exile for three years or more, and where the process for finding durable solutions, such as repatriation, absorption in host communities or settlement in third locations, has stalled. This definition includes refugees and IDPs forced to leave their homes to avoid armed conflict, violence, violations of human rights or natural or human-made disasters, It also includes those living in camps or dispersed among host populations*" (34).

Devictor and Q. Do (2017) conduct an analysis using UNHCR data answering "*how many years have refugees been in exile?*" question. The analysis

results provided an over-estimate of the mean duration of exile at around 11 years and of the median duration at about 4 years, the mean duration of exile has been quite constant since the late 1990s, at 11 to 15 years. The analysis resulted that number of refugees who are in prolonged exile remained stable since the mid-1990s at 5 million to 7 million, and estimated their mean duration of exile that exceeds 20 years (35).

UNHCR Global Trends, Forced Displacement in 2015 report concluded number of pathways for achieving comprehensive solutions of forced displacement, including through voluntary repatriation, resettlement, and different forms of local integration. The authors considered that the implementation of combination of more than one pathway jointly can achieve better results for displaced people (36).

In Libya, there were many waves of displacement since the main conflict erupted in 2011, by the year 2017 majority of IDPs from Tawergha spent more than 6 years in displacement, while those from Benghazi who were displaced after the 2014 conflicts mainly spent over 3 years in displacement, IDPs from Sirte would spent about one to two years in displacement as they left their home city starting from 2015 conflicts (31,32,33).

Libya's IDP & Returnee Round 8 Report (2017) categorize IDPs by the period of displacement into three groups; where 26% of all identified IDPs had been displaced between 2011 and 2014, 42% of IDPs had been displaced during 2015, at the peak of civil conflict in Libya, and 32% had been displaced in 2016 (25).

Multiple Displacements

According to United Nations Office for the Coordination of Humanitarian Affairs (OCHA) Report (2017) that studied the situation of IDPs in protracted situations in five countries: Colombia, DRC, Philippines, Somalia and Ukraine; secondary intra- or inter-urban displacement is a common event among IDPs in Colombia because of violence and threats by criminal elements. IDPs in Democratic Republic of the Congo may be displaced multiple times, returning to their place of origin to be displaced again undermining their resilience. The report considers multiple displacements as a form of protracted displacement, which is common in the

case of IDPs in Philippines. It mentions also that IDPs from Somalia have been displaced several times due to various causes (37).

Similarly in Libya, among 22,304 IDPs identified in 2016 and who had been displaced at least once before, 95% of these (21,156 individuals) had been displaced twice and 5% (1,130 individuals) had been displaced three times, the remaining 18 identified IDPs were displaced four times. Where 92% of identified IDPs were originally from Sirte, 5% were from Benghazi originally and 2% were from Ubari (25).

Family Integrity

As the family is considered the structural and functional unit of the society, society conflicts the main cause of displacement affect directly the integrity and functionality of the families, this impact is summarized by Ntakiyimana (2004) in the following elements: 1) Conflict among families and allies where members of the same family or the same group of families who considered as allies assign other family members as an opponent, according to their political or religious understanding, or even ethnic and geographical origins in mixed marriages, 2) Family separation due to loss of one or both of the parents or losing a family member, while escaping clashes holding family integrity is a difficult task, some families are ripped apart because of displacement and targeting different refugees camps, 3) Destruction of homes and livelihoods, during armed conflicts houses are destructed leaving the occupying families homeless seeking for shelter, and facing difficult times away from their usual habitat, also losing the breadwinner family member may lead to family scarcity of food, water and basic life needs which threatens the integrity of the whole family, 4) Violence, death and spoliation are common events during armed conflicts which victims cannot carry on a normal life any more, losing parents expose children to violence, exploitation and child soldering, family members who experience violence needs extra efforts to be protected or embraced by their families, in some cases violence affecting families making them unsafe place for their members (38).

During the armed conflict in Libya family integrity has been affected, either through forced migration and displacement or by the regular targeting of civilian

houses during the clashes. A heavy destruction of more than 40,000 houses reported in Misurata, Bani Walid and Sirt according to media reports in 2011 (39,40), in the consecutive years targeting house became a programmed behavior practiced by the fighting groups, according to Victims Organization Report 2015 houses has been targeted regularly by bombing, burning or looting during 2014 conflict in Tripoli, Warshafana and Benghazi (41).

2.2.4. IDPs Health

Forced displacement and migration health impacts can be discussed by different aspects; including: their impact on communicable diseases, non communicable diseases, maternal and child health, health behavior, mental health and accessibility to health service.

Communicable Diseases

Paquet and Hanquet (1998) concluded that during complex emergencies infectious diseases are always considered the main cause of mortality as they are coincidently linked to population displacements. They stated that vaccination against measles, the availability of clean water and sanitation and the effective management of malaria, diarrhea and pneumonia cases are the main efforts for preventing excess mortality at the initial phase of a refugee influx. They stated that measles, poor sanitary service, malaria, diarrhea and acute respiratory infections all contribute to an excess crude mortality rate among displaced populations, especially in under-developed countries. They considered tuberculosis and reproductive health as specific issues to be targeted by the public health activities during the post emergency phase (42).

Gayer, et al. (2007) in their article titled "*Conflict and Emerging Infectious Diseases*" concluded most of the factors that lead to the emerging of infectious diseases during armed conflicts, they concluded that in post conflict phases populations may have high incidence rates of infectious diseases and related mortalities due to the destruction of the healthcare systems, shortage of trained human resources, interruption of established disease control programs, destroyed infrastructure, people displacement, unsanitary environmental conditions, inadequate

surveillance and restricted service delivery. Populations may be more prone to infectious diseases due to malnutrition status, low vaccine coverage and long term stress during and after armed conflicts (43).

World Health Organization Report (2006) reviewed diseases associated with crowding globally, it states that displaced people due to natural disasters are more prone to live in crowded living conditions which facilitate microbial transmission and increase the need for higher immunization coverage levels to prevent disease outbreaks. The risk of transmission of measles among displaced population is dependent on the baseline immunization coverage rates among the susceptible population especially among children aged less than 15 years. It mentions that meningitis caused by Neisseria meningitidis is transmitted from person to person, particularly in crowded living conditions, and acute respiratory infections (ARI) are a major cause of morbidity and mortality among displaced people, particularly in children aged less than 5 years, it consider lack of access to health services and to antibiotics for treatment further to increases the risk of death from ARI. Risk factors of ARI among displaced people include crowded living conditions, exposure to indoor cooking and poor nutrition (44).

In Libya, although reviews showed no large impact infectious disease outbreaks have been registered in the recent years, but there are serious concerns about possible outbreaks of infectious diseases due to conflict related conditions including the entry of waves of international migrants, internal displacement and destruction of healthcare system. According to World Health Organization Report 2015 the risk of measles and poliomyelitis outbreaks increased during the recent conflicts because of the increasing population displacement and disruption of vaccination activities in conflict affected areas, and increased risk of communicable diseases, including tuberculosis, malaria, and HIV-AIDs, as a result of large numbers of migrants and a collapsed surveillance system. The report also addressed limited prevention and management of the consequences of sexual violence, and treatment of sexually transmitted infections (45).

Non Communicable Diseases

Yun et al. (2012) stated that prevalence of chronic non-communicable conditions among adult refugees is high; they found that 51.1% of the adult refugees in their sample had at least one chronic non communicable disease, and 9.5% had three or more non communicable diseases. They found that 15% of participants had a behavioral health diagnoses, 13.3% had hypertension and 54.6% of adults were overweight or obese (46).

Anderson (1999) summarized that health problems experienced by people living in the camps include infectious diseases associated with lack of sanitary services, mental health problems associated with displacement and with experiencing violent conflicts, intellectual and physical disability among children, poor health among pregnant women and infants, and chronic diseases such as diabetes (47).

Amara and Aljunid (2014) conducted a systematic review to compare the prevalence of non-communicable diseases among urban refugees with the diseases prevalence in their home countries, they found that the prevalence of NCDs among urban refugees in the Middle East Region is high, and they observed that hypertension, musculoskeletal disease, diabetes and chronic respiratory disease were the major diseases among urban refugees (48).

World Health Organization Report 2015 states that limited care for patients with chronic diseases, disabilities and mental health disorders and increased mortality and morbidity caused by non communicable diseases due to weak primary health care services in Libya (45).

Women, Maternal and Child Health

A briefing paper from Doctors without Borders (2014) summarizes key medical risks facing displaced women in the following:

Sexual violence; with a global average of one in three women experiencing some form of sexual violence or intimate partner violence during her lifetime, the risk of sexual violence increases in the situation of displacement, during displacement families are often separated leaving solo women or children exposed to assaults, women may be forced into prostitution in IDP camps to support their families (49).

Obstetric emergencies; through the inaccessibility to healthcare facilities and the absence of healthcare workers associated with displacement, pregnant women face a great risk during obstetric emergencies (49).

Family planning; in displacement condition women may not be able to continue their contraceptive method, due to inaccessibility to health services (49).

Single parenting; fathers may be killed or separated during conflicts leaving women with children responsibility (49).

Mental health; displacement carries the risk of traumatic experience to women by losing their loved ones or facing violence. Depression, anxiety and post traumatic stress disorder can be experienced in the form of body pains to non-responsiveness (49).

Devlin (2010) assessed the state of maternal and child health of internally displaced persons (IDP) in Darfur, Sudan, and she concluded that the levels of maternal mortality, neonatal mortality, under-5 mortality, and malnutrition resulting from conflict in Darfur are unacceptable by any standard (50). Nidzvetska (2014) studied subjective health status of internally displaced mothers and children in Ukraine, she found that the influence of conflict and displacement experience mostly reflected on mental and psychological health of IDP mothers in Ukraine, and she considered poor financial conditions, low income, weak state support, unhealthy household environment, deteriorated nutrition practices and the absence of vaccination are the main obstacles that faces the IDP mothers and children in Ukraine (51). Fiala (2009) studied the impact of forced displacement on livelihoods and health in northern Uganda, he concluded severely decreased nutritional consumption content for households, and thus children specially are at risk of future health and physical development problems due to decreased nutrition (52).

World Health Organization Report (2015) "*Humanitarian Crisis in Libya*" stated that reproductive health services were markedly affected by the growing number of IDPs and the closure of main hospitals, and increases in HIV and other sexually transmitted diseases are likely. The report added the lack of referral and access to basic and universal obstetric care. It mentions the increasing risk of disease outbreaks among infants and children due to new waves of displacement and disruption of primary health care and vaccination activities (7).

Nutrition

Pejic (2001) stated that *"It is self-evident that population displacement is a major factor contributing to hunger and starvation in times of armed conflict."* He concluded that during displacement, all stages of food production, procurement, preparation, allocation and consumption are disrupted (53). Becerra (2014) studied the impact of forced displacement on early childhood nutritional development; his results suggest that forced displacement increases the likelihood of chronic malnutrition, and it has an impact on the long term indicators of nutritional development, he added that the results indicate that forced displacement causes a delay in linear growth (54).

According to Humanitarian Needs Overview 2017 in Libya, protracted displacement, disruption of markets and lower food production led to increasing food insecurity among affected population, thus the risk of inadequate food consumption is high among the most vulnerable population (55). The World Food Program *"Rapid Food Security Assessment"* Report in Libya 2016 indicated that 17% of internally displaced people were food insecure, and about 60% of IDPs were vulnerable to food insecurity, the report considers IDPs, returnees and refugees are among the most vulnerable population groups in need of food assistance (56).

Health Behavior

Zhang et al. (2015) examined the levels of substance use and changes across different migration stages among Mexican migrants on the U.S.-Mexico border. They concluded that the risk of alcohol drinking, illicit drug use and current smoking was higher among migrants than the pre departure phase (57). Similarly, Borges et al. (2007) studied the effect of migration to the United States on substance use disorders among returned Mexican migrants and families of migrants, and they resulted that migrants were more likely to have used alcohol, marijuana, or cocaine at least once in their lifetime, to develop a substance use disorder, and to have a current (in the past 12 months) substance use disorder than were other Mexicans (58). Zilic (2015) analyzed health consequences of forced civilian displacement that occurred during the War in Croatia, and he found that displacement did not induce a change in healthy behaviors (59).

Accessibility to Health Service

Spiegel et al. (2002) conducted a retrospective analysis studying mortality data for the previous 3 months in 51 post emergency phase camps in seven countries, they found that crude mortality rates were higher and fewer local health workers per person among recently established camps than earlier established camps. Crude mortality rates were higher among camps located close to the border or region of conflict or located far away from referral hospitals than those located further away or near referral hospitals. Crude mortality rates were higher in camps with less water per person and higher rates of diarrhea than those with more water and lower rates of diarrhea. They concluded that the distance to conflict, water quantity, and the number of local health workers per person exceeded the minimum indicators recommended in the emergency phase (60).

According to World Health Organization Report (2015) in Libya, the access to health care services is greatly diminished; the report mentions that the portion of population affected by the conflict, the size of geographical area involved, the number of non functioning health facilities and the lack of sufficient human resources were the factors that affect healthcare services accessibility, these factors affecting all regions in Libya to different degrees, and these factors were highly linked to the conflict and displacement. The report states that a significant increase in the demand on health services were observed in some hospitals in Benghazi, Misrata, Al Marj and Tripoli. People in need of emergency surgery, caesarean sections and chronic diseases treatment face the principal access problems (7).

2.3. Mental Disorders among IDPs

2.3.1. Impact of Displacement

Munro et al. (2013) studied the effect of evacuation and displacement on mental health outcomes, they found that people were displaced from their homes were significantly more likely to have higher scores on each scale for depression 1.95 (95% CI 1.30–2.93), for anxiety 1.66 (1.12–2.46), and for post-traumatic stress disorder 1.70 (1.17–2.48) than people who were not displaced. And they interpreted that displacement caused by flooding was associated with higher risk of reporting

symptoms of depression, anxiety and post-traumatic stress disorder one year after flooding (61). Ammar and Nohra (2014) concluded the long term effect of displacement on mental health, and they recommended better understanding for the long and short term effect of displacement on mental health in order to provide early intervention related to depression, anxiety and post traumatic stress disorder (62).

Porter and Haslam (2005) conducted a meta-analysis of refugee mental health explained the magnitude and determinants of the psychological consequences of the refugee experience. They explored factors faced during the pre-displacement and post displacement phase associated with the refugees and IDPs mental health in a meta-analytic review. They assessed the impact of demographic and socio-economic factors on the mental health of refugees, including; type of accommodation during displacement, economic opportunities, cultural access, conflict status, age and gender differences, pre-displacement urban and rural residence and other factors. They concluded that the sociopolitical condition of the refugee experience was associated with refugee mental health, emphasized that economic opportunities and permanent private accommodation were associated with superior outcomes, female gender, adult ages and higher educational status showed worse mental health outcomes than others. Region of origin was also associated with refugee mental health outcomes (63).

Mels, et al. (2010) compared currently internally displaced adolescents to returnees and non-displaced peers in the aspects of the impact of war induced displacement and related risk factors on the mental health. They concluded that IDPs reported higher psychological distress when compared to returnees and non-displaced peers, they explained that by the higher exposure to violence and daily stressors. On the other hand, they stated that non displaced adolescents had lower scores of psychological distress scales (64).

Roberts et al. (2009) provided an evidence regarding the role of socio-demographic factors associated with displacement in the development of psychological disorders (PTSD, Depression) proceeded by exposure to traumatic events. Their analysis showed that gender, marital status, forced displacement and trauma exposure are strongly associated with outcomes of post traumatic stress disorder and depression (65).

2.3.2. Mental Disorders

From the previous review, it is obvious that forced displacement and migration are highly associated with the prevalence of mental health disorders, the most seen mental disorders among IDPs can be concluded in; depression, anxiety and stress.

Vigo, et al. (2016) using published data estimated the global burden of mental illness controlling all reasons caused underestimation, they stated that the global burden of mental illness accounts for 32.4% of years lived with disability (YLDs) and 13.0% of disability-adjusted life-years (DALYs), and their estimate placed mental disorders in the first place regarding global burden in terms of YLDs, and placed mental disorders in similar level with cardiovascular and circulatory diseases in terms of DALYs (66).

Depression

Depression is in *"a mood or emotional state that is marked by feelings of low self-worth or guilt and a reduced ability to enjoy life. A person who is depressed usually experiences several of the following symptoms: feelings of sadness, hopelessness, or pessimism; lowered self-esteem and heightened self-depreciation; a decrease or loss of ability to take pleasure in ordinary activities; reduced energy and vitality; slowness of thought or action; loss of appetite; and disturbed sleep or insomnia"* (67).

World Health Organization defines depression as *"a common mental disorder, characterized by persistent sadness and a loss of interest in activities that you normally enjoy, accompanied by an inability to carry out daily activities, for at least two weeks. In addition, people with depression normally have several of the following: a loss of energy; a change in appetite; sleeping more or less; anxiety; reduced concentration; indecisiveness; restlessness; feelings of worthlessness, guilt, or hopelessness; and thoughts of self-harm or suicide"* (68).

World Health Organization Report (2017) stated that the proportion of the global population with depression in 2015 was estimated to be 4.4%. Depression is more common among females (5.1%) than males (3.6%). Prevalence varies by WHO Region, from a low of 2.6% among males in the Western Pacific Region to 5.9%

among females in the African Region. Prevalence rates vary by age, peaking in older adulthood (above 7.5% among females aged 55-74 years, and above 5.5% among males). Depression also occurs in children and adolescents below the age of 15 years, but at a lower level than older age groups. The total number of people living with depression in the world is 322 million. Depressive disorders led to a global total of over 50 million Years Lived with Disability (YLD) in 2015. More than 80% of this non-fatal disease burden occurred in low- and middle-income countries. Globally, depressive disorders are ranked as the single largest contributor to non-fatal health loss (7.5% of all YLD) (69).

Sheikh et al. (2015) studied the prevalence of depression among IDPs in North Western Nigeria, their results showed that among participant IDPs 59.7% had probable depression, and 16.3% had definite depression, Females were more likely to have probable depression (1.68, 95% CI 1.02–2.78; p=0.04) and definite depression (2.69, 1.31–5.54; p=0.006), IDPs with co-morbid PTSD were more likely to have probable depression (16.9, 8.15–35.13; p<0.000) and definite depression (3.79,1.86–7.71; p<0.000) (70).

Feyera, et al. (2015) performed a cross sectional study investigation the prevalence of depression and associated factors among Somali refugee at Melkadida camp, southeast Ethiopia. They resulted that 38.3 % of respondent refugees met the symptoms criteria for depression. They added that gender, marital status, displaced previously as refugee, witnessing murderer of family or friend, lack of house or shelter and being exposed to increased number of cumulative traumatic events were significantly associated with depression among respondent refugees (71).

Alkhafaji, et al. (2015) conducted a study aims to identify the prevalence rate of depression among IDPs in AL-Diwaniyah Iraq. They found that the prevalence rate of depression among IDPs was 34.5%, and they added that the rate of depression was higher for females than males, with some differences in depression rate among socio-demographic variable (72).

Anxiety

Anxiety is defined as *"a feeling of dread, fear, or apprehension, often with no clear justification. Anxiety is distinguished from fear because the latter arises in*

response to a clear and actual danger, such as one affecting a person's physical safety. Anxiety, by contrast, arises in response to apparently innocuous situations or is the product of subjective, internal emotional conflicts the causes of which may not be apparent to the person himself. Some anxiety inevitably arises in the course of daily life and is considered normal. But persistent, intense, chronic, or recurring anxiety not justified in response to real-life stresses is usually regarded as a sign of an emotional disorder. When such an anxiety is unreasonably evoked by a specific situation or object, it is known as a phobia. A diffuse or persistent anxiety associated with no particular cause or mental concern is called general, or free-floating, anxiety" (73).

World Health Organization Report (2017) stated that the proportion of the global population with anxiety disorders in 2015 was estimated to be 3.6%. As with depression, anxiety disorders were more common among females than males (4.6% compared to 2.6% at the global level). In the region of the Americas, as many as 7.7% of the female population were estimated to suffer from anxiety disorder (males, 3.6%). Prevalence rates did not vary substantially between age groups, although there was an observable trend towards lower prevalence among older age groups. The total estimated number of people living with anxiety disorders in the world was 264 million. This total for 2015 reflects a 14.9% increase since 2005, as a result of population growth and ageing. 24.6 million YLD in 2015 globally were attributed to anxiety disorders. Rates varied across WHO Regions, from 267 YLD per 100 000 population in the African Region to over 500 in the Region of the Americas. Due to their low average level of disability estimates were lower for anxiety disorders compared to depression. Anxiety disorders were ranked as the sixth largest contributor to non-fatal health loss globally and appear in the top 10 causes of YLD in all WHO Regions (69).

Ali N. (2015) compared the mean scores of anxiety among internally displaced and non internally displaced people in Kurdistan region of Iraq, he found that mean score of anxiety among IDPs (32.908±5.631) was about two times the score of anxiety among non IDPs (15.720±6.372), and he concluded that the internally displaced had more level of anxiety than non internally displaced (74).

Stress

There are many attempts for mental stress definition, but A. Baum (1990) presented the most used definition, he said *"We define stress as a negative experience that is associated with threat, harm, or demand. Although distinct from this experience, stressors are events or thoughts that can cause harm or pose threats or challenges. They are events that require more than routine adjustments. Stressors initiate a process in the organism by which they are recognized and response to them is generated. The goal of this process is to remove or reduce the pressures or threats causing stress or to reduce the unpleasantness associated with it".* And he added *"Very intense or chronic responses may be more likely to have consequences (such as mental or physical illness) than less intense or more acute responses. Similarly, some stress responses (such as increased drug use, smoking, or eating) may be more likely to have negative consequences than others"* (75).

Posttraumatic stress disorder (PTSD) is the most studied disorder occurring after exposure to potentially traumatic events (76). According to American Psychiatric Association Posttraumatic stress disorder is *"a psychiatric disorder that can occur in people who have experienced or witnessed a traumatic event such as a natural disaster, a serious accident, a terrorist act, war/combat, rape or other violent personal assault"* (77). DSM-5 criteria for PTSD include: Exposure to stressor, Intrusion symptoms, Persistent avoidance, Negative alterations in cognitions and mood, Alterations in arousal and reactivity, Duration, Functional significance and Exclusion (78).

Lagos-Gallego, et al. (2017) stated that Post-Traumatic Stress Disorder (PTSD) had been described as one of the most frequently reported mental condition among refugees and internally displaced populations (IDPs), and they compared the prevalence of PTSD among general population and IDPs of Colombia and they found that PTSD was 5.1 times higher among IDPs than in general population (79).

2.3.3. Mental Disorders in Libya

Armed conflicts had a great impact on mental and psychosocial state among the effected society. Armed conflict related stress increases the risk of Post Traumatic Stress Disorder (PTSD), substance abuse and depression, where the

prevalence of such disorders increased from 1-3% among normal populations up to 30-40% among armed conflict effected populations, where they may experience symptoms such as sleeplessness, irritability, hopelessness and hypervigilance, symptoms which can be seriously affecting the individual's ability to carry on his normal functions. Effected people were not classified normally as having a psychiatric disorder but may experience different psychosocial disorders as domestic violence, criminal activities, educational dropouts and other antisocial behaviors, where a large part of the effected people may suffer nightmares, anxiety and stressful feelings that can be transient and recover over time (5).

In Libya, and due to decades of neglect, and adding the impact of 2011 and the ongoing 2014 conflict, made the mental health system in progressive weakness, with only one psychiatrist per 200,000 citizens, and only two main psychiatry hospitals in Tripoli and Benghazi (6).

Reviewing all publications related to the impact of armed conflict and internal displacement on mental health in Libya shows no real statistics from the field, but most of the publications mention the study conducted by Charlson (2012) that aimed to predict the impact of the 2011 conflict in Libya on population mental health, based on analyzing data from other post conflict zones they estimated that 40% of the conflict affected population in Libya may suffer from PTSD and that 30% of these were considered sever, more than one third of conflict affected population in Libya could also have depression, and a high degree of co-morbidity also exists between the two conditions, according to Charlson (2012) study there were about 120,000 people might be suffering from PTSD in Libya, and around 220,000 people suffering from severe depression (80).

2.4. Quality of Life

2.4.1. QOL Definition, Measurement

WHO defines Quality of Life as *"individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns. It is a broad ranging concept affected in a complex way by the person's physical health, psychological state, level*

of independence, social relationships, personal beliefs and their relationship to salient features of their environment" (81).

Health-related quality of life (HRQOL) is defined as *"a multi-dimensional concept that includes domains related to physical, mental, emotional, and social functioning. It goes beyond direct measures of population health, life expectancy, and causes of death, and focuses on the impact health status has on quality of life"* (82).

QOL as an indicator can be used in medical practice assessment, medical research, audit, and in policy making. For that purpose WHO developed two instruments for measuring quality of life; the WHOQOL-100 and the WHOQOL-BREF, these instruments can be used for different population with a variety of cultural settings in different countries which can be compared (81).

The Patient Reported Outcomes Measurement Information System (PROMIS) global health measure assesses global physical, mental, and social HRQOL. The PROMIS global measure includes questions that assess self-rated health, physical HRQOL, mental HRQOL, and individual questions on fatigue, pain, emotional distress, social activities, and roles. Well-being indicators measure when people feel very healthy and satisfied or content with life. It measures types of positive experiences of people's daily lives and the quality of their relationships, their positive emotions, resilience, and realization of their potential, where traditional HRQOL fail to assess (82).

RAND developed the 36-Item Short Form Health Survey (SF-36) as a part of the medical outcomes study, which is a study to explain variations in patient outcomes. SF-36 is a set of quality-of-life measures which generic, coherent, and easily administered. The SF-36 consists of eight scaled scores; which are the weighted sums of the questions in their section. Each scale is directly transformed into a 0-100 scale on the assumption that each question carries equal weight. The scores are inversely related to disability; the lower the score the greater the disability, the higher the score the less the disability. The eight sections include: Vitality, physical functioning, bodily pain, general health, perceptions, physical role functioning, emotional role functioning, social role functioning and mental health (83,84).

RAND 36-Item Health Survey 1.0 (aka SF 36) has been translated into Arabic language by Saud Abdulaziz Al abdulmohsin, Stephen Joel Coons, JoLaine R. Draugalis and Ron D. Hays at RAND research. The objectives of their research were to: (1) translate the RAND 36-Item Health Survey 1.0 (aka SF-36) into Arabic; (2) evaluate the reliability and equivalence of the Arabic and English versions in a sample of Saudi Arabian citizens; and (3) assess the health status of a sample of Saudi Arabian citizens using both the Arabic and English versions. Forward and backward translation of the SF-36 with committee review was performed. Both the Arabic and English versions of the survey were administered to a convenience sample of bilingual (English and Arabic) Saudi citizens (N=415) at Saudi ARAMCO Company, Dhahran, Saudi Arabia. Internal consistency, equivalent-forms, and test-retest reliability were estimated for the Arabic and English versions of the survey. The results of the study provided support for the reliability and equivalence of both versions. The median internal consistency reliability coefficients for all administrations (Group 1, 3 and 5) of the Arabic version of the SF-36 exceeded 0.70 for every scale except for the general health perceptions scale (median alpha =0.59). The median internal consistency reliability coefficients for all administrations (Groups 2, 4, and 6) of the English version of the SF-36 exceeded 0.70. Therefore, the results of this study provide support for the reliability of the Arabic version of the SF-36 and are consistent with previous reliability estimates reported for the English version (84,85).

2.4.2. QOL and Displacement

Jamwal and Shekhar (2017) compared the quality of life among internally displaced and non-internally displaced persons of Jammu and Kashmir who were exposed to violence at the time of displacement. They concluded that only physical health was not found significant as non-displaced persons scored higher on all the dimensions showing poor quality of life in displaced persons (86).

Getanda et al. (2015) conducted a study aimed to investigate the quality of life, and life satisfaction among IDPs living in Nakuru, Kenya, they concluded that poor levels of quality of life and wellbeing was found among IDPs, and they found that some demographic and socio-economic status such as being younger, married,

perceiving to receive social and governmental health were considered as a protective factor against poor quality of life and well begin among IDPs. Their study found that the overall health and wellbeing was harmfully affected by the type of conflict induced forced internal displacement. They recommended that IDPs require urgent help and support to improve their health and safety, and they recommended priority for IDPs who fear for the welfare of their families; do not perceive social support, and who experience poor mental health (87).

2.4.3. QOL and Mental Disorders

Crouchley et al. (2007) in their published report titled *"Chronic Disease and Quality of Life"* compared the impact of chronic conditions on the quality of life scale SF8 dimensions, they concluded that among all selected chronic conditions (including; Heart disease, Stroke, Diabetes, Asthma, Respiratory condition other than asthma, Arthritis and Osteoporosis and Mental Health Problem) having a current mental health condition was the health condition that showed the greatest impact of all the conditions over all the dimensions of the SF8 (88).

Lam and Laudera (2000) similarly conducted a study that aimed to determine the impact of eight chronic diseases on the health-related quality of life (HRQOL) of Chinese patients, their results concluded that depression was the most disabling disease and daily role functioning was the most commonly affected HRQOL domain, they discussed that psychological diseases are not expected to affect the physical component of health, but they believe that this unique finding could be due to a cultural tendency for Chinese patients to somatize their psychological problems (89).

In their study conducted to investigate the quality of life, and mental health among IDPs living in Nakuru, Kenya, Getanda et al. (2015) concluded that poor levels of mental health, quality of life and wellbeing was found among IDPs, and they indicated that being younger, married, perceiving to receive social and governmental health are IDPs who are most protected from poor mental health and wellbeing, they discussed proper mental health care services for IDPs that are challenged by equity of access, resource capacity and competence, stigmatization and lack of awareness in service function and availability (87).

3. RESEARCH METHODOLOGY

3.1. Research Type

The research was designed in the form of descriptive study.

3.2. Research Place, Time and Sampling

- **Research place:** The research was conducted in Tripoli city Libya for many reasons including that Tripoli is the political and administrative capital of Libya, and because of decades of administrative centralization of decision making in Libya, most of the governmental administrations are located in Tripoli city, that made the city to be the preferred destination for IDPs where they can easily correct their paper works regarding their ID, job, residency and banking. Adding to that, the availability of facilities in Tripoli city including houses for rent, schools and healthcare facilities and the condensation of governmental and nongovernmental relief agencies in the city, those who provide help to IDPs. Finally, Tripoli city with its mixed and crowded population provides a safe place for people who are escaping political or racial discrimination. Tawergha represented the origin of majority for the first phase of displacement for IDPs in Tripoli. The majority of those displaced between 2014 and 2016 were from Sirte and Kikla (17).
- **Research time:** The research was conducted in 2017-2018, according to the time chart explained in section 3.14.
- **Research sample:** Internally Displaced Persons (IDPs) targeted in our research, as they are one of the vulnerable groups in the society; fortunately IDPs in Tripoli city are well recorded because of the efforts of many governmental and nongovernmental bodies. The records of Ministry of Social Affairs were used; where these records are presented in the form of lists that include names, national numbers, origins and phone numbers of the IDPs located in the city.

3.3. Research sample size calculations

Using the equation when the target population number is unknown as follows:

$$n = \frac{(t)^2\ (p.q)}{S^2}$$

The target population will be classified into two groups as follows:-

A- Sample size among IDPs located in private residencies:

t: is the confidence level = 1.96

p: is the prevalence of mental disorders among armed conflict affected population = 0.3 (5).

q: (1-p) = 0.7

S: confidence interval = 0.05

n: is the sample size = 323

B- Sample size among IDPs located in informal residencies:

t: is the confidence level = 1.96

p: is the prevalence mental disorders among armed conflict affected population = 0.3 (5).

q: (1-p) = 0.7

S: confidence interval = 0.05

n: is the sample size = 323

-Total sample size = 323+323 = 646, 646 (+10%) = 711 persons

3.4. Selection Criteria

Subjects selected according to the following inclusion criteria:

- IDPs located in one of the 6 municipalities of Tripoli city.
- IDPs who have been displaced in 2011 and after.
- Adults aged 18 years old and above.

3.5. Research Questions

- What is the proportion of mental disorders among adult IDPs in Tripoli city according to their type of residency?
- What is the level of HRQOL among adult IDPs in Tripoli city according to their type of residency?
- Do demographic factors affect mental health and HRQOL among adult IDPs in Tripoli city according to their type of residency?
- Do socio-economic factors affect mental health and HRQOL among adult IDPs in Tripoli city according to their type of residency?
- Does general health condition affect mental health and HRQOL among adult IDPs in Tripoli city according to their type of residency?
- Does level of utilization of healthcare services affect mental health and HRQOL among adult IDPs in Tripoli city according to their type of residency?
- Does type of residency and mental disorders affect HRQOL among adult IDPs in Tripoli city?

3.6. Conceptual Framework

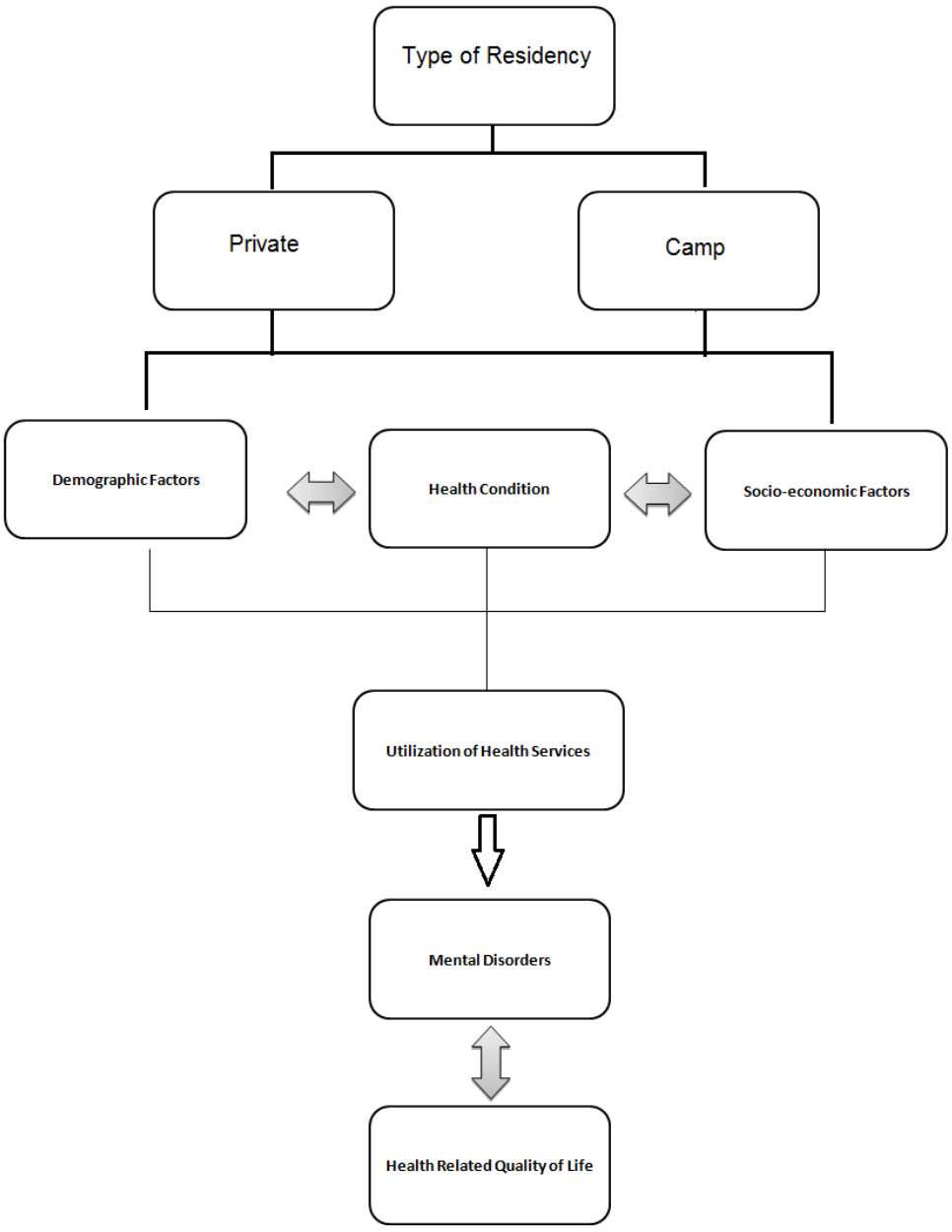

Figure 3.1. Conceptual Framework

According to our conceptual framework, our research was designed to assess the effect of demographic factors, socioeconomic factors, health condition and health service utilization on the proportion of mental disorders and quality of life among IDPs according to their type of residency.

3.7. Research Variables

3.7.1. Dependent Variables

- Mental disorders.
- Health Related Quality Of Life.

3.7.2. Independent Variables

Demographic Variables

Age, gender, level of education, marital status, family type, family size, family integrity.

Socio-Economic Variables

Employment, occupation, income, social support, financial support, type of residency, displacement conditions: city of origin, cause of displacement, duration of displacement, multiple displacements.

Health Condition

Presence of physical disability, presence of chronic disease, date of diagnosis, regularity of treatment, complications, tobacco use, alcohol usage.

Utilization of Health Services

Physician visit during displacement, type of facility, level of satisfaction, difficulties faced during visit including: transportation, appointment, presence of physician, security, waiting time, visit payment, medication payment and discrimination.

3.8. Research Instruments

3.8.1. Socio-Demographic Factors

The questionnaire form used in order to collect data regarding subject’s socio-demographic and economic factors.

3.8.2. Mental Disorders (DASS 42)

The Depression, Anxiety, and Stress Scale 42 was developed by the University of New South Wales (Australia). The reliability scores of the scales in terms of Cronbach's alpha scores rate the Depression scale at 0.91, the Anxiety scale at 0.84 and the Stress scale at 0.90 in the normative sample. The means and standard deviations for each scale are 6.34 and 6.97 for depression, 4.7 and 4.91 for anxiety and 10.11 and 7.91 for stress, respectively. The mean scores in the normative sample did vary slightly between genders as well as varying by age, though the threshold scores for classifications do not change by these variations. The DASS is a set of three self-report scales designed to measure the negative emotional states of depression, anxiety and stress. The DASS was constructed not merely as another set of scales to measure conventionally defined emotional states, but to further the process of defining, understanding, and measuring the ubiquitous and clinically significant emotional states usually described as depression, anxiety and stress. The DASS should thus meet the requirements of both researchers and scientist-professional clinicians. Each of the three DASS scales contains 14 items, divided into subscales of 2-5 items with similar content. The Depression scale assesses dysphoria, hopelessness, devaluation of life, self-deprecation, and lack of interest/involvement, anhedonia, and inertia. The Anxiety scale assesses autonomic arousal, skeletal muscle effects, situational anxiety, and subjective experience of anxious affect. The Stress scale is sensitive to levels of chronic non-specific arousal. It assesses difficulty relaxing, nervous arousal, and being easily upset/agitated, irritable/over-reactive and impatient. Subjects are asked to use 4-point severity/frequency scales to rate the extent to which they have experienced each state over the past week. Scores for Depression, Anxiety and Stress are calculated by summing the scores for the relevant items. The DASS may be administered either in groups or individually for research purposes. The capacity to discriminate between the three related states of depression, anxiety and stress should be useful to researchers concerned with the nature, etiology and mechanisms of emotional disturbance. As the essential development of the DASS was carried out with non-clinical samples, it is suitable for screening normal adolescents and adults (90).

An Arabic version of the DASS 42 was developed by Miriam Taouk Moussa and Peter F. Lovibond at School of Psychology, University of New South Wales, Sydney, Australia. Its psychometric properties were evaluated in an Australian immigrant sample (n=220) and compared to the data reported by Lovibond and Lovibond (1995) using the English version of the DASS (N=720). Confirmatory factor analysis showed that the Arabic DASS discriminates between depression, anxiety, and stress, but the extent of differentiation between these negative emotional syndromes was less in comparison to the English DASS. The factor loadings for all 42 items of the Arabic DASS were comparable to those of the English DASS, and indicated that the items had been adequately and appropriately translated and adapted. Analysis of exploratory items suggested by Arabic-speaking mental health professionals failed to reveal any new items that were both psychometrically adequate and theoretically coherent. Analysis of a bilingual sample (n=24) indicated that use of English norms was appropriate for the Arabic DASS. The results support the universality of depression, anxiety, and stress across cultures, and provide initial support for the psychometric properties of the Arabic scales. Reliability (alpha) coefficients for the three scales were Depression: 0.93; Anxiety: 0.90; Stress 0.93 (85,90).

DASS 42 scores were calculated according to the instructions of the scale authors (90), the higher the score the higher risk of mental disorder, five degrees of depression, anxiety and stress are interpreted according to DASS scores including; normal, mild, moderate, severe and extremely severe. In our analysis only participants with normal score considered disease free while participants with mild, moderate, severe and extremely severe scores considered diseased.

DASS 21 scale the Arabic version has been used in Libya according to Taher, et al. (2016) and Jiji and Rajagopal (2014) (91,92).

3.8.3. HRQOL (Rand 36-Item Health Survey)

As part of the Medical Outcomes Study (MOS), a multi-year, multi-site study to explain variations in patient outcomes, RAND developed the 36-Item Short Form Health Survey (SF-36). SF-36 is a set of generic, coherent, and easily administered quality-of-life measures. The SF-36 consists of eight scaled scores, which are the

weighted sums of the questions in their section. Each scale is directly transformed into a 0-100 scale on the assumption that each question carries equal weight. The lower the score the greater the disability. The higher the score the less the disability. The eight sections are: vitality, physical functioning, bodily pain, general health perceptions, physical role functioning, emotional role functioning, social role functioning, mental health (83,84).

RAND 36-Item Health Survey 1.0 (aka SF 36) has been translated into Arabic language by Saud Abdulaziz Al abdulmohsin, Stephen Joel Coons, JoLaine R. Draugalis and Ron D. Hays at RAND research. The objectives of their research were to: (1) translate the RAND 36-Item Health Survey 1.0 (aka SF-36) into Arabic; (2) evaluate the reliability and equivalence of the Arabic and English versions in a sample of Saudi Arabian citizens; and (3) assess the health status of a sample of Saudi Arabian citizens using both the Arabic and English versions. Forward and backward translation of the SF-36 with committee review was performed. Both the Arabic and English versions of the survey were administered to a convenience sample of bilingual (English and Arabic) Saudi citizens (N=415) at Saudi ARAMCO Company, Dhahran, Saudi Arabia. Internal consistency, equivalent-forms, and test-retest reliability were estimated for the Arabic and English versions of the survey. The results of the study provide support for the reliability and equivalence of both versions. The median internal consistency reliability coefficients for all administrations (Group 1, 3 and 5) of the Arabic version of the SF-36 exceeded 0.70 for every scale except for the general health perceptions scale (median alpha =0.59). The median internal consistency reliability coefficients for all administrations (Groups 2, 4, and 6) of the English version of the SF-36 exceeded 0.70. Therefore, the results of this study provide support for the reliability of the Arabic version of the SF-36 and are consistent with previous reliability estimates reported for the English version. Scoring the RAND 36-Item Health Survey is a two-step process. First, precoded numeric values are recoded per the scoring key. Note that all items are scored so that a high score defines a more favorable health state. In addition, each item is scored on a 0 to 100 range so that the lowest and highest possible scores are 0 and 100, respectively. Scores represent the percentage of total possible score achieved. In step 2, items in the same scale are averaged together to create the 8 scale

scores. Items that are left blank (missing data) are not taken into account when calculating the scale scores. Hence, scale scores represent the average for all items in the scale that the respondent answered (84,85).

Our literature review did not show any published study using RAND 36-Item Health Survey among Libyan population, but Sayah F., et al. (2012) discussed the use of health related quality of life measures in Arabic speaking populations, and they concluded that research on HRQOL assessment is scarce in the Arabic countries, and they reinforced the need for further investigation of the performance of the Arabic versions of HRQOL measures and their measurement properties (93).

3.9. Data Collection

3.9.1. Data Collection Team

Data collection team was established for the purpose of research data collection, the team was formed of two groups with similar tasks. Each group contained a group leader and four group members (university students). Two group leaders (medical physicians) were trained on the process of data collection and the use of research questionnaire and explanation of educational leaflets by the researcher. The leaders then transferred their knowledge to group members under observation of the researcher. All group members received two hours of training before the start of data collection process.

3.9.2. Data Collection Process

Target population was divided into two groups according to data collection approach:

1- Private Residents: Those were IDPs who lived in private houses owned, rented, shared or granted. They had their own addresses, and they had been contacted randomly through the IDP lists prepared by Libyan Ministry of Social Affairs (written permission), where they were called by phone (phone numbers included in lists), and those who accepted to participate their family adults were offered to participate also. Unfortunately, and due to data collection limitations about 30% of the targeted private residents list could not be contacted.

2- Informal Residents (Camp): Those were IDPs who lived in abundant construction company workers camps, Alfallah1 (32.854217,13.147598) and Alfallah2 (32.861015,13.157403) camps were targeted as they are the only governmental controlled and recognized camps, where governmental permissions where given for those two camps only, and warning of approaching the other camps were given for security hazards. All IDPs in both camps were targeted and informed consent was obtained.

Self-answered questionnaire was given for educated participants, and those who lack reading and writing skills assistance from data collectors provided.

Target representative sample size was not achieved for field limitations including political instability, frequently erupted conflicts and lack of security in Tripoli city.

3.10. Data Entry

Started at October 2017, collected questionnaires were passed immediately to the researcher; data were entered into SPSS 22 data sheet concurrently with data collection process. Data clearing were done prior to statistical analysis.

3.11. Data Entry Statistics

496 questionnaires were collected.
27 of them were excluded for missed DASS scale.
469 valid questionnaires were entered.
242 of them were answered by camp residents.
227 of them were answered by private residents.

3.12. Statistical Analysis

- Our data analysis is done by using IBM SPSS Statistics version 22.
- Started at January 2018.
- Statistical analysis done in two models:

1- **Bivariate analysis model:** This model included all demographic, socio-economic, health condition, displacement condition, healthcare utilization variables, DASS scores and SF-36 scores by Type of

Residency. Tests included Pearson Chi-Square test, Fisher's exact test, Mann-Whitney U test and Kruskal Wallis test were used in the first model.

DASS 42 scores were calculated according to the instructions of the scale authors (90), the higher the score the higher risk of mental disorder, five degrees of depression, anxiety and stress were interpreted according to DASS 42 scores including; normal, mild, moderate, severe and extremely severe. In our analysis only participants with normal score considered disease free while participants with mild, moderate, severe and extremely severe scores considered diseased.

Table 3.1. Bivariate analysis model variables grouping

Variable	**Categories**							
Age	18-24	25-34	35-44	45-64	≥65			
Education	Illiterate	Only literate	Primary school	Elementary school	Secondary school	College graduate	University graduate	Postgraduate degree
Family size	1-5	6-10	≥11					
Employment	Enrolled	Not regularly enrolled	Partly enrolled	Not enrolled				
Occupation	Highly educated	Office worker	Small employer	Industrial worker	Non regular work			
Monthly income	≤450	451-1000	>1000					
Place of origin	Tawerga	Bengazi	Sirt	Other				
Disp. time (months)	≤36	37-72	>72					
Cause of disp.	General violence	Security issues	Economic issues					
Depression	Normal	Depression						
Anxiety	Normal	Anxiety						
Stress	Normal	Stress						

2- Logistic regression model: Binary logistic regression analysis was used including all the significant variables from the first model, Cox & Snell, Negelkerke and Hosmer-lemeshow tests were used and odds ratio, p value and confidence interval were calculated. 95% confidence interval and 0.05 P value were considered in the analysis. The logistic regression model was performed in two steps; in the first step all significant variables from bivariate model were included and results shown in

Appendix E, in the second step only significant variables from the first step were included in order to gain sufficient number of participants.

Table 3.2. Logistic regression model variables grouping

Variable	**Categories**			
Age	18-24	25-44	45-64	≥65
Education	Illiterate	Literate, Primary, Secondary	University+	
Family size	1-5	6-10	≥11	
Employment	Enrolled	Not regularly enrolled	Not enrolled	
Monthly income	<450	≥450		
Place of origin	Tawerga	Other		
Disp. time	≤72	>72		
Cause of disp.	General violence	Security issues		
Depression	Normal	Depression		
Anxiety	Normal	Anxiety		
Stress	Normal	Stress		

3.13. Ethical Issues

- Ethical committee approval; Approval was obtained from the ethical committee at Almargeb University Alkhums Libya. - Governmental approvals were obtained from Libyan Ministry of Social Affairs and Tawerga Local Council [Appendix C].

- Health Educational Leaflets regarding Mental Disorder's signs, symptoms and availability of healthcare services were distributed with the questionnaires. WHO brochures regarding Depression and other mental disorders were distributed, and governmental supported mental health service phone numbers were printed on the brochures, for maximum benefit [Appendix D].

3.14. Research Time Chart (Gantt chart)

Table 3.3. Gantt chart

Task	Start	Period	May 2017	Jun 2017	Jul 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018	May 2018	Jun 2018	Jul 2018	Aug 2018	Sep 2018	Oct 2018	Nov 2018	Dec 2018	Jan 2019
Literature Review	01-05-2017	20 Months																					
Thesis proposal presentation	16-05-2017	1 Day																					
Data collection	01-06-2017	120 Days																					
Data entry	01-10-2017	90 Days																					
Data clearing	01-01-2018	30 Days																					
Data analysis	01-01-2018	6 Months																					
Thesis writing	01-07-2018	6 months																					
Final discussion	01-01-2019	1 Day																					

4. RESULTS

This chapter contains the results of our research's statistical analysis, where our data are transferred to understandable information, information are presented quantitatively in tables and followed by verbal explanation and comparison. Percentages were used for comparisons and different statistical approaches were used for data analysis according to the type of variable data, in addition to basic descriptive statistical approaches; tests included Pearson Chi-Square test, Fisher's exact test, Mann-Whitney U test and Kruskal Wallis test were used in the first model titled "Bivariate analysis".

In the second model titled "Logistic regression" binary logistic regression analysis was used including all the significant variables from the first model, Cox & Snell, Negelkerke and Hosmer-lemeshow tests were used and odds ratio, p value and confidence interval were calculated.

496 IDPs participated in our research, thus 496 questionnaires were collected, 27 of them were excluded for missed DAS scale, 469 valid questionnaires were entered, 242 of them were answered by camp residents and 227 of them were answered by private residents.

4.1. Bivariate Analysis

4.1.1. Demographic, Socio-Economic Characteristics And Health Condition

Table 4.1. Demographic characteristics of IDPs by type of residency (Tripoli 2017)

	Type of Residency				p*
	Private		Camp		
	n	%	n	%	
Gender					**<0.001**
Male	117	51.8	80	33.2	
Female	109	48.2	161	66.8	
Total	**226**	**100.0**	**241**	**100.0**	
Age category					**<0.001**
18-24**	21	9.3	79	32.6	
25-34**	93	41.0	66	27.3	
35-44	59	26.0	52	21.5	
45-64	37	16.3	35	14.5	
≥65	17	7.5	10	4.1	
Total	**227**	**100.0**	**242**	**100.0**	
Education status					**<0.001**
Illiterate**	12	5.3	26	11.1	
Only literate	13	5.8	11	4.7	
Primary school	4	1.8	4	1.7	
Elementary school graduate**	4	1.8	16	6.8	
Secondary school graduate**	28	12.4	46	19.7	
Graduated from college	40	17.8	49	20.9	
University graduate**	112	49.8	77	32.9	
Postgraduate degree	12	5.3	5	2.1	
Total	**225**	**100.0**	**234**	**100.0**	

*Pearson Chi-Square.
** Significant cells

Table 4.1 of our results shows demographic characteristics of participants by type of residency, the results shows that 51.8% of private resident are males, while 33.2% of camp resident are males ($p<0.001$). Participants' age categories shows that 9.3% of private residents and 32.6% of camp residents are aged 18-24, while 83.3% of private residents and 63.3% of camp residents are aged 25-64, 7.5% of private residents and 4.1% of camp residents are aged ≥65 years ($p <0.001$). The table also shows that 5.3% of private residents and 11.1% of camp residents are illiterate, while

5.8% of private residents and 4.7% of camp residents are only literate and did not finish any degree, 1.8% of private residents and 1.7% of camp residents finished primary school, 1.8% of private residents and 6.8% of camp residents finished elementary school, 12.4% of private residents and 19.7% of camp residents finished secondary school, 17.8% of private residents and 20.9% of camp residents finished college degree, 49.8% of private residents and 32.9% of camp residents finished university degree and 5.3% of private residents and 2.1% of camp residents finished master or doctor degree ($p<0.001$).

Table 4.2. Demographic (Family condition) characteristics of IDPs by type of residency (Tripoli 2017)

	Type of Residency				**p***
	Private		**Camp**		
	n	**%**	**n**	**%**	
Marital status					**<0.001**
Married**	131	57.7	87	36.1	
Single**	87	38.3	129	53.5	
Widow/ Separated**	9	4.0	25	10.4	
Total	**227**	**100.0**	**241**	**100.0**	
Family type					**<0.001**
Nuclear family**	128	58.2	81	34.6	
Single parent family	17	7.7	21	9.0	
Extended family**	75	34.1	132	56.4	
Total	**220**	**100.0**	**234**	**100.0**	
Family integrity					0.503
Yes	154	68.8	156	65.8	
No	70	31.3	81	34.2	
Total	**224**	**100.0**	**237**	**100.0**	
Family size					**0.010**
1-5	71	31.7	86	36.6	
6-10	100	44.6	121	51.5	
≥11**	53	23.7	28	11.9	
Total	**224**	**100.0**	**235**	**100.0**	

*Pearson Chi-Square
** Significant cells

Table 4.2 shows other demographic characteristics of participants by type of residency. The table shows that 57.7% of private residents and 36.1% of camp residents are married, 38.3% of private residents and 53.5% of camp residents are single, 4.0% of private residents and 10.4% of camp residents are widows or separated (p<0.001). Participants' family type shows that 58.2% of private residents and 34.6% of camp residents have nuclear families, 7.7% of private residents and 9.0% of camp residents have single parent families while 34.1% of private residents and 56.4% of camp residents have extended families (p<0.001). Regarding family integrity 68.8% of private residents said that all family members are living together while 65.8% of camp residents said that (p=0.503). Family size statistics shows about half of the families have 6-10 members, while 23.7% of private resident families and 11.9% of camp resident families have more than 11 members (p=0.010).

Table 4.3. Socio-economic characteristics of IDPs by Type of Residency (Tripoli 2017)

	Type of Residency				**p***
	Private		**Camp**		
	n	**%**	**n**	**%**	
Enrolled in work					**<0.001**
Enrolled**	92	40.5	66	27.4	
Not regularly enrolled	28	12.3	37	15.4	
Partly enrolled**	41	18.1	12	5.0	
Not enrolled at all**	66	29.1	126	52.3	
Total	**227**	**100.0**	**241**	**100.0**	
Occupation					**<0.001**
Highly educated**	46	31.5	9	9.5	
Office worker**	49	33.6	52	54.7	
Small employee	23	15.8	11	11.6	
Industrial worker**	9	6.2	14	14.7	
Non regular work	19	13.0	9	9.5	
Total	**146**	**100.0**	**95**	**100.0**	
Monthly income (LD)					**<0.001**
Less than 450**	22	15.4	33	30.3	
Between 451 and 1000	99	69.2	74	67.9	
More than 1000**	22	15.4	2	1.8	
Total	**143**	**100.0**	**109**	**100.0**	

*Pearson Chi-Square
** Significant cells

Table 4.3 shows socio-economic characteristics of participants by type of residency. The table shows that 40.5% of private residents and 27.4% of camp residents are regularly enrolled, while 29.1% of private residents and 52.3% of camp residents are not enrolled at all, the rest are irregularly enrolled ($p<0.001$). Regarding occupation; 31.5% of private residents and 9.5% of camp residents have higher educated type of jobs, while 33.6% of private residents and 54.7% of camp residents are office workers, 15.8% of private residents and 11.6% of camp residents are small employee, 6.2% of private residents and 14.7% of camp residents are industrial workers while 13.0% of private residents and 9.5% of camp residents are on non regular work ($p<0.001$). Majority of participants (69.2% of private residents. and 67.9% of camp residents.) have an average monthly income between 451 and 1000 LD, while 30.3% of camp residents have monthly income less than the lower limit and 15.4% of private residents have monthly income higher than 1000 LD ($p<0.001$).

Table 4.4. Financial and social support characteristics of IDPs by Type of Residency (Tripoli 2017)

	Type of Residency				
	Private		**Camp**		**p***
	n	**%**	**n**	**%**	
Financial support					0.702
Yes	42	18.8	47	20.3	
No	181	81.2	185	79.7	
Total	**223**	**100.0**	**232**	**100.0**	
Social support					**0.031**
Yes	51	23.0	71	32.1	
No	171	77.0	150	67.9	
Total	**222**	**100.0**	**221**	**100.0**	

*Pearson Chi-Square

Table 4.4 shows financial and social support conditions of participants, where 18.8% of private residents and 20.3% of camp residents have financial support ($p=0.702$), 23.0% and 32.1% of them respectively have social support when needed ($p=0.031$).

Table 4.5. Displacement characteristics of IDPs by Type of Residency (Tripoli 2017)

	Type of Residency				p*
	Private		Camp		
	n	%	n	%	
Place of origin					**<0.001**
Tawerga**	77	33.9	236	97.5	
Bengazi**	74	32.6	1	0.4	
Sirt**	38	16.7	1	0.4	
Other**	38	16.7	4	1.7	
Total	**227**	**100.0**	**242**	**100.0**	
Displacement time (month)					**<0.001**
<36	87	39.0**	1	0.4**	
37-72	66	29.6	69	29.4	
>72	70	31.4**	165	70.2**	
Total	**223**	**100.0**	**235**	**100.0**	
Cause of displacement					**<0.001**
General violence**	181	82.4	232	96.3	
Security issues**	36	16.6	8	3.3	
Economic issues	3	1.4	1	0.4	
Total	**220**	**100.0**	**241**	**100.0**	
Change of displacement					**<0.001**
Yes	30	15.1	83	38.8	
No	169	84.9	131	61.2	
Total	**199**	**100.0**	**214**	**100.0**	

*Pearson Chi-Square
** Significant cells

Table 4.5 shows displacement conditions of participants by type of residency, 33.9% of private residents and 97.5% of camp residents are originally from Tawerga city, while 66.0% of private residents and 2.5% of camp residents are from other cities of Libya ($p<0.001$). Among private residents 39.0% and 0.4% of camp residents have less than 36 months in displacement, while 31.4% of private residents and 70.2% of camp residents have more than 72 months in displacement ($p<0.001$). Of private residents 82.4% and 96.3% of camp residents are displaced because of general violence, while the rest are displaced because of either security or economic issues ($p<0.001$). 15.1% of private residents and 38.8% of camp residents said that they changed their place of displacement, the rest said not ($p<0.001$).

Table 4.6. Cigarette smoking and alcohol usage of IDPs by Type of Residency (Tripoli 2017)

	Type of Residency				p*
	Private		Camp		
	n	%	n	%	
Cigarette smoking					**0.026**
Yes	64	29.0	37	19.5	
No	157	71.0	153	80.5	
Total	**221**	**100.0**	**190**	**100.0**	
Alcohol usage					0.210
Yes	11	5.0	5	2.6	
No	208	95.0	186	97.4	
Total	**219**	**100.0**	**191**	**100.0**	

*Pearson Chi-Square

Table 4.6 shows cigarette smoking and alcohol usage of participants by the type of residency, it shows that 29.0% of private residents and 19.5% of camp residents are cigarette smokers (p=0.026), while 5.0% of private residents and 2.6% of camp residents said that they use alcohol (p=0.210).

Table 4.1. Chronic disease characteristics of IDPs by Type of Residency (Tripoli 2017)

	Type of Residency						p
	Private			Camp			
	N	n	%	N	n	%	
Chronic diseases	227	55	24.2	242	40	16.5	**0.038***
Diabetes mellitus	227	8	3.5	242	6	2.5	0.506*
Hypertension	227	24	10.6	242	21	8.7	0.486*
Hyperlipidemia	227	10	4.4	242	1	0.4	**0.004***
Respiratory disease	227	21	9.3	242	8	3.3	**0.008***
Heart disease	227	6	2.6	242	1	0.4	0.061**
Mental disease	227	1	0.4	242	4	1.7	0.374**
Liver disease	227	1	0.4	242	1	0.4	1.000**
Kidney disease	227	1	0.4	242	2	0.8	1.000**
Physical disability	211	1	0.5	201	10	5.0	**0.005***

*Pearson Chi-square
**Fisher's Exact Chi-square

Table 4.7 shows chronic disease characteristics of participants by type of residency according to participants self report, 24.2% of private residents said that they have any type of chronic diseases (p=0.038), 3.5% of them have diabetes mellitus (p=0.506), 10.6% have hypertension (p=0.486), 4.4% have hyperlipidemia (p=0.004), 9.3% have respiratory disease (p=0.008), 2.6% have heart disease (p=0.061) and 0.5% has physical disability (p=0.005). While 16.5% of camp residents said that they have any type of chronic diseases (p=0.038), 2.5% of them have diabetes mellitus (p=0.506), 8.7% have hypertension (p=0.486), 0.4% has hyperlipidemia (p=0.004), 3.3% have respiratory disease (p=0.008), 0.4% has heart disease (p=0.061) and 5.0% have physical disability (p=0.005).

Table 4.8. IDPs healthcare service utilization by Type of Residency (Tripoli 2017)

Healthcare service utilization	Type of Residency						p*
	Private			Camp			
	N	n	%	N	n	%	
Physician visit	225	146	64.9	236	170	72.0	0.099
Visiting public health facility	146	108	74.0	170	142	83.5	**0.007**
Satisfaction for public facility							**<0.001**
Satisfied		59	48.8		132	69.8	
Not satisfied		62	51.2		57	30.2	
Total		**121**	**100.0**		**189**	**100.0**	
Visiting private health facility	146	58	39.7	170	49	28.8	**0.003**
Satisfaction for private facility							**0.033**
Satisfied		44	66.7		37	64.9	
Not satisfied		22	33.3		20	35.1	
Total		**66**	**100.0**		**57**	**100.0**	

*Pearson Chi-square

Table 4.8 shows participant's healthcare service utilization by type of residency, where 64.9% of private residents and 72.0% of camp residents said that they visited a physician during their displacement time (p=0.099), 74.0% of private residents and 83.5% of camp residents visited the public health facilities (p=0.007), and 48.8% of private residents and 69.8% of camp residents were satisfied with the

service of public health facilities (p<0.001). 39.7% of private residents and 28.8% of camp residents visited private health facilities (p=0.003) and 66.7% of private residents and 64.9% of camp residents were satisfied with the service of private health facilities (p=0.033).

Table 4.9. IDPs healthcare service utilization difficulties by Type of Residency (Tripoli 2017)

Health facility difficulties	Type of Residency						p*
	Private			Camp			
	N	n	%	N	n	%	
Transportation	88	17	19.3	133	36	27.1	0.187
Appointment	88	34	38.6	133	38	28.6	0.118
No physicians in the area	88	21	23.9	133	24	18.0	0.293
Security	88	10	11.4	133	27	20.3	0.082
Waiting time	88	41	46.6	134	49	36.6	0.137
Visit payment	88	15	17.0	134	27	20.1	0.564
Medication payment	88	28	31.8	134	46	34.3	0.698
Discrimination	88	7	8.0	134	15	11.2	0.429

*Pearson Chi-square

Table 4.9 shows participant's healthcare service utilization difficulties by type of residency, among private residents waiting time difficulty have the highest share (46.6%) (p=0.137), then the appointment difficulty (38.6%) (p=0.118), then the medication payment (31.8%) (p=0.698). While among camp residents waiting time difficulty have the highest share (36.6%) (p=0.137), then the medication payment difficulty (34.3%) (p=0.698), then the appointment difficulty (28.6%) (p=0.118). Discrimination difficulty has the least percentage among both participants' categories (8.0% and 11.2% respectively) (p=0.429).

4.1.2. Depression, Anxiety and Stress Scale (DASS)

DASS scores were calculated according to the instructions of the scale authors (90), the higher the score the higher risk of mental disorder, five degrees of depression, anxiety and stress are interpreted according to DASS scores including;

normal, mild, moderate, severe and extremely severe. In our analysis only participants with normal score considered disease free while participants with mild, moderate, severe and extremely severe scores considered diseased.

Table 4.10. The distribution of Depression, Anxiety and Stress according to DASS42 among IDPs by the type of residency (Tripoli 2017)

DASS	Type of Residency				N	%	p*
	Private		Camp				
	n	%	n	%			
Depression							**<0.001**
Normal	109	51.7	46	23.6	155	38.2	
Mild	26	12.3	15	7.7	41	10.1	
Moderate	32	15.2	46	23.6	78	19.2	
Severe	26	12.3	31	15.9	57	14.0	
Extremely severe	18	8.5	57	29.2	75	18.5	
Total	**211**	**100.0**	**195**	**100.0**	**406**	**100.0**	
Anxiety							**<0.001**
Normal	114	52.8	60	29.4	174	41.4	
Mild	17	7.9	11	5.4	28	6.7	
Moderate	37	17.1	43	21.1	80	19.0	
Severe	21	9.7	39	19.1	60	14.3	
Extremely severe	27	12.5	51	25.0	78	18.6	
Total	**216**	**100.0**	**204**	**100.0**	**420**	**100.0**	
Stress							**<0.001**
Normal	127	59.1	59	29.2	186	44.9	
Mild	29	13.5	25	12.6	54	13.0	
Moderate	33	15.3	55	27.6	88	21.3	
Severe	24	11.2	28	14.1	52	12.6	
Extremely severe	2	0.9	32	16.1	34	8.2	
Total	**215**	**100.0**	**199**	**100.0**	**414**	**100.0**	

*Pearson Chi-square

Table 4.10 shows participants' depression, anxiety and stress scale scores by the type of residency, 48.3% of private residents and 76.4% of camp residents have scores with some degree of depression ($p<0.001$), while 47.2% of private residents and 70.6% of camp residents have scores with some degree of anxiety ($p<0.001$), and 40.9% of private residents and 70.4% of camp residents have scores with some degree of stress ($p<0.001$).

Depression scores findings (According to DASS)

Table 4.11. The distribution of depression according to DASS42 among IDPs by demographic characteristics and type of residency (Tripoli 2017)

	Depression							
	Private				**Camp**			
	N	**n**	**%**	**p***	**N**	**n**	**%**	**p***
Gender				0.605				0.232
Male	112	52	46.4		70	50	71.4	
Female	98	49	50.0		124	98	79.0	
Age category				0.221				**<0.001**
18-24	18	8	44.4		64	59**	92.2	
25-44	143	70	49.0		98	71	72.4	
45-64	36	14	38.9		25	14**	56.0	
≥65	14	10	71.4		8	5	62.5	
Marital status				0.155				**<0.001**
Married	122	55	45.1		69	43**	62.3	
Single	80	40	50.0		107	93**	86.9	
Widow/Separated	9	7	77.8		18	12	66.7	
Educational status				**0.006**				0.248
Not educated	8	8**	100.0		18	14	77.8	
Literate, Primary, Sec.	46	25	54.3		66	47	71.2	
College/University+	155	69**	44.5		106	87	82.1	

*Pearson Chi-square
** Significant cells

Table 4.11 shows participants' depression scores by demographic characteristics and type of residency, the results shows that female participants have higher percentage of depression among both categories (p=0.605, p=0.232). According to age categories participants aged more than 64 years have the highest percentage of depression (71.4%) among private residents (p=0.221), and participants aged 18-24 years have the highest percentage of depression (92.2%) among camp residents (p<0.001). Widowed, separated or divorced participants have the highest percentage of depression (78.8%) among private residents (p=0.155), while single participants have the highest percentage of depression (86.9%) among camp residents (p<0.001). Illiterate participants have the highest percentage of depression (100.0%) among private residents (p=0.006), and participants with high

level of education have the highest percentage of depression (82.1%) among camp residents (p=0.248).

Table 4.2. The distribution of depression according to DASS42 among IDPs by demographic (Family condition) characteristics and type of residency (Tripoli 2017)

	Depression							
	Private				**Camp**			
	N	**n**	**%**	**p***	**N**	**n**	**%**	**p***
Family type				**0.010**				0.612
Nuclear	118	48**	40.7		64	49	76.6	
Single parent	16	12**	75.0		15	10	66.7	
Extended	71	40	56.3		110	86	78.2	
Family size				0.837				0.679
1-5	66	31	47.0		68	54	79.4	
6-10	95	45	47.4		100	74	74.0	
≥11	48	25	52.1		22	16	72.7	
Family integrity				0.741				0.388
Yes	147	71	48.3		129	96	74.4	
No	61	31	50.8		65	52	80.0	

*Pearson Chi-square
** Significant cells

Table 4.12 shows participants depression scores by demographic characteristics and type of residency, the results shows that participants with single parent have the highest percentage of depression (75.0%) among private residents (p=0.010), and participants with extended family have the highest percentage of depression (78.2%) among camp residents (p=0.612). Participants with larger families have the highest percentage of depression (52.1%) among private residents (p=0.837), participants with smaller families have the highest percentage of depression (79.4%) among camp residents (p=0.679). Participants with integrate families have lower percentage of depression in both categories (p=0.741, 0.388).

Table 4.3. The distribution of depression according to DASS42 among IDPs by socio-economic characteristics and type of residency (Tripoli 2017)

	Depression							
	Private				**Camp**			
	N	**n**	**%**	**p***	**N**	**n**	**%**	**p***
Work enrollment				0.051				**0.014**
Enrolled	88	35	39.8		54	34**	63.0	
Not regular/Partly	65	32	49.2		42	33	78.6	
Not enrolled	58	35	60.3		98	82**	83.7	
Monthly income				**0.033**				0.897
<450	18	13	72.2		22	14	63.6	
≥450	115	52	45.2		66	43	65.2	
Financial support				**0.008**				0.189
Yes	35	24	68.6		42	35	83.3	
No	172	76	44.2		147	108	73.5	
Social support				**0.012**				**0.046**
Yes	41	27	65.9		63	53	84.1	
No	166	73	44.0		116	82	70.7	

*Pearson Chi-square
** Significant cells

Table 4.13 shows participants depression scores by socio-economic characteristics and type of residency, the results shows that participants who are not work enrolled have the highest percentage of depression (60.3%) among private residents (p=0.051), and similarly participants who are not work enrolled have the highest percentage of depression (83.7%) among camp residents (p=0.014). participants with less monthly income have higher percentage of depression (72.2%) among private residents (p=0.033), while participants with high monthly income have the higher percentage of depression (65.2%) among camp residents (p=0.897). Financially and socially supported participants have higher percentage of depression among both private (p=0.008, p=0.012) and camp (p=0.189, p=0.046) resident IDPs.

Table 4.14. The distribution of depression according to DASS42 among IDPs by displacement conditions and type of residency (Tripoli 2017)

	Depression							
	Private				Camp			
	N	**n**	**%**	**p***	**N**	**n**	**%**	**p***
Place of origin				**<0.001**				0.848
Tawerga	66	44	66.7		190	145	76.3	
Other	145	58	40.0		5	4	80.0	
Disp. time (month)				**0.002**				**0.047**
≤72	146	60	41.1		55	47	85.5	
>72	62	40	64.5		135	97	71.9	
Displacement cause				0.060				0.738
General violence	168	87	51.8		186	143	76.9	
Security issues	35	12	34.3		7	5	71.4	
Displacement change				**0.038**				**0.004**
Yes	27	18	66.7		62	42	67.7	
No	162	73	45.1		108	93	86.1	

*Pearson Chi-square

Table 4.14 shows participants depression scores by socio-economic characteristics (displacement conditions) and type of residency, the results shows that participants from Tawerga have higher percentage of depression (66.7%) among private residents (p<0.001), while participants from other cities have higher percentage of depression (80.0%) among camp residents (p=0.848). Participants who spent more than 72 months in displacement have higher percentage of depression (64.5%) among private residents (p=0.002), while participants who spent less than 72 months in displacement have higher percentage of depression (85.5%) among camp residents (p=0.047). Participants who considered general violence as the cause of displacement have a higher percentage of depression in both private and camp residents (51.8%, 76.9% respectively) (p=0.060, 0.738). Participants who changed their place of displacement have higher percentage of depression (66.7%) among private residents (p=0.038) while those who did not change their place of displacement have higher percentage of depression (86.1%) among camp residents (p=0.004).

Table 4.15. The distribution of depression according to DASS42 among IDPs by health condition and behavior and type of residency (Tripoli 2017)

	Depression							
	Private				Camp			
	N	**n**	**%**	**p***	**N**	**n**	**%**	**p***
Chronic disease				**<0.001**				0.440
Yes	50	38	76.0		28	23	82.1	
No	161	64	39.8		167	126	75.4	
Cigarette smoking				0.545				0.961
Yes	61	31	50.8		34	25	73.5	
No	145	67	46.2		119	87	73.1	
Physician visit				**0.002**				0.127
Yes	135	76	56.3		138	101	73.2	
No	75	25	33.3		53	45	84.9	

*Pearson Chi-square

Table 4.15 shows participants' depression scores by socio-economic characteristics (health condition and behavior) and type of residency, the results show that participants who have chronic disease have a higher percentage of depression among both private residents (76.0%) ($p<0.001$) and camp residents (82.1%) ($p=0.440$). Participants who smoke cigarette have a higher percentage of depression among both private residents (50.8%) ($p=0.545$) and camp residents (73.5%) ($p=0.961$). While participants who said that they visited a physician during displacement have higher percentage of depression (56.3%) among private residents ($p=0.002$), participants who said that they did not visit a physician during displacement have higher percentage of depression (84.9%) among camp residents ($p=0.127$).

Anxiety Scores Findings (According to DASS)

Table 4.16. The distribution of anxiety according to DASS42 among IDPs by demographic characteristics and type of residency (Tripoli 2017)

	Anxiety							
	Private				**Camp**			
	N	**n**	**%**	**p***	**N**	**n**	**%**	**p***
Gender				0.160				0.624
Male	112	48	42.9		73	50	68.5	
Female	103	54	52.4		131	94	71.8	
Age category				0.060				0.368
18-24	20	12	60.0		69	48	69.6	
25-44	144	63	43.8		101	71	70.3	
45-64	36	15	41.7		27	18	66.7	
≥65	16	12	75.0		7	7	100.0	
Marital status				0.475				0.233
Married	127	58	45.7		73	47	64.4	
Single	80	38	47.5		112	81	72.3	
Widow/Separated	9	6	66.7		18	15	83.3	
Educational status				**<0.001**				0.061
Not educated	11	11**	100.0		17	16	94.1	
Literate/Prim/Secondary	47	27	57.4		68	51	75.0	
College/University+	156	64**	41.0		114	77	67.5	

*Pearson Chi-square
** Significant cells

Table 4.16 shows participants' anxiety scores by demographic characteristics and type of residency, the results shows that female participants have higher percentage of anxiety among both private (52.4%) (p=0.160) and camp (71.8%) (p=0.624) residents. Participants aged more than 64 years have the highest percentage of anxiety among both private (75.0%) (p=0.060) and camp (100.0%) (p=0.368) residents. Widowed, separated or divorced participants have the highest percentage of anxiety among both private (66.7%) (p=0.475) and camp (83.3%) (p=0.233) residents. Illiterate participants have the highest percentage of anxiety among both private (100.0%) (p<0.001) and camp (94.1%) (p=0.061) residents.

Table 4.17. The distribution of anxiety according to DASS42 among IDPs by demographic (Family condition) characteristics and type of residency (Tripoli 2017)

	Anxiety							
	Private				**Camp**			
	N	**n**	**%**	**p***	**N**	**n**	**%**	**p***
Family type				**0.006**				**0.003**
Nuclear	124	55	44.4		69	38**	55.1	
Single parent	16	12**	75.0		17	14	82.4	
Extended	70	32	45.7		112	87**	77.7	
Family size				0.109				0.241
1-5	68	27	39.7		69	49	71.0	
6-10	95	43	45.3		106	70	66.0	
11+	51	30	58.8		24	20	83.3	
Family integrity				0.735				0.182
Yes	150	70	46.7		135	91	67.4	
No	63	31	49.2		68	52	76.5	

*Pearson Chi-square
** Significant cells

Table 4.17 shows participants' anxiety scores by demographic characteristics and type of residency, the results shows that participants with single parent have the highest percentage of anxiety among both private (75.0%) (p=0.006) and camp (82.4%) (p=0.003) residents. Participants with larger families have the highest percentage of anxiety among both private (58.8%) (p=0.109) and camp (83.3%) (p=0.241) residents. Participants with integrate families have lower percentage of anxiety in both categories (p=0.735, 0.182).

Table 4.18. The distribution of anxiety according to DASS42 among IDPs by socio-economic characteristics and type of residency (Tripoli 2017)

	Anxiety							
	Private				**Camp**			
	N	**n**	**%**	**p***	**N**	**n**	**%**	**p***
Work enrollment				0.151				0.138
Enrolled	91	36	39.6		55	33	60.0	
Not regular/Partly	64	33	51.6		44	33	75.0	
Not enrolled	61	33	54.1		104	77	74.0	
Monthly income (LD)				**0.012**				0.142
<450	18	13	72.2		24	20	83.3	
≥450	118	48	40.7		68	46	67.6	
Financial support				**0.005**				0.676
Yes	37	25	67.6		44	30	68.2	
No	175	74	42.3		154	110	71.4	
Social support				**0.046**				0.707
Yes	43	26	60.5		62	43	69.4	
No	168	73	43.5		125	90	72.0	

*Pearson Chi-square

Table 4.18 shows participants anxiety scores by socio-economic characteristics and type of residency, the results shows that participants who are not work enrolled have the highest percentage of anxiety (54.1%) among private residents (p=0.151), while participants who are not regularly work enrolled have the highest percentage of anxiety (75.0%) among camp residents (p=0.138). Participants with less monthly income have higher percentage of anxiety among both private (72.2%) (p=0.012) and camp (83.3%) (p=0.142) residents. Financially supported participants have higher percentage of anxiety (67.6%) among private residents (p=0.005), while those who are not financially supported have higher percentage of anxiety (71.4%) among camp residents (p=0.676). Socially supported participants have higher percentage of anxiety (60.5%) among private residents (p=0.046), while those who are not financially supported have higher percentage of anxiety (72.0%) among camp residents (p=0.707).

Table 4.19. The distribution of anxiety according to DASS42 among IDPs by displacement conditions and type of residency (Tripoli 2017)

	Anxiety							
	Private				Camp			
	N	n	%	p*	N	n	%	p*
Place of origin				**<0.001**				0.640
Tawerga	73	53	72.6		199	140	70.4	
Other	143	49	34.3		5	4	80.0	
Displacement time				**<0.001**				0.153
≤72	148	54	36.5		57	44	77.2	
>72	66	47	71.2		142	95	66.9	
Displacement cause				**<0.001**				0.789
General violence	174	92	52.9		194	137	70.6	
Security issues	35	6	17.1		8	6	75.0	
Displacement change				**0.041**				0.430
Yes	27	17	63.0		64	42	65.6	
No	165	69	41.8		179	82	71.3	

*Pearson Chi-square

Table 4.19 shows participants anxiety scores by socio-economic characteristics (displacement conditions) and type of residency, the results shows that participants from Tawerga have higher percentage of anxiety (72.6%) among private residents (p<0.001), while participants from other cities have higher percentage of anxiety (80.0%) among camp residents (p=0.640). Participants who spent more than 72 months in displacement have higher percentage of anxiety (71.2%) among private residents (p<0.001), while participants who spent less than 72 months in displacement have higher percentage of anxiety (77.2%) among camp residents (p=0.153). Participants who considered general violence as the cause of displacement have a higher percentage of anxiety (52.9%) among private residents (p<0.001), while those who consider security issues as the cause of displacement have higher percentage of anxiety (75.0%) among camp residents (p=0.789). Participants who changed their place of displacement have higher percentage of anxiety (63.0%) among private residents (p=0.041) while those who did not change their place of displacement have higher percentage of anxiety (71.3%) among camp residents (p=0.430).

Table 4.21. The distribution of anxiety according to DASS42 among IDPs by health condition and behavior and type of residency (Tripoli 2017)

	Anxiety							
	Private				**Camp**			
	N	**n**	**%**	**p***	**N**	**n**	**%**	**p***
Chronic disease				**0.002**				**0.005**
Yes	50	33	66.0		28	26	92.9	
No	166	69	41.6		176	118	67.0	
Cigarette smoking				0.445				0.545
Yes	61	31	50.8		33	23	69.7	
No	151	68	45.0		128	82	64.1	
Physician visit				**<0.001**				0.073
Yes	138	77	55.8		141	104	73.8	
No	76	23	30.3		59	36	61.0	

*Pearson Chi-square

Table 4.20 shows participants' anxiety scores by socio-economic characteristics (health condition and behavior) and type of residency, the results shows that; participants who have chronic disease have a higher percentage of anxiety among both private residents (66.0%) (p=0.002) and camp residents (92.9%) (p=0.005). Participants who smoke cigarette have a higher percentage of anxiety among both private residents (50.8%) (p=0.445) and camp residents (96.7%) (p=545). Participants who said that they visited a physician during displacement have higher percentage of anxiety among both private (55.8%) (p<0.001) and camp (73.8%) (p=0.073) residents.

Stress Scores Findings (According to DASS)

Table 4.21. The distribution of stress according to DASS42 among IDPs by demographic characteristics and type of residency (Tripoli 2017)

	Stress							
	Private				Camp			
	N	n	%	p*	N	n	%	p*
Gender				0.311				**0.020**
Male	111	42	37.8		70	42	60.0	
Female	103	46	44.7		128	97	75.8	
Age category				0.322				**0.043**
18-24	19	9	47.4		67	54**	80.6	
25-44	145	58	40.0		98	62**	63.3	
45-64	36	12	33.3		29	19	65.5	
≥65	15	9	60.0		5	5	100.0	
Marital status				0.162				0.105
Married	126	45	35.7		72	44	61.1	
Single	80	38	47.5		111	84	75.7	
Widow/separated/divorced	9	5	55.6		15	11	73.3	
Educational status				0.089				**<0.001**
Illiterate	11	8	72.7		16	16**	100.0	
Literate, primary, secondary	45	17	37.8		68	38**	55.9	
College/university+	158	63	39.9		110	84	76.4	

*Pearson Chi-square
** Significant cells

Table 4.21 shows participants stress scores by demographic characteristics and type of residency, the results shows that; female participants have higher percentage of stress among both private (44.7%) (p=0.311) and camp (75.8%) (p=0.020) residents. Participants aged more than 64 years have the highest percentage of stress among both private (60.0%) (p=0.322) and camp (100.0%) (p=0.043) residents. Widowed, separated or divorced participants have the highest percentage of stress (66.7%) among private residents (p=0.162), while single participants have the highest percentage of stress (75.7%) among camp residents (p=0.105). Illiterate participants have the highest percentage of stress among both private (72.7%) (p=0.089) and camp (100.0%) (p<0.001) residents.

Table 4.22. The distribution of stress according to DASS42 among IDPs by demographic (Family condition) characteristics and type of residency (Tripoli 2017)

	Stress							
	Private				Camp			
	N	n	%	p*	N	n	%	p*
Family type				**0.047**				0.120
Nuclear	122	42**	34.4		66	41	62.1	
Single parent	16	10	62.5		16	11	68.8	
Extended	71	33	46.5		111	85	76.6	
Family size				0.078				0.609
1-5	67	21	31.3		65	45	69.2	
6-10	96	40	41.7		109	79	72.5	
≥11	50	26	52.0		21	13	61.9	
Family integrity				0.320				0.176
Yes	146	57	39.0		134	90	67.2	
No	67	31	46.3		64	49	76.6	

*Pearson Chi-square
** Significant cells

Table 4.22 shows participants stress scores by demographic characteristics and type of residency, the results shows that participants with single parent have the highest percentage of stress (75.0%) among private residents (p=0.047), and participants with extended families have the highest percentage of stress (82.4%) among camp residents (p=0.120). participants with large size families have the highest percentage of stress (52.0%) among private residents (p=0.078), and participants with 6-10 members families have the highest percentage of stress (72.5%) among camp residents (p=0.609). Participants with integrate families have lower percentage of stress in both categories (p=0.320, 0.176).

Table 4.23. The distribution of stress according to DASS42 among IDPs by socio-economic characteristics and type of residency (Tripoli 2017)

	Stress							
	Private				**Camp**			
	N	**n**	**%**	**p***	**N**	**n**	**%**	**p***
Work enrollment				0.217				**0.003**
Enrolled	91	33	36.3		56	30**	53.6	
Not regular/Partly	62	24	38.7		39	29	74.4	
Not enrolled	62	31	50.0		103	81**	78.6	
Monthly salary				**0.012**				0.663
<450	16	11	68.8		19	12	63.2	
≥450	119	43	36.1		66	38	57.6	
Financial support				0.177				0.619
Yes	40	20	50.0		46	31	67.4	
No	172	66	38.4		146	104	71.2	
Social support				0.617				0.272
Yes	46	20	43.5		61	46	75.4	
No	165	65	39.4		120	81	67.5	

*Pearson Chi-square
** Significant cells

Table 4.23 shows participants stress scores by socio-economic characteristics and type of residency, the results shows that participants who are not work enrolled have the highest percentage of stress among both private (50.0%) (p=0.217) and camp (78.6%) (p=0.003) residents. Participants with less monthly income have higher percentage of stress among both private (68.8%) (p=0.012) and camp (63.2%) (p=0.663) residents. Financially supported participants have higher percentage of stress (50.0%) among private residents (p=0.177), while those who are not financially supported have higher percentage of stress (71.2%) among camp residents (p=0.619). Socially supported participants have higher percentage of stress among both private (43.5%) (p=0.617) and camp (75.4%) (p=0.272) residents.

Table 4.24. The distribution of stress according to DASS42 among IDPs by displacement conditions and type of residency (Tripoli 2017)

	Stress							
	Private				Camp			
	N	n	%	p*	N	n	%	p*
Place of origin				**<0.001**				0.632
Tawerga	73	45	61.6		194	136	70.1	
Other	142	43	30.3		5	4	80.0	
Displacement time				**0.002**				**0.003**
≤72	146	49	33.6		58	49	84.5	
>72	66	37	56.1		136	86	63.2	
Displacement cause				**<0.001**				0.755
General violence	171	79	46.2		189	132	69.8	
Security issues	35	3	8.6		8	6	75.0	
Displacement change				0.404				**0.016**
Yes	27	13	48.1		62	39	62.9	
No	164	65	39.6		113	90	79.6	

*Pearson Chi-square

Table 4.24 shows participants stress scores by socio-economic characteristics (displacement conditions) and type of residency, the results shows that participants from Tawerga have higher percentage of stress (61.6%) among private residents (p<0.001), while participants from other cities have higher percentage of stress (80.0%) among camp residents (p=0.632). participants who spent more than 72 months in displacement have higher percentage of stress (56.1%) among private residents (p=0.002), while participants who spent less than 72 months in displacement have higher percentage of stress (84.5%) among camp residents (p=0.003). Participants who considered general violence as the cause of displacement have a higher percentage of stress (46.2%) among private residents (p<0.001), while those who consider security issues as the cause of displacement have higher percentage of stress (75.0%) among camp residents (p=0.755). Participants who changed their place of displacement have higher percentage of stress (48.1%) among private residents (p=0.404), while those who did not change their place of displacement have higher percentage of stress (79.6%) among camp residents (p=0.016).

Table 4.25. The distribution of stress according to DASS42 among IDPs by health condition and behavior and type of residency (Tripoli 2017)

	Stress							
	Private				Camp			
	N	n	%	p*	N	n	%	p*
Chronic disease				0.095				**0.006**
Yes	51	26	51.0		27	25	92.6	
No	164	62	37.8		172	115	66.9	
Cigarette smoking				0.407				0.820
Yes	58	26	44.8		31	19	61.3	
No	153	59	38.6		126	80	63.5	
Physician visit				0.399				0.961
Yes	139	59	42.4		140	98	70.0	
No	74	27	36.5		56	39	69.6	

*Pearson Chi-square

Table 4.25 shows participants stress scores by socio-economic characteristics (health condition and behavior) and type of residency, the results shows that participants who have chronic disease have a higher percentage of stress among both private residents (51.0%) (p=0.095) and camp residents (92.6%) (p=0.006). Participants who smoke cigarette have a higher percentage of stress (44.8%) among private residents (p=0.407) while those who do not smoke cigarette have higher percentage of stress (63.5%) among camp residents (p=0.820). participants who said that they visited a physician during displacement have higher percentage of stress among both private (42.4%) (p=0.399) and camp (70.0%) (p=0.961) residents.

4.1.3. Short Form-36 Scale

Table 4.26. IDPs SF-36 scale mean scores by type of residency (Tripoli 2017)

	Type of Residency						p*
	Private			Camp			
SF-36	**n**	**Mean**	**SD**	**n**	**Mean**	**SD**	
PF	218	82.27	22.26	216	67.10	24.26	**<0.001**
RLPH	225	68.77	40.78	215	51.51	35.93	**<0.001**
RLEP	225	64.88	42.45	214	51.55	38.42	**<0.001**
Energy	222	51.26	15.01	219	53.72	17.03	**0.033**
EW	224	57.10	14.59	228	53.91	19.93	0.091
SF	213	70.77	23.75	219	62.38	22.01	**<0.001**
Pain	226	75.42	23.26	234	65.79	22.63	**<0.001**
GH	222	54.00	15.18	224	51.98	14.76	0.196
PCS	214	69.72	20.85	188	59.43	17.86	**<0.001**
MCS	207	62.28	17.87	189	55.56	17.20	**<0.001**

*Mann-Whitney U

Table 4.26 shows participants SF-36 scale scores according to different eight health concepts: physical functioning (PF), role limitation due to physical health problems (RLPH), role limitation due to personal or emotional problems (RLEP), energy/fatigue, emotional well-being (EW), social functioning (SF), bodily pain, and general health perceptions (GH). As a summary for both physical and mental concepts two concepts were added: physical compound summary (PCS) and mental compound summary (MCS). The results shows that participants among private residents have the highest mean score for PF (82.27±22.26) ($p<0.001$), where they have lowest mean score for energy (51.26±15.01) ($p=0.033$). While participants among camp residents have the highest mean score for PF (67.10±24.26) ($p<0.001$), and they have lowest mean score for RLPH (51.26±38.42) ($p<0.001$). Generally private resident participants have higher mean scores than camp resident participants in both PCS ($p<0.001$) and MCS ($p<0.001$).

PCS mean scores (According to SF 36)

Physical Compound Summary (PCS) concept is an accumulative concept includes four physical concepts of SF-36 scale: physical functioning, role limitation due to physical health problems, energy/fatigue, and bodily pain.

Table 4.27. IDPs PCS mean scores by demographic characteristics and type of residency (Tripoli 2017)

	Quality of Life PCS (Physical Compound Summary)							
	Private				**Camp**			
	n	**Mean**	**SD**	**p**	**n**	**Mean**	**SD**	**p**
Gender				**0.005***				**0.003***
Male	112	72.91	20.41		69	64.68	18.55	
Female	101	66.35	20.92		118	56.56	16.75	
Total	213				187			
Age category				**<0.001****				**0.045****
18-24	21	72.88	18.34		66	61.64	12.34	
25-44	144	73.63	16.15		88	61.40	18.11	
45-64	33	66.76	23.88		28	52.16	23.17	
≥65	16	36.60	25.90		6	40.00	21.57	
Total	214				188			
Marital status				0.247**				**<0.001****
Married	122	67.68	23.08		68	60.40	20.25	
Single	84	73.08	17.29		105	61.04	15.34	
Widow/Separated/ Divorced	8	65.54	15.57		14	42.23	15.72	
Total	214				187			

*Mann-Whitney U
**Kruskal Wallis Test

Table 4.27 shows participants PCS mean scores by demographic characteristics and type of residency, results shows that male participants have higher PCS mean scores among both private (72.91±20.41) (p=0.005) and camp (64.68±18.55) (p=0.003) residents. Participants aged 25-44 have the highest PCS mean scores (73.63±16.15) while those aged more than 65 have the lowest PCS mean scores (36.60±25.90) among private residents (p<0.001), Participants aged 18-24 have the highest PCS mean scores (61.64±12.34) while those aged more than 64

have the lowest PCS mean scores (40.00±21.57) among camp residents (p=0.045). Regarding marital status, Single participants have the highest PCS mean scores among both private (73.08±17.29) (p=0.247) and camp (61.04±15.34) (p<0.001) residents, while widow/ separated participants have the lowest PCS mean scores among both private (65.54±15.57) (p=0.247) and camp (42.23±15.72) (p<0.001) residents.

Table 4.28. IDPs PCS mean scores by demographic (Family condition) characteristics and type of residency (Tripoli 2017)

	Quality of Life PCS (Physical Compound Summary)							
	Private				**Camp**			
	n	**Mean**	**SD**	**p**	**n**	**Mean**	**SD**	**p**
Educational status				**<0.001****				**0.025****
Illiterate	11	24.77	11.50		18	45.90	20.14	
Literate/Primary/Sec	48	67.40	22.84		60	59.86	19.15	
College/University+	154	73.52	16.49		105	61.04	15.64	
Total	213				183			
Family type				**0.045****				0.121**
Nuclear	121	72.39	18.33		64	62.13	19.33	
Single parent	16	58.28	20.16		16	51.99	22.72	
Extended	71	67.81	24.04		103	59.48	15.44	
Total	208				183			
Family size				**0.046****				0.503**
1-5	65	72.22	16.67		66	57.61	18.57	
6-10	95	73.01	17.72		97	60.54	16.42	
≥11	51	60.20	27.79		20	61.87	23.04	
Total	211				183			
Family integrity				**0.041***				0.192*
Yes	145	72.54	17.26		131	60.65	16.79	
No	67	63.11	26.12		55	56.61	19.47	
Total	212				186			

*Mann-Whitney U
**Kruskal Wallis Test

Table 4.28 shows participants PCS mean scores by demographic characteristics and type of residency, according to education level illiterate

participants have the lowest PCS mean scores and higher educated participants have the highest PCS mean scores among both private (24.77±11.50, 73.52±16.49) (p<0.001) and camp (45.90±20.14, 61.04±15.64) (p=0.025) residents. Participants living in nuclear families have the highest PCS mean scores among both private (72.39±18.33) (p=0.045) and camp (62.13±19.33) (p=0.121) residents. Participants with family size 6-10 have the highest PCS mean scores (73.01±17.72) (p=0.046) among private residents while participants with family size more than 11 members have the highest PCS mean scores (61.87±23.04) (p=0.503) among camp residents. Participants with integrate families have higher PCS mean scores among both private (72.54±17.26) (p=0.041) and camp (60.65±16.79) (p=0.192) residents.

Table 4.29. IDPs PCS mean scores by socio-economic characteristics and type of residency (Tripoli 2017)

	Quality of Life PCS (Physical Compound Summary)							
	Private				**Camp**			
	n	**Mean**	**SD**	**p**	**n**	**Mean**	**SD**	**p**
Work enrollment				**0.012****				0.585**
Enrolled	84	74.17	16.94		47	60.91	18.09	
Not regularly/partly	68	70.83	22.29		41	61.18	19.72	
Not enrolled	62	62.47	24.35		99	57.68	16.78	
Total	214				187			
Monthly income (LD)				**0.041***				**<0.001***
<450	22	65.36	16.23		22	44.48	15.21	
≥450	112	72.88	19.70		57	61.57	18.81	
Total	134				79			
Financial support				0.201*				0.271*
Yes	41	62.51	27.12		43	62.41	14.36	
No	170	71.60	18.85		137	59.21	18.61	
Total	211				180			
Social support				0.061*				0.579*
Yes	49	63.92	23.70		56	58.62	17.39	
No	161	71.66	19.69		115	60.65	18.46	
Total	210				171			

*Mann-Whitney U
**Kruskal Wallis Test

Table 4.29 shows participants PCS mean scores by socio-economic characteristics and type of residency, regularly enrolled participants have highest

PCS mean scores (74.17±16.94) (p=0.012) among private residents and those who are not regularly enrolled have the highest PCS mean scores (61.18±19.72) (p=0.585) among camp residents. Participants who have monthly income more than 450 LD have the highest PCS mean scores among both private (72.88±19.70) (p=0.041) and camp (61.57±18.81) (p<0.001) residents. Participants who are not supported financially have a higher PCS mean scores (71.60±18.85) (p=0.201) among private residents, where those who are financially supported have a higher PCS mean scores (62.41±14.36) (p=0.271) among camp residents. Socially supported participants have higher PCS mean scores among both private (71.66±19.69) (p=0.061) and camp (60.65±18.46) (p=0.579) residents.

Table 4.30. IDPs PCS mean scores by health condition & behavior and type of residency (Tripoli 2017)

	Quality of Life PCS (Physical Compound Summary)							
	Private				**Camp**			
	n	**Mean**	**SD**	**p**	**n**	**Mean**	**SD**	**p**
Chronic disease				**<0.001***				**<0.001***
Yes	51	46.65	22.58		27	39.00	16.91	
No	163	76.94	13.94		161	62.85	15.63	
Total	214				188			
Cigarettes				0.826*				0.199*
Yes	61	70.49	18.94		30	64.87	14.64	
No	147	69.77	21.69		119	59.77	19.19	
Total	208				149			
Physical disability				0.250*				**0.020***
Yes	1	43.12	-		4	40.00	9.69	
No	199	69.92	21.04		151	60.66	18.44	
Total	200				155			
Physician visit				**<0.001***				0.809*
Yes	137	63.59	22.15		132	59.05	19.39	
No	75	80.70	12.48		54	60.74	13.78	
Total	212				186			

*Mann-Whitney U

Table 4.30 shows participants PCS mean scores by health condition & behaviour and type of residency, participants without any chronic disease have

higher PCS mean scores among both private (76.94±13.94) (p<0.001) and camp (62.85±15.63) (p<0.001) residents. Participants who smokes cigarettes have higher PCS mean scores among both private (70.49±18.94) (p=0.826) and camp (64.87±14.64) (p=0.199) residents. Participants without any physical disability have higher PCS mean scores among both private (69.92±21.04) (p=0.250) and camp (60.66±18.44) (p=0.020) residents. Participants who said that they did not visit a physician during displacement have higher PCS mean scores among both private (80.70±12.48) (p<0.001) and camp (60.74±13.78) (p=0.809) residents.

Table 4.31. IDPs PCS mean scores by displacement conditions and type of residency (Tripoli 2017)

	Quality of Life PCS (Physical Compound Summary)							
	Private				**Camp**			
	n	**Mean**	**SD**	**p***	**n**	**Mean**	**SD**	**p***
Place of origin				**0.008**				0.487
Tawerga	72	62.26	25.04		185	59.51	17.85	
Other	142	73.50	17.27		3	54.16	21.88	
Total	214				188			
Displacement time				**0.006**				0.095
≤72	144	74.08	16.50		54	56.25	15.96	
>72	66	60.98	26.13		130	60.62	18.57	
Total	210				184			
Displacement cause				0.101				0.635
General violence	169	68.60	21.67		180	59.13	17.40	
Security issues	35	76.80	13.80		6	63.64	28.31	
Total	204				186			
Displacement change				**0.005**				0.332
Yes	29	63.01	16.11		55	56.98	18.99	
No	161	72.53	18.69		108	59.95	15.20	
Total	190				163			

*Mann-Whitney U

Table 4.31 shows participants PCS mean scores by displacement conditions and type of residency, results shows that participants from other cities have higher PCS mean scores (73.50±17.27) (p=0.008) among private residents, while

participants from Tawerga city have higher PCS mean scores (59.51±17.85) (p=0.487) among camp residents. Participants who spent less than 72 months in displacement have higher PCS mean scores among private (74.08±16.50) (p=0.006) residents, while those who spent more than 72 months in displacement have a higher PCS mean score among camp (60.62±18.57) (p=0.095). Participants who said that security issues are the cause of displacement have higher PCS mean scores among both private (76.80±13.80) (p=0.101) and camp (63.64±28.31) (p=0.635) residents. Participants who did not change their place of displacement have higher PCS mean scores among both private (72.53±18.69) (p=0.005) and camp (59.95±15.20) (p=0.332) residents.

Table 4.32. IDPs DASS scores by their PCS mean scores and type of residency (Tripoli 2017)

	Quality of Life PCS (Physical Compound Summary)							
	Private				**Camp**			
	n	**Mean**	**SD**	**p***	**n**	**Mean**	**SD**	**p***
Depression				**<0.001**				**<0.001**
Yes	99	61.21	22.15		128	56.91	16.42	
No	103	79.05	13.91		32	71.85	16.60	
Total	202				160			
Anxiety				**<0.001**				**<0.001**
Yes	97	61.60	23.31		121	57.42	16.44	
No	107	78.44	14.00		47	69.74	15.24	
Total	204				168			
Stress				**<0.001**				**<0.001**
Yes	82	61.77	22.76		122	56.39	16.30	
No	122	75.64	17.11		42	69.92	15.32	
Total	204				164			

*Mann-Whitney U

Table 4.32 shows participants DASS scores by their PCS mean scores and type of residency, results shows that participants with normal depression scores have higher PCS mean scores among both private (79.05±13.91) (p<0.001) and camp (71.85±16.60) (p<0.001) residents. Participants with normal anxiety scores have

higher PCS mean scores among both private (78.44±14.00) (p<0.001) and camp (69.74±15.24) (p<0.001) residents. Participants with normal stress scores have higher PCS mean scores among both private (75.64±17.11) (p<0.001) and camp (69.92±15.32) (p<0.001) residents.

MCS mean scores (According to SF 36)

Mental compound summary (MCS) concept is an accumulative concept includes four mental concepts of SF-36 scale: role limitation due to personal or emotional problems, emotional well-being, social functioning and general health perceptions.

Table 4.33. IDPs MCS mean scores by demographic characteristics and type of residency (Tripoli 2017)

	Quality of Life MCS (Mental Compound Summary)							
	Private				**Camp**			
	n	**Mean**	**SD**	**p**	**n**	**Mean**	**SD**	**p**
Gender				**0.028***				0.071*
Male	109	64.55	18.25		64	58.73	19.07	
Female	97	59.78	17.27		124	54.15	15.89	
Total	206				190			
Age category				**0.006****				**0.021****
18-24	18	63.14	19.33		63	53.39	12.52	
25-44	140	64.69	15.34		92	58.70	17.60	
45-64	35	60.08	20.15		30	53.37	22.15	
≥65	14	42.57	22.31		4	34.12	10.10	
Total	207				189			
Marital status				0.281**				**0.032****
married	121	61.67	18.40		75	59.06	20.31	
single	79	63.84	17.52		100	53.86	14.44	
Widow/separated/ divorced	7	55.13	10.32		13	48.70	14.87	
Total	207				188			

*Mann-Whitney U
**Kruskal Wallis Test

Table 4.33 shows participants MCS mean scores by demographic characteristics and type of residency, results shows that male participants have higher MCS mean scores among both private (64.55±18.25) (p=0.028) and camp (58.73±19.07) (p=0.071) residents. Participants aged 25-44 have the highest MCS mean scores (64.69±15.34) while those aged more than 64 have the lowest MCS mean scores (42.57±22.31) among private residents (p=0.006), Participants aged 25-44 have the highest MCS mean scores (58.70±17.60) while those aged more than 64 have the lowest MCS mean scores (34.12±10.10) among camp residents (p=0.021). Regarding marital status single participants have the highest MCS mean scores (63.84±17.52) (p=0.281) among private residents, while married participants have the highest MCS mean scores (59.06±20.31) (p=0.032) among camp residents.

Table 4.34. IDPs MCS mean scores by demographic (Family condition) characteristics and type of residency (Tripoli 2017)

	Quality of Life MCS (Mental Compound Summary)							
	Private				**Camp**			
	n	**Mean**	**SD**	**p**	**n**	**Mean**	**SD**	**p**
Educational status				**<0.001****				**0.019****
Illiterate	9	28.66	6.70		16	43.16	16.57	
Literate/Primary/Sec	45	60.21	19.46		62	55.63	18.42	
College/University+	151	64.80	15.77		106	57.10	15.99	
Total	205				184			
Family type				**0.029****				0.162******
Nuclear	117	64.90	15.88		71	58.66	19.41	
Single parent	16	52.19	18.42		13	50.71	18.23	
Extended	68	60.00	20.12		98	54.28	14.92	
Total	201				111			
Family size				0.236**				0.105******
1-5	65	64.37	14.41		66	59.06	17.49	
6-10	93	63.88	17.02		96	54.42	15.97	
≥11	46	55.76	22.57		22	50.33	21.07	
Total	204				184			
Family integrity				0.132*				0.886*
Yes	143	64.07	15.65		130	55.36	16.54	
No	63	58.09	21.76		59	56.00	18.72	
Total	206				189			

*Mann-Whitney U
**Kruskal Wallis Test

Table 4.34 shows participants MCS mean scores by demographic characteristics and type of residency, according to education level illiterate participants have the lowest MCS mean scores among both private (28.66±6.70) (p<0.001) and camp (43.16±16.57) (p=0.019) residents. Participants living in nuclear families have the highest MCS mean scores among both private (64.90±15.88) (p=0.029) and camp (58.66±19.41) (p=0.162) residents. Participants with family size 1-5 have the highest MCS mean scores among both private (64.37±14.41) (p=0.236) and camp (59.06±17.49) (p=0.105) residents. Participants with integrate families have higher MCS mean scores (64.07±15.65) (p=0.132) among private residents, while those with non-integrate families have higher MCS mean scores (56.00±18.72) (p=0.886) among camp residents.

Table 4.35. IDPs MCS mean scores by socio-economic characteristics and type of residency (Tripoli 2017)

	Quality of Life MCS (Mental Compound Summary)							
	Private				**Camp**			
	n	**Mean**	**SD**	**p**	**n**	**Mean**	**SD**	**p**
Work enrollment				0.132**				**0.002****
Enrolled	87	64.81	15.55		53	62.35	16.61	
Not regularly/partly	62	62.57	18.51		40	53.59	19.84	
Not enrolled	58	58.17	19.89		95	52.36	15.22	
Total	207				188			
Monthly income (LD)				0.335*****				**0.045***
<450	20	61.66	13.03		21	49.48	13.02	
≥450	111	64.01	16.98		63	58.28	18.97	
Total	131				84			
Financial support				**0.034***				0.289*
Yes	34	55.58	20.85		39	53.46	14.25	
No	170	63.71	17.02		144	56.75	17.82	
Total	204				183			
Social support				0.065*				0.067*
Yes	42	58.54	17.51		61	53.26	14.85	
No	160	63.47	17.82		114	57.30	18.37	
Total	202				174			

*Mann-Whitney U
**Kruskal Wallis Test

Table 4.35 shows participants MCS mean scores by socio-economic characteristics and type of residency, regularly enrolled participants have highest MCS mean scores among both private (64.81±15.55) (p=0.132) and camp

(62.35±16.61) (p=0.002) residents. Participants who have monthly income more than 450 LD have the highest MCS mean scores among both private (64.01±16.98) (p=0.335) and camp (58.28±18.97) (p=0.045) residents. Participants who are not supported financially have a higher MCS mean scores among both private (63.71±17.02) (p=0.034) and camp (56.75±17.82) (p=0.289) residents. Socially non-supported participants have higher MCS mean scores among both private (63.47±17.82) (p=0.065) and camp (57.30±18.37) (p=0.067) residents.

Table 4.36. IDPs MCS mean scores by health condition & behaviour and type of residency (Tripoli 2017)

	Quality of Life MCS (Mental Compound Summary)							
	Private				**Camp**			
	n	**Mean**	**SD**	**p**	**n**	**Mean**	**SD**	**p**
Chronic disease				**<0.001***				**<0.001***
Yes	51	45.75	18.71		28	44.14	18.98	
No	156	67.68	13.87		161	57.55	16.13	
Total	207				189			
Cigarettes				0.126*				0.889*
Yes	58	60.18	16.64		28	57.52	16.71	
No	143	63.36	18.54		125	56.62	18.75	
Total	201				153			
Physical disability				-				0.148*
Yes	1	-	-		4	43.14	7.69	
No	191	62.20	18.00		150	55.64	18.08	
Total	192				154			
Physician visit				**<0.001***				0.971*
Yes	131	58.21	19.10		133	55.44	17.82	
No	75	69.28	12.99		53	56.44	15.90	
Total	206				186			

*Mann-Whitney U

Table 4.36 shows participants MCS mean scores by health condition & behaviour and type of residency, participants without any chronic disease have higher MCS mean scores among both private (67.68±13.87) (p<0.001) and camp (57.55±16.13) (p<0.001) residents. Participants who do not smoke cigarettes have higher MCS mean scores (63.36±18.54) (p=0.126) among private residents, while participants who smokes cigarettes have higher MCS mean scores (57.52±16.71) (p=0.889) among camp residents. Participants without any physical disability have higher MCS mean scores among both private (62.20±18.00) (p=0.427) and camp

(55.64±18.08) (p=0.148) residents. Participants who said that they did not visit a physician during displacement have higher MCS mean scores among both private (69.28±12.99) (p<0.001) and camp (56.44±15.90) (p=0.971) residents.

Table 4.37. IDPs MCS mean scores by displacement conditions and type of residency (Tripoli 2017)

	Quality of Life MCS (Mental Compound Summary)							
	Private				Camp			
	n	**Mean**	**SD**	**p***	**n**	**Mean**	**SD**	**p***
Place of origin				**0.027**				0.067
Tawerga	64	56.56	22.22		185	55.87	17.19	
Other	143	64.83	14.93		4	41.55	12.63	
Total	207				189			
Displacement time				**0.008**				**0.032**
≤72	144	65.13	15.05		53	51.71	14.61	
>72	59	55.43	22.44		132	57.41	18.02	
Total	203				185			
Displacement cause				0.145				0.915
General violence	162	61.32	18.61		181	55.41	16.96	
Security issues	35	67.54	12.89		6	55.24	24.62	
Total	197				187			
Disp. change				0.282				0.583
Yes	26	60.60	17.39		58	57.11	17.41	
No	158	63.62	16.69		107	55.53	15.59	
Total	184				165			

*Mann-Whitney U

Table 4.37 shows participants MCS mean scores by displacement conditions and type of residency, results shows that participants from other cities have higher MCS mean scores (64.83±14.93) (p=0.027) among private residents, while participants from Tawerga city have higher MCS mean scores (55.87±17.19) (p=0.067) among camp residents. Participants who spent less than 72 months in displacement have higher MCS mean scores among private (65.13±15.05) (p=0.008), while those who spent more than 72 months have higher MCS mean scores (57.41±18.02) (p=0.032) among camp. Participants who said that security issues are the cause of displacement have higher MCS mean scores (67.54±12.89) (p=0.145) among private residents, while those who said that general violence is the cause of displacement have higher MCS mean scores (55.41±16.96) (p=0.915) among camp residents. Participants who did not change their place of displacement have higher

PCS mean scores (63.62±16.69) (p=0.282) among private residents, while those who changed their place of displacement have higher MCS mean scores (57.11±17.41) (p=0.583) among camp residents.

Table 4.38. IDPs DASS scores by their MCS mean scores and type of residency (Tripoli 2017)

	Quality of Life MCS (Mental Compound Summary)							
	Private				**Camp**			
	n	**Mean**	**SD**	**p***	**n**	**Mean**	**SD**	**p***
Depression				**<0.001**				**<0.001**
Yes	95	53.89	18.56		127	51.34	15.61	
No	103	70.87	12.15		34	69.21	16.54	
Total	198				161			
Anxiety				**<0.001**				**<0.001**
Yes	88	54.15	19.38		116	50.95	15.42	
No	110	69.55	13.06		55	66.34	16.16	
Total	198				171			
Stress				**<0.001**				**<0.001**
Yes	76	53.51	19.68		117	49.84	15.04	
No	121	68.11	14.19		48	67.47	14.55	
Total	197				165			

*Mann-Whitney U

Table 4.38 shows participants DASS scores by their MCS mean scores and type of residency, results shows that participants with normal depression scores have higher MCS mean scores among both private (70.87±12.15) (p<0.001) and camp (69.21±16.54) (p<0.001) residents. Participants with normal anxiety scores have higher MCS mean scores among both private (69.55±13.06) (p<0.001) and camp (66.34±16.16) (p<0.001) residents. Participants with normal stress scores have higher MCS mean scores among both private (68.11±14.19) (p<0.001) and camp (67.47±14.55) (p<0.001) residents.

4.2. Logistic Regression Models

In the second model titled “Logistic regression” binary logistic regression analysis was used including all the significant variables from the first model, Cox & Snell, Negelkerke and Hosmer-lemeshow tests were used and odds ratio, p value and confidence interval were calculated.

The logistic regression model was performed in two steps; in the first step all target variables were included and results shown in Appendix E, in the second step only significant variables were included.

4.2.1. DASS Scores By Demographic And Socio-Economic Variables Findings

Depression Scores (According to DASS)

Table 4.39. Logistic regression model for risk of depression among IDPs by type of residency (Tripoli 2017)

	Depression					
	Private*			Camp**		
	OR	**CI**	**p**	**OR**	**CI**	**p**
Social support	NE					
Yes				2.960	1.161-7.542	**0.023**
No				**Ref.**		
Disp. change	NE					
Yes				**Ref.**		
No				3.177	1.411-7.154	**0.005**
Chronic disease				NE		
Yes	4.799	2.332-9.887	**<0.001**			
No	**Ref.**					
Constant	0.660	-	**0.010**	1.329	-	0.391

*Nagelkerke R Square: 0.125
** Nagelkerke R Square: 0.126

Table 4.39 is based on Table E.1 which included education, family type, income, financial support, social support, city of origin, displacement time, displacement change, chronic disease and physician visit as independent variables among private resident IDPs. Only chronic disease was significant in Table E.1 and this variable was included in the second step analysis showed in Table 4.39.

Table E.1also included age, marital status, work enrollment, social support, displacement time and displacement change as independent variables among camp resident IDPs and only social support and displacement change were significant and these variables were included in the second step analysis showed in Table 4.39.

Table 4.39 shows results of logistic regression model for risk of depression among participant IDPs according to associated variables by type of residency. The results show that participant IDPs living in private residency that have chronic

disease have 4.799 times higher risk of depression than those who do not have chronic disease (p<0.001), And participant IDPs living in camp residency who have social support have 2.960 times higher risk of depression than those who do not have social support (p=0.023). Participant IDPs living in camp residency that did not change place of displacement have 3.177 times higher risk of depression than those who did change place of displacement (p=0.005).

Anxiety Scores (According to DASS)

Table 4.40. Logistic regression model for risk of anxiety among IDPs by type of residency (Tripoli 2017)

	Anxiety					
	Private*			**Camp****		
	OR	**CI**	**p**	**OR**	**CI**	**p**
Income				NE		
<450	3.792	1.269-11.332	**0.017**			
≥450		**Ref.**				
Constant	0.686	**-**	0.044			

* Nagelkerke R Square: 0.061
** Not analyzed for camp

Table 4.40 is based on Table E.2 which included education, family type, income, financial support, social support, city of origin, displacement time, cause of displacement, displacement change, chronic disease and physician visit as independent variables among private resident IDPs. Only income was significant in Table E.2 and this variable was included in the second step analysis showed in table 4.40.

Table 4.40 shows results of logistic regression model for risk of anxiety among participant IDPs according to associated variables by type of residency. All included variables were not significantly associated with risk of anxiety among camp residents in the bivariate analysis; that for Logistic Regression analysis was not performed. The results show that participant IDPs living in private residency that have monthly income <450 LD have 3.792 times higher risk of anxiety than those who have monthly income ≥450 LD (p=0.017).

Stress Scores (According to DASS)

Table 4.41. Logistic regression model for risk of stress among IDPs by type of residency (Tripoli 2017)

	Stress					
	Private*			Camp**		
	OR	**CI**	**p**	**OR**	**CI**	**p**
Education	NE					
Illiterate				-	-	0.998
Lit,Prim,Sec				**Ref.**		
University+				2.472	1.181-5.173	**0.016**
City of origin				NE		
Tawerga	3.025	1.613-5.674	**<0.001**			
Other		**Ref.**				
Cause of disp.				NE		
General violence	5.667	1.616-19.866	**0.007**			
Security issues		**Ref.**				
Disp. change	NE					
Yes				**Ref.**		
No				2.710	1.299-5.654	**0.008**
Constant	0.094	**-**	**<0.001**	0.805	-	0.546

*Nagelkerke R Square: 0.199
** Nagelkerke R Square: 0.183

Table 4.41 is based on Table E.3 which included family type, city of origin, displacement time, cause of displacement as independent variables among private resident IDPs. Only cause of displacement and city of origin were significant in Table E.3 and these variables were included in the second step analysis showed in Table 4.41. Table E.3 included gender, age, education, work enrollment, displacement time, displacement change and chronic disease as independent variables among camp resident IDPs. Only education and displacement change were significant in Table E.3 and these variables were included in the second step analysis showed in Table 4.41.

Table 4.41 shows results of logistic regression model for risk of stress among participant IDPs according to associated variables by type of residency. The results show that participant IDPs living in private residency who are originally from Tawerga have 3.025 times higher risk of stress than those who are originally from other cities ($p<0.001$). Participant IDPs living in private residency who consider general violence as the cause of displacement have 5.667 times higher risk of stress than those who consider security issues as the of displacement ($p=0.007$). Participant

IDPs living in camp residency who have university and above educational level have 2.472 times higher risk of stress than those who have primary or secondary school educational level (p=0.016). Participant IDPs living in camp residency that did not change place of displacement have 2.710 times higher risk of stress than those who did change place of displacement (p=0.008).

4.2.2. SF-36 By Demographic, Socio-Economic Variables And DASS Scores

Physical QOL (According to SF 36)

Table 4.42. Logistic regression model for risk of low PQOL among IDPs by type of residency (Tripoli 2017)

	PCS					
	Private*			Camp**		
	OR	**CI**	**p**	**OR**	**CI**	**p**
Chronic disease				NE		
Yes	12.327	5.224-29.088	**<0.001**			
No		**Ref.**				
Displacement change				NE		
Yes	5.393	2.166-13.428	**<0.001**			
No		**Ref.**				
Stress	NE					
Yes				4.923	2.327-10.413	**<0.001**
No					**Ref**.	
Constant	0.240	**-**	**<0.001**	3.692	**-**	**<0.001**

*Nagelkerke R Square: 0.330
** Nagelkerke R Square: 0.146

Table 4.42 is based on Table E.4 which included gender, age, education, family type, family size, family integrity, income, work enrollment, income, chronic disease, physician visit, city of origin, displacement time, displacement change, depression, anxiety and stress as independent variables among private resident IDPs. Only chronic disease and displacement change were significant in Table E.4 and these variables were included in the second step analysis showed in Table 4.42. Table E.4 included gender, age, marital status, education, income, chronic disease, physical disability, depression, anxiety and stress as independent variables among camp resident IDPs. Only stress was significant in Table E.4 and this variable was included in the second step analysis showed in Table 4.42.

Table 4.42 shows results of logistic regression model for risk of low PQOL among participant IDPs according to associated variables by type of residency. The results of private residency living IDPs showed that participants with chronic disease have 12.327 times higher risk of low PQOL than those without any chronic disease (p<0.001), and participant IDPs living in private residency who changed place of displacement have 10.943 times higher risk of low PQOL than those who did not change place of displacement (p<0.001). Participant IDPs living in camp residency who have stress have 4.923 times higher risk of low PQOL than those who do not have stress (p<0.001).

Mental QOL (According to SF 36)

Table 4.43. Logistic regression model for risk of low MQOL among IDPs by type of residency (Tripoli 2017)

	MCS					
	Private*			**Camp****		
	OR	**CI**	**p**	**OR**	**CI**	**p**
Chronic disease				NE		
Yes	9.401	4.531-19.506	**<0.001**			
No		**Ref.**				
Stress	NE					
Yes				7.066	3.363-14.847	**<0.001**
No					**Ref.**	
Constant	0.311	**-**	**<0.001**	0.548	**-**	**0.047**

*Nagelkerke R Square: 0.253
** Nagelkerke R Square: 0.223

Table 4.43 is based on Table E.5 which included gender, age, education, family type, financial support, chronic disease, physician visit, city of origin, displacement time, depression, anxiety and stress as independent variables among private resident IDPs. Only chronic disease was significant in Table E.5 and this variable was included in the second step analysis showed in Table 4.43.

Table E.5 included age, marital status, education, work enrollment, income, chronic disease, displacement time, depression, anxiety and stress as independent

variables among camp resident IDPs. Only stress was significant and this variable was included in the second step analysis showed in Table 4.43.

Table 4.43 shows results of logistic regression model for risk of low MQOL among participant IDPs according to associated variables by type of residency. The results showed that participant IDPs living in private residency that have chronic disease have 9.401 times higher risk of low MQOL than those who do not have chronic disease ($p<0.001$). and participant IDPs living in camp residency who have stress have 7.066 times higher risk of low MQOL than those who do not have stress ($p<0.001$).

4.2.3. SF-36 By Demographic, Socio-Economic Variables, DASS Scores And Type Of Residency

Table 4.44. Logistic regression model for risk of low PQOL and MQOL among IDPs (Tripoli 2017)

	PCS			MCS		
	OR	**CI**	**p**	**OR**	**CI**	**p**
Type of residency						
Private		**Ref.**			**Ref.**	
Camp	3.511	2.040-6.040	**<0.001**	3.112	1.755-5.519	**<0.001**
Depression						
Yes	4.370	2.366-8.073	**<0.001**	3.387	1.730-6.634	**<0.001**
No		**Ref.**			**Ref.**	
Anxiety				NE		
Yes	2.020	1.135-3.593	**0.017**			
No		**Ref.**				
Stress	NE					
Yes				3.995	2.106-7.581	**<0.001**
No					**Ref.**	
Chronic disease						
Yes	9.269	4.177-20.569	**<0.001**	6.230	2.851-13.615	**<0.001**
No		**Ref.**			**Ref.**	
Constant	0.099	**-**	**<0.001**	0.095	**-**	**<0.001**

*Nagelkerke R Square: 0.425
** Nagelkerke R Square: 0.460

Table 4.44 is based on Table E.6 which included type of residency, depression, anxiety, stress, chronic disease and displacement change as independent variables for risk of low PQOL. Only displacement change was not significant and this variable was dropped in the second step analysis showed in Table 4.44.

Table E.6 included type of residency, depression, anxiety, stress and chronic disease as independent variables for risk of low MQOL. Only anxiety was not significant and this variable was dropped in the second step analysis showed in Table 4.44.

Table 4.44 shows a logistic regression analysis for risk of low PQOL and MQOL among participant IDPs according to associated variables and type of residency as an independent variable. Results show that participant IDPs living in camps have 3.511 times higher risk of low PQOL ($p<0.001$), and they have 3.112 times higher risk of low MQOL ($p<0.001$) than those living in private residency. Participant IDPs who have depression have 2.67 times higher risk of low PQOL ($p<0.001$), and they have 2.85 times higher risk of low MQOL ($p<0.001$) than those who do not have depression. Participant IDPs who have anxiety have 2.020 times higher risk of low PQOL ($p=0.017$) than those who do not have anxiety. Participant IDPs who have stress have 3.995 times higher risk of low MQOL ($p<0.001$) than those who do not have stress. Participant IDPs who have chronic disease have 9.269 times higher risk of low PQOL ($p<0001$), and they have 6.230 times higher risk of low MQOL ($p<0.001$) than those who do not have chronic disease.

5. DISCUSSIONS

5.1. Bivariate Analysis

5.1.1. Demographic, Socio-Economic Characteristics And Health Condition

Our results show that the majority of participant IDPs are females (57.8%) the percentage that is not far different from results provided by DTM reports which provided that 51% of IDP population in Libya are females (17). Results show that half of private residents are males while only one third of camp residents are males and that can be explained by the security hazards faced by young adult males in the camps who are accused of violent activities. In addition, our data collection process is based on the targeted participants in their homes. The process may push our samples towards the majority of women who are more likely to be at home than males.

Our study targets adult IDPs exclusively; all of our participants were aged more than 17 years old, among them only 5.7% aged more than 64 years old and that is compatible with the Libyan population pyramid results where only 4.31% of the total population is more than 64 years old (94). This result is also fits with the UNHCR Statistical Yearbook 2014 results which showed that among UNHCR people of concern (including refugees and IDPs) less than 3% aged 60 years or older (19).

Among our participants we found that 8.2% are illiterate in line with the Libyan population rate of illiteracy which is about 9% of total population more than 15 years (20). But it is prominent that illiteracy level is two times among camp residents (11.1%) than that among private residents (5.3%) and the percentage of university graduates is higher among private residents (49.8%) than that of camp residents (32.9%). That shows the higher level of education among private resident IDPs than that among camp resident IDPs, and this can be attributed to the fact that camp resident IDPs are mainly from mass displacement of the residents of Tawerga city who lives an agricultural and grazing life style, while the private resident IDPs are from capital cities of Libya (Bengazi, Sirt, Misurata) where the modern life style is prominent.

The significant finding of the marital status among our participants ($p<0.001$) showed that a large portion of private residents (57.7%) are married while a large portion of camp residents (63.9%) are single, widow or separated, On the other hand, results showed the majority of private residents (58.2%) to have nuclear families, while 56.4% of camp residents are living among extended families, this result can be discussed along with the family size results that showed that 48% of participants families are composed of 6-10 persons in numbers. A similarly high percentage of family integrity can be seen among both private and camp resident IDPs. These results regarding participant's family characteristics do not show significant privilege for any of our participants' categories.

There is a significant difference found among our participants regarding employment conditions ($p<0.001$), where 70.9% of private residents are employed only 47.7% of camp residents are employed, and this is reflected on the monthly income of participants, where 15.4% of private residents said to have a monthly income more than 1000 LD only 1.8% of camp residents said that, a wider portion of camp residents (30.3%) are receiving less than 450 LD monthly (the social security value), these results may clarify partly the high standards of living for private residents compared to camp residents. Among those who are employed, majority of private residents have a high education or office linked jobs while the majority of employed camp residents said to have governmental office job and this also gives better position for private residents in terms of standards of living and employment.

The monthly income is evaluated in Libyan Dinars currency, during our data collection Libyan dinar had two different prices, the official governmental price where one LD equals 0.72 United States Dollar, and black market price where one LD equals 0.12 United States Dollars, the real value of Libyan Dinar lies in the middle between governmental and market values because most of life necessary consumables in Libya are provided in governmental price (95).

Our findings regarding IDPs livelihood are in line with previously mentioned literature, Morales (2016) concluded that internal displacement carries a large short term impact on local wages and human resources allocation among the hosting society (23), Alhasan (2007) discussed the economic frustration associated with displacement, the motivations and adaptive skills of IDPs regarding their

employment condition improvement (24), these statements can be applied to our study population. Causes discussed by The Assessment Capacities Project Libya report (2015) explain our findings in terms of the economic difficulties faced by Libyan IDPs; the report considers inability to cash out salaries, the non-functioning banking system and lack of job opportunity as the main causes of income shortage (21). Public employment, small businesses or trading, and aid were the three most cited sources of income for IDPs in Libya according to Libya's IDP & Returnee round 8 Report (2017) (25), and this is in line with our findings among camp resident IDPs.

There was no significant difference among participants in terms of financial support ($p=0.702$), and about 80% of all participants denied to receive financial support. On the other hand social support was significantly different ($p=0.031$), and camp residents showed a higher percentage of social support than private residents, the lower socio-economic state, the closer housing, extended families and the higher security risk among camp residents are believed to participate in a richer social life in the camp environment.

The results showed that all (97.5%) camp resident IDPs are from Tawerga, while private residents are from different cities, unfortunately this can be attributed to the fact that Tawergees are black-skinned people who are at risk of racial discrimination and they face difficulties in melting in the Tripoli society, the fact that explains their aggregation in overcrowded camps looking for safety and support by their similar neighbors (31).

Regarding duration of displacement our results showed that the majority of camp resident IDPs (70.2%) spent more than 6 years in displacement, this result ties well with the fact that all of camp residents are from Tawerga city and all of them were displaced during the main conflict erupted in 2011 (31). It is believed that duration of displacement is linked to the city of origin where the story of conflict is different according to cities, as mentioned in our literature review; IDPs from Benghazi mainly spent over 3 years in displacement as the conflict started in 2014, and similar to those from Sirt who spent about one to two years in displacement as they left their home city starting from 2015 conflicts (31,33).

Similarly among both IDPs categories, general violence was the main cause of displacement in 89.3% of our participants, where 10% of them were displaced due to security issues and only 1% considered economic cause as the cause of displacement, the result that is perfectly compatible with all the previous literature, as it is mentioned that 91% of IDPs in Libya have been displaced because of the general conflict, while 7% and 2% of IDPs considered security issue and economic factors respectively as the cause of displacement (25). The only significant difference in our results seen in the percentage of security issue as the cause of displacement, where 16.6% of private residents and 3.3% of camp residents considered security issue as the cause of displacement, and that can be explained by the nature of conflict in Benghazi and Sirt, where political affiliation is the main point of disagree among armed groups, that drives groups to practice security threats such as assassination, enforced disappearance and torture for interrogation more than direct armed conflict.

Our study found that 27% of IDPs were displaced more than once, even though we did not replicate the previously reported literature results by The United Nation Migration Agency report (25) which stated higher rate of multiple displacements, our results suggest that camp resident IDPs (38.8%) faced multiple displacement more than private resident IDPs (15.1%), this does seem to depend on the duration of displacement and the socio-economic status which are in favor of private residents.

Results regarding health behavior showed that in total 24.2% of all participant IDPs smokes cigarettes and 3.8% of all participants stated to use alcohol. Although these results are in line with the statistics provided by WHO, where it says that about 50% of adults smokes tobacco products and only 4.6% of adults uses alcohol in Libya, but we believe that the negative social attitude and the highly sensitive sense of sin regarding both tobacco and alcohol use that is presented in the Libyan culture drives people to deny their truthful condition whenever they are asked, thus these numbers are always considered low compared to real prevalence (96,97).

Our results show voluntary answers of participants regarding their chronic disease condition based on their previous knowledge, where 24.2% of private residents and 16.5% of camp residents stated that they have a chronic disease, this can be attributed to the higher educational level, economic status, healthcare

accessibility and older age among private residents. Hypertension, respiratory disease, hyperlipidemia, diabetes mellitus and heart disease were respectively the top chronic conditions prevalent among private resident IDPs, where hypertension, physical disability, respiratory disease, diabetes mellitus and mental illness were respectively the top chronic conditions prevalent among camp resident IDPs. Although significant difference among our participants can be seen only in hyperlipidemia (p=0.004), respiratory disease (p=0.008) and disability (p=0.005) but our results provide a very organized database for the most prominent chronic conditions among IDPs in general, which can play a role in any effort regarding priority setting and resource allocation in healthcare services.

Regarding healthcare service utilization our results showed that camp residents (83.5%) visit public facilities more than private residents (74.0%) among the IDPs who had physician visit, on the other hand, private residents (39.7%) visit private facilities more frequently than camp residents (28.8%). This can be explained by the economic capabilities which are lower among camp residents than those of private residents, and that also explains the low level of satisfaction (48.8%) toward public facilities among private residents, where they are more satisfied (66.7%) with the private facilities.

Results show difficulties that prevents IDPs from healthcare service utilization can be discussed as follows; the waiting time difficulty was the most prominent difficulty among both IDPs categories, where having an appointment, medication payment and absence of physicians were the top difficulties seen by private residents respectively, and medication payment, having an appointment and transportation were the top difficulties seen by camp residents respectively. On the other hand discrimination and visit payment difficulties were the least concerns by both participant categories. The waiting time difficulty can be explained by the increased demand on healthcare services and the lack of human resources mentioned in the World Health Organization Report (2015) regarding healthcare service challenges in Libya (7). These findings can contribute greatly in the process of decision making regarding healthcare service forecasting.

Conclusively, our results showed that private residents IDPs have a higher socio-economic status than camp resident IDPs, in terms of educational level,

employment, occupation, income and healthcare service accessibility, while proportion of chronic diseases was higher among private residents than camp residents.

5.1.2. Depression, Anxiety and Stress Scale (DASS)

Depression Scores (According to DASS)

DAS scale results show the participants screening test scores regarding depression, anxiety and stress, the screening test scores which are interpreted as Normal, Mild, Moderate, Severe and extremely severe state for each mental disorder. The results of the degree of mental disorders among our participants show that the percentages of all three mental disorders are higher among camp resident IDPs than those among private resident IDPs. The results also show that participants with severe and extremely severe degrees of depression, anxiety and stress are more among camp residents than private residents. This result can be attributed to the previous chapter results that showed a higher socio-economic condition among private residents than those of camp residents.

According to our results the percentage of depression among camp residents (76.4%) is higher than the percentage of depression among private residents (48.3%) ($p < 0.001$), and both groups showed an average percentage of depression about 61.82%, so the proportion of IDPs with depression is about 14 times more compared to the proportion of the global population with depression in 2015 which is estimated to be 4.4% (69). And this is in line with the findings of previously presented studies including the finding of Sheikh et al. (2015) who showed that among participant IDPs in north western Nigeria 59.7% had probable depression (70), and Feyera, et al. (2015) who resulted that 38.3 % of respondent Somali refugee at Melkadida camp met the symptoms criteria for depression (71), and Alkhafaji, et al. (2015) they found that the prevalence rate of depression among IDPs at AL- Diwanyia Iraq was 34.5% (72). Although our result shows a degree of compatibility with previous literature, it exceeded the estimated percentages of depression found by Charlson et al. (2012) who estimated that more than one third of conflict affected population in Libya could have depression, and they estimated that around 220,000 are believed to have severe depression (80).

The percentage of anxiety among camp residents (70.6%) is higher than the percentage of anxiety among private residents (47.2%) ($p < 0.001$), and the average percentage of anxiety among both groups is about 58.5%, when compared to the proportion of the global population with anxiety disorders in 2015 which is estimated to be 3.6%, our results show that the proportion of IDPs with anxiety is about 16 times more than the global one (69). That can be understood in comparison to Ali (2015) findings, he found that mean score of anxiety among IDPs (32.908±5.631) is about two times the score of anxiety among non IDPs (15.720±6.372), and that can be attributed to the similarity of various factors between IDPs and non IDPs in Kurdistan region of Iraq (74).

The percentage of stress among camp residents (70.4%) is higher than the percentage of stress among private residents (40.9%) ($p<0.001$). Among both groups the percentage of stress is about 55.0% and 20.7% of all participants have severe stress. A similar pattern of results were estimated by Charlson, et al. (2012) who predicted the impact of the 2011 Conflict in Libya on population mental health, they estimated that 40% of the conflict affected population in Libya may suffer from PTSD and that 30% of these are considered sever (80). These results also are in line with the percentage provided by the World Bank report; it says that among armed conflict affected populations 30-40% is at the risk of Post Traumatic Stress Disorder (PTSD), substance abuse and depression (5). Based on the report's findings the percentage of stress among our participant IDPs is about 18.5 times more than the percentage among normal population, and that exceeds the findings of Lagos-Gallego et al. (2017) who stated that Post-Traumatic Stress Disorder (PTSD) was 5.1 times higher among IDPs of Colombia than in general population (79).

In general, the scores of depression, anxiety and stress among our IDP participants showed higher percentage of mental disorders compared to the proportion of the global population and that of specific populations seen in reviewed literatures. We speculate that this might be due to two causes; first we included all degrees of mental disorder cases including mild, moderate, severe and extremely severe, while other literatures consider different degrees of disorder mostly those who need intervention only were included, secondly other literature uses different screening tools leads to different results.

Although result shows no significant difference of participants depression scores by gender between camp and private resident IDPs, it shows a higher percentage of depression among female (66.2%) than males (56.0%) in both groups, among private residents 50.0% of females have some degree of depression compared to 46.4% of males, and among camp residents 79.0% of females have some degree of depression compared to 71.4% of males who have depression. Overall, these findings confirm the previous literature that stated that depression is more common among females (5.1%) than males (3.6%) among global population (69), and females were more likely to have probable depression (1.68, 95% CI 1.02–2.78; p=0.04) and definite depression (2.69, 1.31–5.54; p=0.006) among IDPs in North Western Nigeria according to Sheikh et al. (2015) (70), Feyera, et al. (2015) also stated that female gender was significantly associated with depression among respondent refugees (71), and Alkhafaji, et al. (2015) added that the rate of depression was higher for females than males, with some differences in depression rate among socio-demographic variable among IDPs in AL-Diwaniyah Iraq (72).

Result also shows significant association between depression score and age category among camp resident IDPs ($p<0.001$), it shows that young adults 18-24 (92.2%) age group have the highest percentage of depression among camp residents, although literature emphasize that the peak of depression prevalence can be seen in the older adulthood (69,98) but the fact that depression attributed suicide is the second leading cause of death in 15-29 years old people is in line with our results (99).

Marital status also was significantly associated with depression among camp resident IDPs ($p<0.001$), our results show that single people have the highest percentage of depression among other groups, although the depression and marital status association can be modified by the age and gender, and the vulnerability to development of depression is not only related to marital status (100), that can be explained by the large young age group and the high percentage of depression among younger age group of camp resident IDPs.

The educational level shows a significant association with depression among private resident IDPs only ($p=0.006$), where the percentage of depression is two times higher among illiterate IDPs (100.0%) compared to literate IDPs (49.4%), and

that agree with the findings of Babazadeh et al. (2016) and Manzouri et al. (2007) (101,102).

All IDPs family characteristics show no significant association with depression except family type among private residents, where participants from single parent families show higher percentage of depression (75.0%) (p=0.010) compared to participants from nuclear (40.7%) and extended families (56.3%). Different literatures describe the association between mental disorders among children and family context, including findings of Perals et al. (2017) (103), Hoyt et al. (1990) (104), Ibrahim et al. (2011) (105) and Ramagopal et al. (2016) (106), a similar effect can be assumed for adults presumably.

Work enrollment condition is seen to be significantly associated with the percentage of depression among camp residents (p=0.014), where unemployed IDPs have a higher percentage of depression (83.7%) compared to enrolled (63.0%) and irregularly enrolled IDPs (78.6%). That is compatible with literature findings of Batic-Mujanovic, et al. (2017) and Linn, et al. (1985) (107,108). Monthly income is also associated with depression among private residents (p=0.033), results show that the less the income the higher the percentage of depression, and that is in line with different literature that conclude the association between poverty and mental illnesses (109,110).

Our results show that private resident IDPs who are financially supported have higher percentage (68.6%) of depression than those who are not financially supported (44.2%) (p=0.008), as financial support is associated with low income, this association seen as an expected result. In addition, IDPs who have social support in both groups show higher percentage of depression than those who are not socially supported, but the result does not explain the time hierarchy of the association; whether the depression or social support is the trigger of the other, because our question did not ask about timing of social support.

Our result shows displacement conditions in relation to depression, it shows a significant association between city of origin and depression scores among private residents (p<0.001), where people from Tawerga living in private residency have higher percentage of depression (66.7%) than those from other cities (40.0%), that

can be attributed to the higher socio-economic status seen in participants from other cities than those from Tawerga.

The duration of displacement has a significant impact on depression among both IDPs categories, but the impact is inversed according to the type of residency, where longer duration is associated with higher percentage of depression among private residents but lower percentage of depression among camp residents, that can be explained by the adaptive skills that can be acquired by the camp residents to lessen the impact of displacement, those skills participate in improvement of life conditions of IDPs as discussed by Alhasan (2007).

Multiple displacement also has significant association with depression among both categories ($p=0.038$, $p=0.004$), its effect is also inversed by the type of residency, where private residents who changed their place of displacement have higher percentage of depression (66.7%) than those who did not (45.1%), and camp residents who changed their place of displacement have lower percentage of depression (67.7%) than those who did not (86.1%). The report by United Nations Office for the Coordination of Humanitarian Affairs (37) considers protracted and multiple displacement as a psychological stressors and they carry a negative impact on mental health of IDPs, this impact can be seen obviously in our results among private resident IDPs who have high percentage of depression associated with long duration and multiple displacement.

Result shows the significant association between health conditions and depression among private resident IDPs, the presence of chronic disease ($p<0.001$) and visiting physicians ($p=0.002$) during displacement are both associated with high percentage of depression. This result ties well with previous studies findings stated that people with chronic disease are at higher risk of developing mental illnesses (111,112,113).

Table 5.1. Factors significantly associated with depression by the type of residency

	Type of Residency			
	Private		Camp	
	Variable	**Factor**	**Variable**	**Factor**
Depression	Education	Illiterate	Age	18-24
	Family type	Single parent	Marital status	Single
	Income	Low	W. enrollment	Unemployed
	Financial supp.	Yes	Social supp.	Yes
	Social supp.	Yes	Disp. time	<72
	City of origin	Tawerga	Disp. change	No
	Disp. time	≥73		
	Disp. change	Yes		
	C. disease	Yes		
	Ph. visit	Yes		

Table 5.1 summarize the factors that significantly associated with high score of depression, it shows that IDPs who are staying at private residency, illiterate, from single parent family, with low income, financially and socially supported, from Tawerga, spent ≥73 months in displacement, changed place of displacement, have a chronic disease and visited physician during displacement have high scores of depression. While those who stay in camp residency, single, unemployed, socially supported, spent <72 months in displacement and did not change their place of displacement have high scores of depression.

Anxiety Scores (According to DASS)

Our results show no significant association between gender, age and marital status and the score of anxiety among both categories of our participants, but there is a significant relationship between anxiety score and educational level among private residents, the percentage of anxiety drops as the level of education increases, where all illiterate participants have high score of anxiety (100.0%) about 50% of literate participants have high score of anxiety in line with the previous literature, where anxiety is associated with educational level (101).

Similar to depression, anxiety is highly associated with family type among both IDPs categories (p=0.006, p=0.003); IDPs from single parent families have higher percentage (75.0%) of anxiety than other types of families, and that is compatible with previous findings of Perals et al. (2017) (103), Hoyt et al. (1990)

(104), Ibrahim et al. (2011) (105) and Ramagopal et al. (2016) (106) presumably. Neither family size nor family integrity factors show significant association with anxiety.

Result shows the significant association between anxiety and economic conditions among private resident IDPs, where IDPs with low income have high percentage of anxiety (72.2%) ($p=0.012$), and IDPs with financial (67.6%) ($p=0.005$) and social (60.5%) ($p=0.046$) support also have higher percentage of anxiety than those without. As we believe that financial support is associated with low income and that is expected to have negative impact on mental status of participants.

Similar to depression results, people from Tawerga in private residency have higher percentage (72.6%) of anxiety than those from other cities (34.3%) ($p<0.001$). This attracts attention to the high results of mental disorders among people from Tawerga whom case needs to be investigated more deep taking in consideration all different factors. Other displacement related factors show significant association with anxiety only among private residents, where prolonged multiple displacement is associated with anxiety, and this is compatible with previous literature that considered protracted and multiple displacement as a psychological stressors and they carry a negative impact on mental health of IDPs (37), and the cause of displacement shows that general violence (52.9%) related to higher percentage of anxiety than security issues (17.1%) ($p<0.001$).

The presence of chronic disease is significantly associated with anxiety in both private ($p=0.002$) and camp ($p=0.005$) residents, while visiting physician is only significantly associated with anxiety among private resident IDPs ($p<0.001$), participants who visit physicians have higher percentage of anxiety (55.8%) than those who do not (30.3%). This result ties well with previous studies findings stated that people with chronic disease are at higher risk of developing mental illnesses (111,112,113), but the exact cause of physician visit has not been investigated in our research, which would add a significant contribution in our discussion.

Table 5.2. Factors significantly associated with anxiety by the type of residency

	Type of Residency			
	Private		camp	
	Variable	**Factor**	**Variable**	**Factor**
Anxiety	Education	Illiterate	Family type	Single parent
	Family type	Single parent	C. disease	Yes
	Income	Low		
	Financial supp.	Yes		
	Social supp.	Yes		
	City of origin	Tawerga		
	Disp. time	≥73		
	Disp. change	Yes		
	Cause of disp.	General		
	C. disease	Yes		
	Ph. visit	Yes		

Table 5.2 summarize the factors that significantly associated with high score of anxiety, it shows that IDPs who are staying at private residency, illiterate, from single parent family, with low income, financially and socially supported, from Tawerga, spent ≥73 months in displacement, changed place of displacement, displaced because of general violence, have a chronic disease and visited physician during displacement have high scores of anxiety. While those who stay in camp residency, from single parent family and having a chronic disease have high scores of anxiety.

Stress Scores (According to DASS)

Result shows that females have higher percentage of stress than males in camps ($p=0.020$), in line with previous findings of Tolin and Foa (2006) (114), Christiansen and Elklit (2012) (115) and Olff (2017) (116) that showed the prevalence of PTSD is higher among females than males. The result shows also the significant association between age and stress among camp residents ($p=0.043$), where young adults (80.6%) and elderly (100.0%) have higher percentage of stress than other age groups, this can be explained by the vulnerability of both age groups under stressors faced during displacement and camp residency. The percentage of stress is significantly high among illiterate participants in camps (100.0%) ($p<0.001$), and that agrees with Babazadeh et al. (2016) findings showed that the educational

level of participants can influence their anxiety, stress, and depression disorders status (101).

Private resident IDPs from single parent families have significantly higher percentage of stress (62.5%) compared to other family types (p=0.047), this is in line with the depression and anxiety results, and in line with the previous studies (103,104,106,105), which indicates that special investigations should be conducted regarding single parent family type and mental disorders taking all possible effecting factors in account. Other family characteristics show no significant association.

Work enrollment condition is seen to be significantly associated with the percentage of stress among camp residents (p=0.003), similar to other mental disorders, unemployment is associated with high percentage of stress (78.6%) and that is in the line with Batic-Mujanovic, et al. (2017) and Linn, et al. (1985) findings (107,108). Monthly income is also associated with stress among private residents (p=0.012), results shows that the less the income the higher the percentage of stress (68.8%), and that is in line with different literature that conclude the association between poverty and mental illnesses (109,110). Financial and social support factors were not significantly associated with stress among both IDPs categories.

Our result shows the significant association between displacement conditions and percentage of stress among private residents. People from Tawerga at private residency had higher percentage (61.6%) of stress than those from other cities (30.3%) (p<0.001), similar to depression and anxiety results, that emphasizes the sensitivity of the Tawerga population. Prolonged displacement shows to be associated with stress among private residents (p<0.001), and inversely new comers face high percentage of stress among camp residents (p=0.003), that is explained by the different effect of time on displaced people (37). Camp resident IDPs who changed their place of displacement had less percentage of stress (62.9%) than those who did not change it (79.6%) (p=0.016), and that supports the adaptation phenomenon discussed previously (37). Regarding the prolonged multiple displacements the welling of staying in displacement or going back home would be investigated to help understanding the adaptation phenomenon among IDPs.

The presence of chronic disease is significantly associated with stress in camp residents (p=0.006), This result ties well with previous studies findings stated that

people with chronic disease are at higher risk of developing mental illnesses (111,112,113).

Table 5.3. Factors significantly associated with stress by the type of residency

	Type of Residency			
	Private		Camp	
	Variable	**Factor**	**Variable**	**Factor**
Stress	Family type	Single parent	Gender	Female
	Income	Low	Age	≥65
	City of origin	Tawerga	Education	Illiterate
	Disp. time	≥73	w. enrollment	Unemployed
	Cause of disp.	General	Disp. time	<72
			Disp. change	No
			C. disease	Yes

Table 5.3 summarize the factors that significantly associated with high score of stress, it shows that IDPs who are staying at private residency, from single parent family, with low income, from Tawerga, spent ≥73 months in displacement and displaced because of general violence have high scores of stress. While those who stay in camp residency, female, aged >64 years, illiterate, unemployed, spent <72 months in displacement, did not change their place of displacement and have a chronic disease have high scores of stress.

5.1.3. Quality of Life (Short form-36 scale)

Using the short form-36 scale for quality of life measurement is concluded into two main summaries; Physical Compound Summary (PCS) which includes four health concepts: physical functioning (PF), role limitation due to physical health problems (RLPH), energy/fatigue and bodily pain, and the Mental Compound Summary (MCS) which includes four health concepts: role limitation due to personal or emotional problems (RLEP), emotional well-being (EW), social functioning (SF), and general health perceptions (GH).

Our result shows participants SF-36 scale scores by the type of residency, except emotional well-being and general health perceptions all the concepts were

significantly different by the type of residency, and except energy all concepts mean scores were higher among private resident IDPs than camp resident IDPs. Conclusively the PCS and MCS means scores are both significantly higher among private residents (69.72±20.85) than camp residents (59.43±17.86) ($p<0.001$), that means all aspects of quality of life are better among private residents than camp residents, and that can be understood looking back to the results of socio-economic factors, health condition and mental disorders which are mainly in favor of private resident IDPs.

Physical Quality of Life (PQOL)

Result shows significant association between PQOL and gender among both IDPs categories, in both private and camp residents; males had higher PQOL scores than females. This result is similar to previous findings of Jamwal and Shekhar (2017) (86) who stated that Quality of life was significantly associated with gender among IDPs and the findings of Crouchley et al. (2007) (88) who discussed the higher scores of quality of life among men than women using SF-8 and they linked that to the significant impact on mental health dimensions, Holter et al. (2009) (117) and Birchall (2016) (118) discuss the impact of gender inequality on quality of life and immigration, and that can explain our results partly, we believe that the male predominance seen in Arab world as discussed in various literature applies to the Libyan society, and leads to gender inequality which effects quality of life (119,120,121).

Age category is significantly associated with PQOL in both private ($p<0.001$) and camp ($p=0.045$) resident IDPs, where younger age participants have higher scores of PQOL than older age participants. Campos et al. (2014) (122) and Netuveli and Blane (2008) (123) discussed the absent influence of age factor on quality of life when all other factors are controlled, but Obidoa et al. (2010) (124) mentioned the longitudinal effects of age on SF-36 scores when used among healthy population, which can explain the effect of age group on PQOL in our results. Marital status is only significant among camp residents, where single participants have higher mean score of PQOL than other status participants. Marital status effect can only be explained in relation to gender and age factors (100).

Level of education was significantly associated with PQOL scores among private ($p<0.001$) and camp ($p=0.025$) residents. Illiterate participants show a very low PQOL scores compared to literate ones; the higher the educational level the higher the PQOL score. This result is logically compatible with many literatures conclude similar association between education and quality of life (125,126,127,128).

All three family characteristics were significantly associated with PQOL scores among private resident IDPs. Participants from single parent families had the lowest PQOL scores (58.28±20.16), and that might be added to our previous negative findings regarding single parent families. Participants with 6-10 family size had the highest PQOL scores (73.01±17.72), while ≥11 families had the lowest PQOL scores (60.20±27.79), and that can be an evidence for the negative impact of crowding on PQOL. Participants with integral family had higher PQOL scores than those with non integral families, in line with the discussion of F. Ntakiyimana (2004); he explained the negative impact of displacement on family integrity and he linked displacement to interfamily conflict, loss f family members, destruction of houses and exposure of family members to violent assaults (38).

Employment is significantly associated with high PQOL scores among private residents, and thus high income is significantly associated with high PQOL scores among both IDPs categories. And this concludes the effect of economic status on physical QOL.

In line with our previous results, the presence of chronic disease is significantly associated with low PQOL scores among both private and camp residents, while visiting physician is significant among private residents only. Crouchley et al. (2007), Lam and Laudera (2000) and many other literature discuss the association between chronic disease and poor quality of life in line of our results, but the knowledge gained in the field is still limited and further inquiry about the mechanism of the effect is always recommended as stated by Shofany (2017) (129).

People from Tawerga in private residency show significantly lower PQOL scores than those from other cities. Prolonged multiple displacement also is significantly associated with low PQOL scores among private residents, and that is compatible with our previous findings and literature (37).

Our findings show the significant association between mental disorders and PQOL among private and camp resident IDPs, participants with depression, anxiety and stress have lower PQOL scores than those without, this result agrees with previously mentioned results of Crouchley et al. (2007) as they concluded that having current mental health condition shows the greatest impact over all dimensions of QOL scale (88). Lam and Laudera (2000) concluded that depression was the most disabling disease and daily role functioning was the most commonly affected HRQOL domain (89), E. Getanda et al. (2015) concluded that poor levels of mental health in parallel with poor quality of life have been found among IDPs (87), and these findings are in line with our results.

Mental Quality of Life

The result shows significant association between MQOL scores and gender among private IDPs ($p=0.028$); males had higher MQOL scores than females. This result can be attributed to the gender inequality discussed in literature similar to PQOL results (119,120,121), and in line with the findings of Jamwal and Shekhar (2017) (86), Crouchley et al. (2007) (88), Holter et al. (2009) (117) and Birchall (2016) (118).

From our results it is obvious that participants aged >64 years old have lower MQOL scores than other age groups in both private and camp residents, and according to Obidoa et al. (2010) (124) age factor has a longitudinal effect on SF-36 scores when used among healthy population, which can explain the effect of age group on MQOL in our results. MQOL scores were lower for widow/separate/divorced participants than other marital status participants among camp residents, including the impact of age and gender inline to marital status can explain such result as discussed by Bulloch, et al. (2017).

Level of education was significantly associated with MQOL scores among private ($p<0.001$) and camp ($p=0.019$) residents. Illiterate participants show a very low MQOL scores compared to literate ones, the higher the educational level the higher the MQOL score. This result is logically compatible with many literatures conclude similar association between education and quality of life (125,126,127,128).

Participants from single parent families had the lowest MQOL scores among private residents (p=0.029), and that might be added to our previous negative findings regarding single parent families. This is consistent with Uhlenberg and Mueller (2003) findings where they linked family context to emotional wellbeing (130).

Similar to PQOL, employment and high income are significantly associated with high MQOL scores among camp residents, and this concludes the effect of occupation and economic status on QOL. Financially supported private residents had significantly lower scores of MQOL than non-supported, which adds evidence to the link between financial support and low economic status.

The presence of chronic illness and visiting physician also show significant association with low MQOL scores, this agrees previous literature of Crouchley et al. (2007), Lam and Laudera (2000).

Similar to PQOL results, people from Tawerga in private residency show significantly lower MQOL scores than those from other cities. Prolonged displacement also is significantly associated with low MQOL scores among private residents, and that is compatible with our previous findings and literature (37).

Our result shows the significant association between mental disorders and MQOL among private and camp resident IDPs, participants with depression, anxiety and stress have lower MQOL scores than those without, this result agrees with previously mentioned results of Crouchley et al. (2007) as they concluded that having current mental health condition shows the greatest impact over all dimensions of QOL scale (88). Lam and Laudera (2000) concluded that depression was the most disabling disease and daily role functioning was the most commonly affected HRQOL domain (89), Getanda et al. (2015) concluded that poor levels of mental health in parallel with poor quality of life have been found among IDPs (87), and these findings are in line with our results.

Conclusively, a similar pattern of results could be seen in the effect of different variables on both domains of QOL scores, where variables including Gender, Age, Marital status, Education, Family type, Employment, Income, Chronic disease, Physician visit, Place of origin, Displacement time and Mental disorders had similar significant effect on PQOL and MQOL scores.

5.2. Logistic Regression Analysis

This model of analysis provided collective and conclusive results for our research, where it included only significantly associated variables from bivariate model aiming to define the strength and the odds of the association.

The logistic regression model was performed in two steps; in the first step all significant variables from bivariate model were included and results shown in Appendix E, in the second step only significant variables were included in order to gain sufficient number of participants.

The results of this model are discussed in the following three chapters:

5.2.1. DASS Scores By Demographic And Socio-Economic Variables

Results show that socially supported camp resident participants have 2.96 times higher risk of depression than those who were not socially supported ($p=0.023$). The results also show that camp residents who did not change their place of displacement have 3.177 times higher risk of depression than those who did change place of displacement ($p=0.005$), this was justified by the adaptation acquired by IDPs discussed by Alhasan (2007). Among private residents those who had chronic disease have 4.799 times higher risk of depression than those who do not have chronic disease ($p<0.001$), and this is in line of previous discussions and findings of Verhaak et al. (2005), Huff et al. (2010) and Chapman et al. (2005).

Results show that participants living in private residency who have monthly income <450 LD have 3.792 times higher risk of anxiety than those who have monthly income ≥450 LD ($p=0.017$). That agrees with different literature conclude the association between poverty and mental illnesses, Mcsilver Institute report stated that "*Research shows that this relationship is bidirectional: poverty may exacerbate mental illness and mental illness may lead to poverty*." (109,110).

Our results show that IDPs living in private residency who are originally from Tawerga have 3.025 times higher risk of stress than those who are originally from other cities ($p<0.001$), that shows the better mental condition of IDPs from cities other than Tawerga. Results also show that participant IDPs living in camp residency who have university and above educational level have 2.472 times higher risk of stress than those who have primary or secondary school educational level ($p=0.016$),

and this is consistent with the previous findings discussed by Poalses and Bezuidenhout (2018), Keady (1999) and Kashmoola (2016) (131,132,133). Results show that participant IDPs living in camp residency that did not change place of displacement have 2.710 times higher risk of stress than those who did change place of displacement (p=0.008), that is in favor of adaptation phenomenon discussed by Alhasan (2007), she said that IDPs are more motivated for adaptation by time, and our results show that change and trials of place adaptation lessens the risk of stress contrary to stability which is linked to risk of stress.

5.2.2. SF-36 By Demographic, Socio-Economic Variables And DASS Scores

Our findings conclude similar effect of chronic disease on both physical and mental QOL, where private residents with chronic disease have 12.327 times higher risk of low PQOL and 9.401 times higher risk of low MQOL than those without any chronic disease, similar to the findings of Crouchley et al. (2007), Lam and Laudera (2000) and Shofany (2017) (129). Displacement change was associated with 5.393 times higher risk of low PQOL among private residents, in line with discussion of Alhasan (2007) (24). Stress shows similar effect on both QOL domains among camp residents, where participants who have stress have 74.01 times higher risk of low PQOL ($p<0.001$) and have 7.066 times higher risk of low MQOL ($p<0.001$) than those who do not have stress, although this is compatible with the literature of Crouchley et al. (2007) (88), Lam and Laudera (2000) (89) and Getanda et al. (2015) (87).

5.2.3. SF-36 By Demographic, Socio-Economic Variables, DASS Scores And Type Of Residency

At this model Type of Residency considered as a separate variable and not as a categorization factor, aiming to assess the impact of different variables regardless the type of residency, and trying to answer the main research questions simply. Model’s results show impact of type of residency, depression and chronic disease on both domains of QOL, while anxiety affected only PQOL and stress affected MQOL only.

Camp resident IDPs had significantly lower QOL than private residents IDPs, that can be attributed to the poor living conditions faced in camps rather than private residencies, previous literature discussed poor thermal and health conditions, Reproductive health problems, gender based violence, armed conflict injuries, social stigmatization, discrimination and xenophobia, barriers to access health care services, risk of malnourishment and abnormal growth pattern among camp residents, all factors can explain the lower QOL among camp resident IDPs (26,27).

Participant IDPs who had high scores of mental disorders scale DASS show low QOL scores. That provides evidence of the association of mental disorders and low QOL as discussed by previous literatures (87,88,89)

The presence of chronic disease shows highly significant association with low QOL among IDPs, regardless the type of residency, and that was in line with all of reviewed literature discussed previously (88,89,129).

Conclusively, it is obvious that IDPs living in camps, having chronic disease and mental disorder have lower QOL scores than those living in private residency without any chronic disease or mental illness.

5.3. Study Strength and Limitation

5.3.1. Study Strengths

Our data had been collected from the field and self reported questionnaire has been used for that purpose, thus our results considered real findings rather than estimates. The scales (DASS, SF-36) used in our study were not valid and reliable specifically in Libya but they are valid and reliable for Arabic language and culture, previous studies for translation has been done and mentioned in methodology chapter. The use of multiple models for analysis helps to concentrate our findings and conclusion. Society contributions are also considered study strengths; where data collectors were trained for field researches and data collection and educational brochures regarding mental disorders have been distributed to participants.

5.3.2. Study Limitations

- All participants were IDPs; non IDP control population should be included in the study.
- Missed details regarding displacement conditions.
- Quantitative method used instead of mixed method (quantitative and qualitative).
- Target representative sample size was not achieved for field limitation.
- Political instability, frequently erupted conflicts and lack of security in Tripoli city.
- Quality of IDPs registration system.
- Dynamic numbers of IDPs on daily basis caused by returnee and new conflicts.
- Health service utilization scale was not properly formatted, that is why its objective was not satisfied.

6. CONCLUSION and RECOMMENDATIONS

Mental disorders have a great impact on QOL, and they are affected by multiple factors associated with armed conflicts and displacement. Our study conducted to assess the proportion of mental disorders and their impact on QOL among IDPs in Tripoli city Libya, also we assessed factors that affect both mental status and QOL including; demographic, socio-economic and health related factors, according to type of residency of IDPs.

Two groups of participants were targeted according to their type of residency, private residents and camp residents; self reported questionnaires were answered by participants. Collected data were analyzed using IBM® SPSS® version 22 and results were presented in tables, discussed in relation to previous literature.

Our results shows that IDPs who are staying at private residency, illiterate, from single parent family, with low income, financially and socially supported, from Tawerga, spent ≥73 months in displacement, changed place of displacement, have a chronic disease and visited physician during displacement have high scores of depression, While those who stay in camp residency, single, unemployed, socially supported, spent <72 months in displacement and did not change their place of displacement have high scores of depression.

Participant IDPs who are staying at private residency, illiterate, from single parent family, with low income, financially and socially supported, from Tawerga, spent ≥73 months in displacement, changed place of displacement, displaced because of general violence, have a chronic disease and visited physician during displacement have high scores of anxiety. While those who stay in camp residency, from single parent family and having a chronic disease have high scores of anxiety.

IDPs that are staying at private residency, from single parent family, with low income, from Tawerga, spent ≥73 months in displacement and displaced because of general violence have high scores of stress. While those who stay in camp residency, female,

aged >64 years, illiterate, unemployed, spent <72 months in displacement, did not change their place of displacement and have a chronic disease have high scores of stress.

Conclusive analysis shows special concerns regarding the deep negative impact of camp residency and presence of chronic disease on mental disorders and QOL among IDPs, thus efforts target the improvement of socio-economic status and mental healthcare service among camp residents IDPs are highly recommended, with special attention to people with chronic diseases. Furthermore, normal population and IDPs by type of residency comparative research is recommended.

RECOMMENDATIONS

To decision makers

- Socio-economic conditions improvement efforts targeting camp resident IDPs, as they showed lower socio-economic status than private resident IDPs.
- Healthcare human and financial resources should be specially allocated to IDPs based on their temporary population and location.
- Accessible and affordable mental healthcare oriented service should be provided to IDPs.
- Accessible and affordable chronic disease healthcare service and medications should be provided to IDPs.
- Efforts aim to end the armed conflicts in Libya, as armed conflict plays the main role in displacement and psychological trauma.
- Efforts facilitate return and integration for IDPs in Libya.

To researchers

Future researches are recommended targeting the following research problems:

- Assessment of public and private healthcare facility customer satisfaction and related factors in Libya.
- Healthcare utilization difficulties including: appointment process, waiting time and medication cost in Libya should be assessed.
- The impact of displacement duration and change on IDPs attitude and socio-economic conditions.
- Socio-economic conditions and QOL among Tawerga IDPs in Libya.
- Mental disorders and QOL comparison between IDPs and normal population.
- Mental disorders and QOL related factors among single parent families and people with disabilities.
- Tobacco, alcohol and substance use pattern among IDPs and affecting factors.
- The rate of stress and PTSD among camp resident IDPs in Libya.

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8. APPENDICES

Appendix A: Data Collection Form (English)

Dear Participant,

This research is a PhD thesis based at Hacettepe University Public Health Department. Our aim is to evaluate the mental health status and quality of life and to identify important factors affecting them and to examine the related items scientifically.

The information collected during this work process will NEVER be shared and will be kept confidential.

Your personal information will only be used for research purposes. If the work data is used in any broadcast and report, your information will not be used in this publication.

Your identification information is not included in the data collection form. The accuracy of the information you provide is important in terms of the nature of the investigation. Thank you for your participation and your sincere responses.

You are not obliged to answer any questions you do not feel comfortable answering.

Mohamed Saleh Sryh

PhD student

Hacettepe University Public Health Department

DEMOGRAPHIC AND SOCIO-ECONOMIC SURVEY:-

1. What is the year of your birth?

……

2. Mark your gender:-

(1) Male.

(2) Female.

3. What is your level of education?

(1) Not educated.

(2) Only literate, did not finish any school.

(3) Primary school (completed sixth grade).

(4) Elementary school graduate.

(5) Secondary school graduate.

(6) Graduated from college.

(7) University graduate.

(8) Completed master's or doctor's degree.

4. What is your marital status?

(1) Married

(2) Single

(3) Widow

(4) Separated / divorced

(5) Other ……

5. How do define your family type?

(1) Nuclear family (Two parents and children).

(2) Single parent family.

(3) Extended family (contains grandparents or grandsons).

(4) Polygamous family.

(5) Other …….

6. How many persons in your family (including parents)?

…… Persons.

7. Are you enrolled in a regular work?

(1) Enrolled.

(2) Not regularly enrolled.

(3) Partly enrolled.

(4) Not enrolled at all.

8. What kind of job do you work for or are you still working for?

(1) Employer (Any type of company manager).
(2) Highly educated self-employed (such as lawyers, physicians).
(3) Small tradesmen - Craftsmen (shopkeepers, small industry tradesmen, market tradesmen)
(4) Employees without regular work (such as drivers, hawkers, etc.)
(5) High educated wage earner (such as Doctor, Engineer, Architect, Judge, Prosecutor, etc.)
(6) Office worker (Government Officer, Teacher, Police, Nurse, etc.).
(7) Industrial worker.
(8) Assigned at National Center.
(9) Unemployed (There is no job that has earned income for at least 6 months).
(10) Other (Please mention) …….

9. How much is your monthly income?

…… LD

10. Do you receive any kind of financial support?

(1) Yes (please explain) ……..
(2) No.

11. Do you have any kind of social support (friends or family members that provide help in need)?

(1) Yes (Please explain) ……..
(2) No.

12. What kind of residency are you staying at?

Private accommodation
(1) Rented house.
(2) Shared rented house.
(3) Hosted with relatives.
(4) Granted house.

Informal accommodation
(5) School.
(6) Public building.
(7) Deserted resort.
(8) Tent, Caravan.
(9) Others (please mention) ……..

13. What is your place of origin?

……

14. What is the cause of displacement?

(1) General violence.
(2) Security issues.
(3) Economic issues.
(4) Others (please mention) ……

15. Did you have any experience;
    (1) Lost someone of your nuclear family
    (2) Lost a relative
    (3) Sexual harassment
    (4) Physical violence
    (5) Destruction of the house
    (6) Others (please mention) ……

16. Please indicate what you consider to be the most hurtful or terrifying events you have experienced. Please specify where and when these events occurred.

    ……

17. How much does this event affect your mental health? (now) please indicate

    1 2 3 4 5 6 7 8 9 10

    None Too much

18. How long have you been in displacement?
    …….. Years and ……. Months.

19. Did you change place of displacement?
    (1) Yes (please explain) City …….. Duration ……
    City …….. Duration ……
    City …….. Duration ……...
    (2) No.

20. Are all your family members living together now being? (nuclear family)
    (1) Yes.
    (2) No. (who is not?.....)

HEALTH CONDITION SURVEY:-

21. Have you ever used cigarettes?
    (1) Yes
    (2) No (skip to question 31)

22. If yes, are you still using it?
    (1) Yes
    (2) No (skip to question 31)

23. How soon after you wake up do you smoke your first cigarette?
    (1) Within 5 minutes
    (2) 6 to 30 minutes
    (3) 31 to 60 minutes
    (4) After 60 minutes

24. Do you find it difficult to refrain from smoking in places where it is forbidden (e.g., in church, at the library, in the cinema)?
    (1) No
    (2) Yes

25. Which cigarette would you hate most to give up?
    (1) The first one in the morning
    (2) Any other

26. How many cigarettes per day do you smoke?
    (1) 10 or less
    (2) 11 to 20
    (3) 21 to 30
    (4) 31 or more

27. Do you smoke more frequently during the first hours after waking than during the rest of the day?
    (1) No
    (2) Yes

28. Do you smoke when you are so ill that you are in bed most of the day?
    (1) No
    (2) Yes

29. Do you drink alcoholic beverages?
    (1) Yes
    (2) No (skip to question 33)

30. If you drink alcoholic beverages:
    How much? (Bag of Bokha a week)
    How long? (..... Years)

31. Do you have any kind of physical special need?
    (1) Yes (Please mention) …….
    (2) No.

32. Do you have any kind of chronic disease that has been diagnosed by a doctor?

(1) Yes (Please fill in the table below)

(2) No.

No	Name of disease	Date of diagnosis	Regular treatment (Yes/No)	Complications (Yes/No)
1	Diabetes			
2	Hypertension			
3	Hyperlipidemia			
4	Chronic respiratory disease			
5	Chronic heart disease			
6	Mental illness			
7	Chronic liver disease			
8	Chronic kidney disease			
9	Others (please mention) …….			

33. While in displacement, have you ever visited a doctor?

(1) Yes. (How many times did you visit the doctor …….)

(2) No.

34. When was the last time you visited the doctor?

(1) Last week.

(2) Last month.

(3) Last 6 months.

(4) Last year.

35. What kind of health facility did you go to?

(1) Public.

(2) Private.

36. What was your level of satisfaction regarding the health service during your doctor visit?

(1) I was very satisfied.

(2) I was satisfied a little.

(3) I was not satisfied.

(4) I am not sure.

37. Did you experience any kind of difficulties during your doctor's visit?

(1) Yes.

(2) No.

38. If yes, what type of difficulties did you experience?

(1) Transportation problems.
(2) Getting an appointment.
(3) No doctors in the area.
(4) Security issues.
(5) Once arrived at the office, had to wait too long to see the doctor.
(6) Not able to pay for the visit.
(7) Discrimination problem.
(8) Not able to pay for the medications.
(9) Others (please mention) …….

39. Do you have any important problem affecting your mental health?

(1) Yes (would you share with us?.....)
(2) No

DASS *Name:*
Date:

Please read each statement and circle a number 0, 1, 2 or 3 which indicates how much the statement applied to you *over the past week*. There are no right or wrong answers. Do not spend too much time on any statement.

The rating scale is as follows:

0 Did not apply to me at all

1 Applied to me to some degree, or some of the time

2 Applied to me to a considerable degree, or a good part of time

3 Applied to me very much, or most of the time

1	I found myself getting upset by quite trivial things	0	1	2	3
2	I was aware of dryness of my mouth	0	1	2	3
3	I couldn't seem to experience any positive feeling at all	0	1	2	3
4	I experienced breathing difficulty (eg, excessively rapid breathing, breathlessness in the absence of physical exertion)	0	1	2	3
5	I just couldn't seem to get going	0	1	2	3
6	I tended to over-react to situations	0	1	2	3
7	I had a feeling of shakiness (eg, legs going to give way)	0	1	2	3
8	I found it difficult to relax	0	1	2	3
9	I found myself in situations that made me so anxious I was most relieved when they ended	0	1	2	3
10	I felt that I had nothing to look forward to	0	1	2	3
11	I found myself getting upset rather easily	0	1	2	3
12	I felt that I was using a lot of nervous energy	0	1	2	3
13	I felt sad and depressed	0	1	2	3
14	I found myself getting impatient when I was delayed in any way (eg, lifts, traffic lights, being kept waiting)	0	1	2	3
15	I had a feeling of faintness	0	1	2	3
16	I felt that I had lost interest in just about everything	0	1	2	3
17	I felt I wasn't worth much as a person	0	1	2	3
18	I felt that I was rather touchy	0	1	2	3
19	I perspired noticeably (eg, hands sweaty) in the absence of high temperatures or physical exertion	0	1	2	3
20	I felt scared without any good reason	0	1	2	3
21	I felt that life wasn't worthwhile	0	1	2	3

Reminder of rating scale:

0 Did not apply to me at all

1 Applied to me to some degree, or some of the time

2 Applied to me to a considerable degree, or a good part of time

3 Applied to me very much, or most of the time

22	I found it hard to wind down	0	1	2	3
23	I had difficulty in swallowing	0	1	2	3
24	I couldn't seem to get any enjoyment out of the things I did	0	1	2	3
25	I was aware of the action of my heart in the absence of physical exertion (eg, sense of heart rate increase, heart missing a beat)	0	1	2	3
26	I felt down-hearted and blue	0	1	2	3
27	I found that I was very irritable	0	1	2	3
28	I felt I was close to panic	0	1	2	3
29	I found it hard to calm down after something upset me	0	1	2	3
30	I feared that I would be "thrown" by some trivial but unfamiliar task	0	1	2	3
31	I was unable to become enthusiastic about anything	0	1	2	3
32	I found it difficult to tolerate interruptions to what I was doing	0	1	2	3
33	I was in a state of nervous tension	0	1	2	3
34	I felt I was pretty worthless	0	1	2	3
35	I was intolerant of anything that kept me from getting on with what I was doing	0	1	2	3
36	I felt terrified	0	1	2	3
37	I could see nothing in the future to be hopeful about	0	1	2	3
38	I felt that life was meaningless	0	1	2	3
39	I found myself getting agitated	0	1	2	3
40	I was worried about situations in which I might panic and make a fool of myself	0	1	2	3
41	I experienced trembling (eg, in the hands)	0	1	2	3
42	I found it difficult to work up the initiative to do things	0	1	2	3

RAND 36-Item Health Survey 1.0 Questionnaire Items

1. In general, would you say your health is:	
Excellent	1
Very good	2
Good	3
Fair	4
Poor	5

2. **Compared to one year ago,** how would your rate your health in general **now**?	
Much better now than one year ago	1
Somewhat better now than one year ago	2
About the same	3
Somewhat worse now than one year ago	4
Much worse now than one year ago	5

The following items are about activities you might do during a typical day. Does **your health now limit you** in these activities? If so, how much?

(Circle One Number on Each Line)

	Yes, Limited a Lot	Yes, Limited a Little	No, Not limited at All
3. **Vigorous activities,** such as running, lifting heavy objects, participating in strenuous sports	[1]	[2]	[3]
4. **Moderate activities,** such as moving a table, pushing a vacuum cleaner, bowling, or playing golf	[1]	[2]	[3]
5. Lifting or carrying groceries	[1]	[2]	[3]
6. Climbing **several** flights of stairs	[1]	[2]	[3]
7. Climbing **one** flight of stairs	[1]	[2]	[3]
8. Bending, kneeling, or stooping	[1]	[2]	[3]
9. Walking **more than a mile**	[1]	[2]	[3]
10. Walking **several blocks**	[1]	[2]	[3]
11. Walking **one block**	[1]	[2]	[3]
12. Bathing or dressing myself	[1]	[2]	[3]

During the **past 4 weeks**, have you had any of the following problems with your work or other regular daily activities **as a result of your physical health**?

(Circle One Number on Each Line)

	Yes	No
13. Cut down the amount of time you spent on work or other activities	1	2
14. **Accomplished less** than you would like	1	2
15. Were limited in the **kind** of work or other activities	1	2
16. Had **difficulty** performing the work or other activities (for example, it took extra effort)	1	2

During the **past 4 weeks**, have you had any of the following problems with your work or other regular daily activities **as a result of any emotional problems** (such as feeling depressed or anxious)?

(Circle One Number on Each Line)

	Yes	No
17. Cut down the **amount of time** you spent on work or other activities	1	2
18. **Accomplished less** than you would like	1	2
19. Didn't do work or other activities as **carefully** as usual	1	2

20. During the **past 4 weeks**, to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbours, or groups?

(Circle One Number)

Not at all 1

Slightly 2

Moderately 3

Quite a bit 4

Extremely 5

21. How much **bodily** pain have you had during the **past 4 weeks**?

(Circle One Number)

None 1

Very mild 2

Mild 3

Moderate 4

Severe 5

Very severe 6

22. During the **past 4 weeks**, how much did **pain** interfere with your normal work (including both work outside the home and housework)?

(Circle One Number)

Not at all 1

A little bit 2

Moderately 3

Quite a bit 4

Extremely 5

These questions are about how you feel and how things have been with you **during the past 4 weeks**. For each question, please give the one answer that comes closest to the way you have been feeling.
How much of the time during the past 4 weeks . . .

(Circle One Number on Each Line)

	All of the Time	Most of the Time	A Good Bit of the Time	Some of the Time	A Little of the Time	None of the Time
23. Did you feel full of pep?	1	2	3	4	5	6
24. Have you been a very nervous person?	1	2	3	4	5	6
25. Have you felt so down in the dumps that nothing could cheer you up?	1	2	3	4	5	6
26. Have you felt calm and peaceful?	1	2	3	4	5	6
27. Did you have a lot of energy?	1	2	3	4	5	6
28. Have you felt downhearted and blue?	1	2	3	4	5	6
29. Did you feel worn out?	1	2	3	4	5	6
30. Have you been a happy person?	1	2	3	4	5	6
31. Did you feel tired?	1	2	3	4	5	6

32. During the **past 4 weeks**, how much of the time has your **physical health or emotional problems** interfered with your social activities (like visiting with friends, relatives, etc.)?

(Circle One Number)

All of the time 1

Most of the time 2

Some of the time 3

A little of the time 4

None of the time 5

How **TRUE** or **FALSE** is each of the following statements for you.

(Circle One Number on Each Line)

	Definitely True	Mostly True	Don't Know	Mostly False	Definitely False
33. I seem to get sick a little easier than other people	1	2	3	4	5
34. I am as healthy as anybody I know	1	2	3	4	5
35. I expect my health to get worse	1	2	3	4	5
36. My health is excellent	1	2	3	4	5

Appendix B: Data Collection Form (Arabic)

نموذج جمع البيانات

عزيزي المشارك،

هذا البحث هو أطروحة دكتوراه مقرها قسم الصحة العامة في جامعة حاجيت تبي (أنقرا) . هدفنا هو تقييم الحالة الصحة العقلية وجودة الحياة وتحديد العوامل الهامة التي تؤثر عليهم وفحص العناصر ذات الصلة علميا.

لن يتم مشاركة المعلومات التي يتم جمعها خلال هذه العملية وسيتم الاحتفاظ بها سريا.

لن يتم استخدام معلوماتك الشخصية إلا لأغراض البحث. إذا تم استخدام بيانات العمل في أي بث أو تقرير، فلن يتم استخدام معلوماتك الشخصية في هذا المنشور.

لا يتم تضمين معلومات التعريف الخاصة بك في نموذج جمع البيانات. دقة المعلومات التي تقدمها مهمة من حيث طبيعة البحث.

أنت لست مجبرا على الإجابة عن أي أسئلة لا تشعر بالراحة في الإجابة عنها.

نشكرك على مشاركتك وردودك الصادقة.

محمد صالح سريح

طالب دكتوراه

جامعة حاجيت تبي قسم الصحة العامة

المسح الديموغرافي والاجتماعي – الاقتصادي :-

1. ما هي السنة التي ولدت فيها؟

.....

2. حدد جنسك :-
(1) ذكر.
(2) أنثى.

3. ما هو مستواك التعليمي؟
(1) غير متعلم.
(2) متعلم, ولم أكمل أي مدرسة.
(3) المدرسة الابتدائية (أكملت الصف السادس).
(4) خريج مدرسة إعدادية.
(5) خريج مدرسة ثانوية.
(6) خريج معهد عالي.
(7) خريج جامعة.
(8) أكملت درجة الماجستير أو درجة الدكتوراه.

4. ما هي حالتك الاجتماعية؟
(1) متزوج
(2) عازب
(3) أرمل\ة
(4) منفصل / مطلق
(5) غير ذلك .....

5. كم عدد الأشخاص في عائلتك (بما في ذلك الوالدين)؟

..... شخص.

6. كيف تعرَف نوع عائلتك ؟
(1) عائلة نووية (أبوين واطفال).
(2) عائلة بولي أمر واحد.
(3) عائلة ممتدة (تحتوي علي الجدود أو الاحفاد).
(4) عائلة متعددة الزوجات.
(5) غير ذلك .....

7. هل أنت مسجل في عمل منتظم؟
(1) نعم أعمل بشكل منتظم.
(2) لا أعمل بشكل منتظم.
(3) أعمل بشكل جزئي.
(4) لا أعمل نهائيا.
8. ما هو نوع العمل الذي تعمل به ؟
(1) صاحب العمل (أي نوع من مدير الشركة).

(2) متعلم تعليما عاليا (مثل المحامين والأطباء).
(3) من صغار الحرفيين (أصحاب المحلات التجارية، صغار التجار في الصناعة، تجار السوق)
(4) الموظفين الذين ليس لديهم عمل منتظم (مثل السائقين، الباعة المتجولين، الخ)
(5) المتعلمين ذوي الدخل العالي (مثل الطبيب، المهندس، المهندس المعماري، القاضي، المدعي العام، وما إلى ذلك)
(6) موظف مكتب (موظف حكومي، معلم، شرطي، ممرضة، وما إلى ذلك).
(7) عامل صناعي.
(8) متعيين في المركز الوطني.
(9) عاطل عن العمل (ليس لدي عمل بدخل لمدة 6 أشهر على الأقل).
(10) غير ذلك (يرجى التوضيح) .....

9. كم يبلغ دخلك الشهري؟
..... دينار

10. هل تتلقى أي نوع من الدعم المالي؟
(1) نعم (يرجى التوضيح) .....
(2) لا.

11. هل لديك أي نوع من الدعم الاجتماعي (أصدقاء أو اقرباء يقدمون المساعدة عند الحاجة) ؟
(1) نعم (يرجى التوضيح) .....
(2) لا.

12. في أي نوع من الإقامة تقيم ؟
أماكن إقامة خاصة
(1) بيت مؤجر.
(2) بيت مؤجر مشترك.
(3) استضافة عند الأقارب.
(4) منزل ممنوح.
أماكن إقامة غير رسمية
(5) مدرسة.
(6) مبنى عام.
(7) منتجع مهجور.
(8) خيمة، تريللا.
(9) غير ذلك (يرجى التوضيح) .....

13. ما هي مدينتك الاصلية؟

.....

14. ما هو سبب النزوح؟
(1) الصراع المسلح.
(2) قضايا الأمن.
(3) المسائل الاقتصادية.
(4) غير ذلك (يرجى التوضيح) .....

15. هل واجهت أي من التجارب التالية:
(1) فقدت أحد أفراد أسرتك (قريب من الدرجة الاولى).
(2) فقدت أحد الأقارب.
(3) التحرش الجنسي.
(4) العنف البدني.
(5) تدمير المنزل.
(6) أخرى (يرجى ذكرها) .....

16. الرجاء أن تذكر الحوادث التي تعرضت لها والتي تعتبرها انت مصدر أشد الألم والرعب. ثم الرجاء تحديد مكان وزمان هذه الحوادث.

.....
.....

17. ما مدى تأثير هذا الحدث على صحتك النفسية الآن؟ يرجى الإشارة

1 2 3 4 5 6 7 8 9 10

لا يؤثر يؤثر كثيرا

18 - كم قضيت من الوقت في النزوح؟

..... سنوات و ..... أشهر.

19. هل غيرت مكان النزوح؟
(1) نعم (يرجى التوضيح) المدينة..... المدة .....
المدينة ..... المدة .....
المدينة ..... المدة .....
(2) لا.

20. هل كل أفراد عائلتك يعيشون معا الآن؟
(1) نعم.
(2) لا

مسح الوضع الصحي :-
21. هل سبق لك أن استخدمت السجائر؟
(1) نعم
(2) لا (انتقل إلى السؤال 25)

22. إذا كانت الإجابة بنعم، هل لا تزال تستخدمه؟
(1) نعم
(2) لا (انتقل إلى السؤال 25)

23. متى تشعل أول سيجارة بعد استيقاظك صباحا ؟
(1) خلال خمس دقائق.
(2) خلال ست إلى ثلاثين دقيقة.
(3) خلال نصف ساعة إلى ساعة.
(4) بعد ساعة أو أكثر.

24. ما معدل عدد السجائر التي تدخنها في اليوم؟
(1) أكثر من 30.
(2) من 21 إلى 30.
(3) من 11 إلى 20.
(4) أقل من 10.

25. أي سيجارة لا يمكنك الاستغناء عنها أبدا ؟
(1) السيجارة الصباحية.
(2) سيجارة أخرى.

26. هل تواجه صعوبة في التوقف عن التدخين في الأماكن العامة الممنوع فيها التدخين ؟
(1) لا.
(2) نعم.

27. هل تدخن عندما تكون مريضا أو طريح الفراش؟
(1) لا.
(2) نعم.

28. هل تدخن أغلبية سجائرك في الفترة الصباحية؟
(1) لا.
(2) نعم.

29. هل تشرب المشروبات الكحولية؟
(1) نعم.
(2) لا (انتقل إلى السؤال 27)

30. إذا كنت تشرب المشروبات الكحولية:
كم الكمية؟ (كيس من البوخة أسبوعيا)
حتى متى؟ (..... سنوات)

31. هل لديك أي نوع من الاحتياجات الخاصة الجسدية؟
(1) نعم (يرجى ذكرها.....)
(2) لا.

32. هل لديك أي نوع من الأمراض المزمنة تم تشخيصه بواسطة الطبيب ؟
(1) نعم (يرجى ملء الجدول أدناه)
(2) لا.

الرقم	إسم المرض	تاريخ التشخيص	علاج منتظم (نعم\لا)	مضاعفات (نعم\لا)
1	البول السكري			
2	ضغط الدم المرتفع			
3	ارتفاع الدهون في الدم			
4	امراض الجهاز التنفسي			
5	امراض القلب المزمنة			
6	مرض نفسي			
7	مرض الكبد الزمن			
8	مرض الكلى المزمن			
9	غيرها (اذكرها .....)			

33. أثناء النزوح هل سبق لك أن زرت طبيب؟
(1) نعم. (كم مرة زرت الطبيب .....)
(2) لا.

34. متى كانت آخر مرة زرت فيها الطبيب ؟
(1) الاسبوع الماضي.
(2) الشهر الماضي.
(3) قبل ستة أشهر.
(4) قبل سنة مضت.

35. ما هو نوع المرفق الصحي الذي ذهبت إليه؟
(1) حكومي.
(2) خاص.

36. ما مستوى رضاك عن الخدمة في المؤسسة الصحية التي زرتها؟
(1) راض جداً.
(2) راض قليلاً.
(3) غير راض.
(4) لست متأكد.

37. هل واجهت أية صعوبات في زيارتك للطبيب؟
(1) نعم.
(2) لا.

38. إذا كانت الاجابة نعم, ما نوع الصعوبات التي واجهتها؟
(1) مشاكل النقل.
(2) الحصول على موعد.
(3) لا يوجد أطباء في المنطقة.
(4) المسائل الأمنية.
(5) اضطر إلى الانتظار وقتا طويلا لرؤية الطبيب أثناء الزيارة.
(6) غير قادر على دفع تكلفة الزيارة.
(7) مشكلة التمييز.
(8) غير قادر على دفع تكلفة الأدوية .
(9) غير ذلك (يرجى التوضيح) .....

39. هل لديك أي مشكلة مهمة تؤثر على صحتك النفسية؟
(1) نعم (هل من الممكن أن توضحها .....).
(2) لا.

Arabic DASS

اسم:_____ التاريخ:_____

اقرأ كل من النصوص التالية ثم ضع دائرة حول الرقم ٠،١،٢ أو ٣ الذي يبين درجة انطباق هذا الشعور عليك في الأسبوع الماضي. لا يوجد إجابات صحيحة أو خاطئة. لا تقضي وقتاً طويلاً في أي منها.

استعمل التقديرات التالية:

٠ لا ينطبق عليّ بتاتاً
١ ينطبق عليّ بعض الشيء أو قليلاً من الأوقات
٢ ينطبق عليّ بدرجة ملحوظة أو بعض الأوقات
٣ ينطبق عليّ كثيراً جداً، أو معظم الأوقات

١	وجدت إنني مضطرب ومنزعج بسبب أمور تافهة جداً	٠	١	٢	٣
٢	شعرت بجفاف في حلقي	٠	١	٢	٣
٣	لم يبدو لي أن بإمكاني الإحساس بمشاعر إيجابية على الإطلاق	٠	١	٢	٣
٤	شعرت بصعوبة في التنفس (شدة التنفس السريع، اللهثان بدون القيام بمجهود جسدي مثلاً)	٠	١	٢	٣
٥	لم يبدو لي أن بإمكاني أن أبدأ في القيام بأعمالي	٠	١	٢	٣
٦	كنت أميل إلى ردة فعل مفرطة للظروف والأحداث	٠	١	٢	٣
٧	شعرت بالرجفة (إن رجلي لا تقوى على حملي مثلاً)	٠	١	٢	٣
٨	أجد صعوبة في الاسترخاء	٠	١	٢	٣
٩	وجدت نفسي في مواقف جعلتني قلقاً جداً، وكنت مرتاحاً للغاية بزوالها	٠	١	٢	٣
١٠	شعرت بأن ليس لدي أي شيء أتطلع إليه	٠	١	٢	٣
١١	وجدت نفسي أميل إلى الاضطراب والانزعاج بسهولة	٠	١	٢	٣
١٢	شعرت بأنني أستهلك الكثير في الطاقة العصبية (شعرت بأنني أستهلك الكثير من قدرتي على تحمل التوتر العصبي)	٠	١	٢	٣
١٣	شعرت بالحزن والإكتآب	٠	١	٢	٣
١٤	وجدت أنني قليل الصبر كلما أخرني شيء (عند انتظار المصعد، إشارات المرور، أو كلما طلب مني الانتظار، مثلاً)	٠	١	٢	٣
١٥	انتابني شعور بالإغماء	٠	١	٢	٣
١٦	شعرت بأنني فقدت الاهتمام بكل شيء تقريباً	٠	١	٢	٣
١٧	شعرت بأن قيمتي قليلة كشخص	٠	١	٢	٣
١٨	شعرت بأنني أميل إلى الغيظ بسرعة	٠	١	٢	٣
١٩	عرقت بشكل ملحوظ (عرق غزير من اليدين مثلاً) بدون أن يكون الطقس حاراً وبدون بذل مجهود جسدي	٠	١	٢	٣
٢٠	شعرت بالخوف بدون أي سبب وجيه	٠	١	٢	٣
٢١	شعرت بأن الحياة لا قيمة لها	٠	١	٢	٣

استعمل التقديرات التالية:

٠ لا ينطبق عليّ بتاتاً

١ ينطبق عليّ بعض الشيء أو قليلاً من الأوقات

٢ ينطبق عليّ بدرجة ملحوظة أو بعض الأوقات

٣ ينطبق عليّ كثيراً جداً، أو معظم الأوقات

٢٢	وجدت صعوبة في الاسترخاء والراحة	٠	١	٢	٣
٢٣	كان لدي صعوبة في البلع	٠	١	٢	٣
٢٤	لم اشعر بالاستمتاع بأي شيء أفعله	٠	١	٢	٣
٢٥	شعرت بضربات قلبي بدون مجهود جسدي (زيادة في معدل الدقات، أو غياب دقة قلب، مثلاً)	٠	١	٢	٣
٢٦	شعرت بالحزن والغم	٠	١	٢	٣
٢٧	شعرت بأنني أنزعج بسرعة	٠	١	٢	٣
٢٨	شعرت بأنني على وشك الوقوع في حالة من الرعب المفاجئ بدون سبب	٠	١	٢	٣
٢٩	أجد صعوبة في استعادة هدوئي بعد انزعاجي من شيء ما	٠	١	٢	٣
٣٠	كنت أخوف من مواجهة عمل بديهي لكنه غير مألوف لدي	٠	١	٢	٣
٣١	فقدت الشعور بالحماس لأي شيء	٠	١	٢	٣
٣٢	لم أعد أتحمل مقاطعة الآخرين لأعمالي	٠	١	٢	٣
٣٣	كنت في حالة توتر عصبي	٠	١	٢	٣
٣٤	شعرت بعدم القيمة لحد ما	٠	١	٢	٣
٣٥	كنت لا أستطيع تحمل أي شيء يحول بيني وبين ما أرغب في القيام به	٠	١	٢	٣
٣٦	شعرت بالهلع والرعب	٠	١	٢	٣
٣٧	لم أر في المستقبل ما يبعث على الأمل	٠	١	٢	٣
٣٨	شعرت بأن الحياة ليس لها معنى	٠	١	٢	٣
٣٩	شعرت بأنني مضطرب ومنزعج	٠	١	٢	٣
٤٠	كنت خائفاً من مواقف قد أفقد فيها السيطرة على أعصابي واسبب إحراجاً لنفسي	٠	١	٢	٣
٤١	شعرت برجفة (باليدين مثلاً)	٠	١	٢	٣
٤٢	وجدت صعوبة في أخذ المبادرة بعمل الأشياء	٠	١	٢	٣

استبيان صحي

الجنس☐ ذكر

☐ انثى

العمر_____سنة

المؤهل العلمي: ابتدائي ☐

اعدادي ☐

ثانوي ☐

بكالوريوس ☐

ماجستير ☐

دكتوراه ☐

من فضلك، أجب على كل الأسئلة الموجودة في هذا الاستبيان. في حالة عدم وضوح أي سؤال، أرجو اختيار أقرب اجابة لمفهومك للسؤال.

١- بصورة عامة، كيف ترى حالتك الصحية؟

(اختر اجابة واحدة وضع علامة ✓ أمام الاجابة المناسبة)

☐ ممتازة

☐ جيدجدا

☐ جيدة

☐ لا بأس بها

☐ سيئة

٢- **مقارنة بعام مضى**، كيف تقيم حالتك الصحية **الآن** بصورة عامة؟

(اختر اجابة واحدة وضع علامة ✓ أمام الاجابة المناسبة)

☐ أفضل بكثير مما كانت عليه قبل عام

☐ أفضل نوعا ما من العام الماضي

☐ تقريبا على ما هي عليه

☐ أسوأ نوعا ما من العام الماضي

☐ أسوأ بكثير مما كانت عليه قبل عام

٣- تتعلق البنود التالية بأنشطة يمكن ان تقوم بها خلال يومك العادي، **في الوقت الحالي، الى اي مدى تقيدك حالتك الصحية:**	(اختر اجابة واحدة بوضع علامة ✓ تحت الاجابة المناسبة)		
	نعم تقيدني كثيرا	نعم تقيدني قليلا	لا تقيدني اطلاقا
أ) من ممارسة **الأنشطة الشاقة** مثل: الجري، حمل الاشياء الثقيلة او مزاولة الأنشطة الرياضية المجهدة جدا؟	☐	☐	☐
ب) من ممارسة **الأنشطة متوسطة الجهد**، كتحريك الطاولة او التنظيف باستخدام المكنسة الكهربائية او تنظيف حديقة المنزل والعناية بها ؟	☐	☐	☐
ج) من حمل المشتريات من البقالة او السوق المركزي (السوبرماركت)؟	☐	☐	☐
د) من صعود الدرج **لعدة ادوار**؟	☐	☐	☐
هـ) من صعود الدرج **لدور واحد فقط**؟	☐	☐	☐
و) من الانحناء او الركوع او السجود ؟	☐	☐	☐
ز) من المشي لأكثر من **كيلومتر ونصف**؟	☐	☐	☐
ح) من المشي **لمسافة نصف كيلومتر**؟	☐	☐	☐
ط) من المشي **لمسافة مئة متر**؟	☐	☐	☐
ي) من الاستحمام او ارتداء الملابس بنفسك؟	☐	☐	☐

الصحة الجسمية

٤- تتعلق البنود التالية (أ ، ب ، ج ، د) بالمشاكل التي يمكن ان تواجهـــك خلال تأديتك لعملك او للأنشطة اليومية المعتادة نتيجة لحالتك الصحية الجسمية. **خلال الأسابيع الأربعة الماضية**، هل تسببت حالتك الصحية الجسمية في:	(اختر اجابة واحدة وضع علامة ✓ تحت الاجابة المناسبة)	
	نعم	لا
أ) **التقليل من الوقت** الذي تقضيه في العمل او اي انشطة اخرى؟	☐	☐
ب) **التقليل** مما تود **انجازه** من العمل أو أي أنشطة أخرى؟	☐	☐
ج) **تقييدك في أداء نوع** معين من الأعمال أو أي أنشطة أخرى؟	☐	☐
د) **أن تجد صعوبة في** تأدية العمل أو أي أنشطة أخرى؟ (على سبيل المثال، احتجت الى جهد اضافي لتأديتها)	☐	☐

الصحة النفسية

٥- تتعلق البنود التالية (أ ، ب ، ج) بالمشاكل التي يمكن ان تواجهك خلال تأديتك لعملك او الانشطة اليومية المعتادة كنتيجة لحالتك الصحية النفسية. (مثلا الشعور بالاكتئاب او القلق) **خلال الاسابيع الأربعة الماضية**، هل تسببت حالتك الصحية النفسية في:	(اختر اجابة واحدة وضع علامة ✓ تحت الاجابة المناسبة)	
	نعم	لا
أ) **التقليل من الوقت** الذي تقضيه في العمل او اي انشطة اخرى؟	☐	☐
ب) **التقليل** مما تود **انجازه** من العمل أو أي أنشطة أخرى؟	☐	☐
ج) **عدم انجاز** العمل او اي انشطة اخرى **بالحرص المعتاد**؟	☐	☐

الصحة الجسمية او النفسية

٦- **خلال الاسابيع الاربعة الماضية**، الى اي مدى تعارضت **صحتك الجسمية او النفسية** مع تأديتك **لنشاطاتك الاجتماعية** المعتادة مع عائلتك او اصدقائك او جيرانك او اي من المناسبات الاجتماعية الأخرى؟

(اختر اجابة واحدة وضع علامة ✓ أمام الاجابة المناسبة)

- ☐ لم يكن هناك أي تعارض اطلاقا
- ☐ كان هناك تعارض قليل
- ☐ كان هناك تعارض متوسط
- ☐ كان هناك تعارض كبير
- ☐ كان هناك تعارض كبير جدا

شدة الألم

٧- ما شدة **الألم الجسمي** الذي عانيت منه خلال **الاسابيع الاربعة الماضية**؟

(اختر اجابة واحدة وضع علامة ✓ أمام الاجابة المناسبة)

- ☐ لم يكن هناك أي ألم
- ☐ كان هناك ألم خفيف جدا
- ☐ كان هناك ألم خفيف
- ☐ كان هناك ألم متوسط
- ☐ كان هناك ألم شديد
- ☐ كان هناك ألم شديد جدا

٨- **خلال الاسابيع الاربعة الماضية**، الى اي مدى ادى الألم **الجسمي** الى التعارض مع تاديتك لأعمالك المعتادة (سواء داخل المنزل او خارجه)؟

(اختر اجابة واحدة وضع علامة ✓ أمام الاجابة المناسبة)

- ☐ لم يكن هناك أي تعارض
- ☐ كان هناك تعارض قليل جدا
- ☐ كان هناك تعارض متوسط
- ☐ كان هناك تعارض كبير
- ☐ كان هناك تعارض كبير جدا

٩- الأسئلة التالية تتعلق بكيفية شعورك وطبيعة سير الأمور معك **خلال الأسابيع الأربعة الماضية**. الرجاء اعطاء اجابة واحدة لكل سؤال بحيث تكون هذه الاجابة هي الأقرب الى الحالة التي كنت تشعر بها.

خلال الأسابيع الأربعة الماضية، كم من الوقت:

(اختر اجابة واحدة بوضع علامة ✓ تحت الاجابة المناسبة)

	في كل الأوقات	في معظم الأوقات	في كثير من الأوقات	في بعض الأوقات	في قليل من الأوقات	لم اشعر في أي وقت من الأوقات
أ) شعرت بأنك ملئ بالحيوية والنشاط؟	☐	☐	☐	☐	☐	☐
ب) كنت شخصا عصبيا جدا؟	☐	☐	☐	☐	☐	☐
ج) شعرت بأنك في حالة اكتئاب الى درجة لم يمكن معها ادخال السرور اليك؟	☐	☐	☐	☐	☐	☐
د) شعرت بالهدوء والطمأنينة؟	☐	☐	☐	☐	☐	☐
هـ) كانت لديك طاقة كبيرة؟	☐	☐	☐	☐	☐	☐
و) شعرت بالاحباط واليأس؟	☐	☐	☐	☐	☐	☐
ز) شعرت بأنك منهك (استُنْفِذت قُواك)؟	☐	☐	☐	☐	☐	☐
ح) شعرت بأنك شخص سعيد؟	☐	☐	☐	☐	☐	☐
ط) شعرت بأنك تعبان؟	☐	☐	☐	☐	☐	☐

١٠- **خلال الاسابيع الأربعة الماضية**، ما مقدار الوقت الذي تعارضت فيه **صحتك الجسمية او مشاكلك النفسية** مع نشاطاتك الاجتماعية (مثل زيارة الأصدقاء والأقارب وغير ذلك) ؟

(اختر اجابة واحدة وضع علامة ✓ أمام الاجابة المناسبة)

- ☐ كان التعارض في كل الأوقات
- ☐ كان التعارض في معظم الأوقات
- ☐ كان التعارض في بعض الأوقات
- ☐ كان التعارض في قليل من الأوقات
- ☐ لم يكن هناك تعارض في أي وقت من الأوقات

١١- ما مدى **صحة او خطأ كل** من العبارات التالية (أ ، ب ، ج ، د) بالنسبة الى حالتك الصحية؟	(اختر اجابة واحدة وضع علامة ✓ امام الاجابة المناسبة)				
	صحيحة بلا شك	صحيحة غالبا	لا اعلم	خطأ غالبا	خطأ بلا شك
أ) يبدو انني أصاب بالمرض أسهل من الآخرين.	☐	☐	☐	☐	☐
ب) حالتي الصحية مساوية لأي شخص أعرفه.	☐	☐	☐	☐	☐
ج) أتوقع أن تسوء حالتي الصحية.	☐	☐	☐	☐	☐
د) حالتي الصحية ممتازة.	☐	☐	☐	☐	☐

****** شكراً لتعاونكم ******

Appendix C: Ethical Approvals

Figure C. 1 Ethical committee approval (Arabic)

Ministry of Higher Education and Scientific Research-Libya
Al Margeb University
Faculty Of Medicine - Al Khums

وزارة التعليم العالي والبحث العلمي. ليبيا
جـــامعة المـــرقـــب
كلية الطب البشري. الخمس

جامعة المرقب
كلية الطب البشري

التـــاريـخ: 2017.7.9
المـوافـق:

الرقم الإشاري: ك.ط.ب/372

اللجنة العلمية بكلية الطب جامعة المرقب

السيد : محمد صالح اسريح

الموضوع: موافقة اللجنة العلمية لدراستكم المقترحة

عنوان الدراسة المقترحة: "تقييم الصحة النفسية وجودة الحياة بين الاشخاص النازحين داخلياً في مدينة طرابلس ليبيا"

لقد قامت اللجنة العلمية بمناقشة ومراجعة طلبكم لإجراء الدراسة المذكورة بصفتكم الباحث المسؤول عن الدراسة.

وقد تم استعراض الوثائق التالية والموافقة عليها:

1- صورة من مقترح البحث (العنوان، المقدمة، أهداف البحث، طريقة البحث، المراجع).

2- النسخة الانجليزية من الاستبيان

3- النسخة العربية من الاستبيان

نوافق نحن الموقعون ادناه علي إجراء الدراسة المقترحة حسب المقترح المقدم من الباحث المذكور اعلاه، كما نقر علي عدم مشاركة الباحث او الباحث المساعد أو اي طرف منهم في عملية اتخاذ قرار الموافقة.

وتتوقع اللجنة العلمية أن تكون على علم بالتقدم المحرز في الدراسة، وأية تغييرات تحدث في سياق الدراسة، و أي تنقيح في البروتوكول ومعلومات المريض / الموافقة المستنيرة، كما نطلب أن تقدم نسخة من التقرير النهائي للدراسة الي اللجنة.

وقد تشكلت اللجنة من الاعضاء التالية اسماؤهم وصفاتهم:

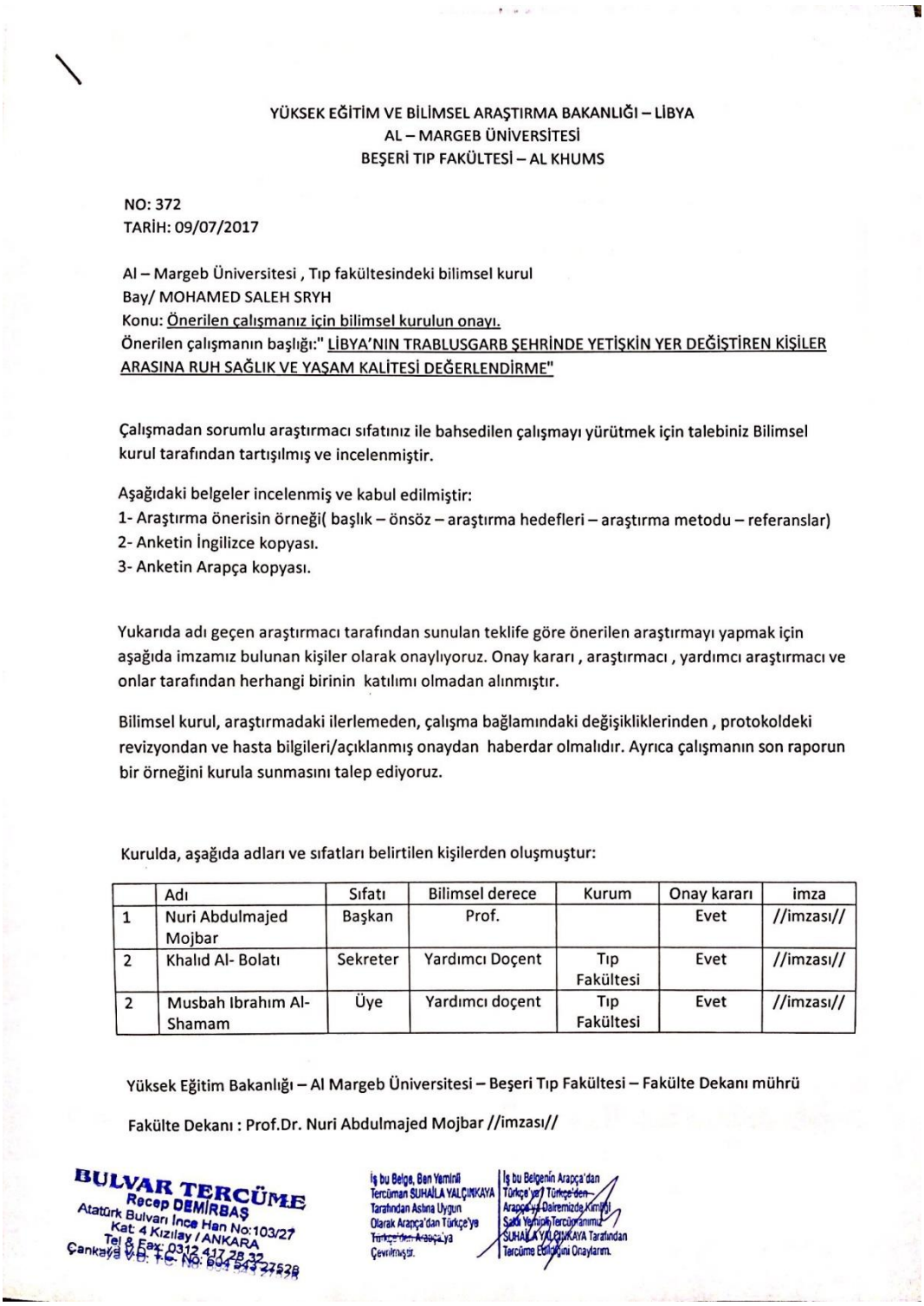
م.	الاسم	الصفة	الدرجة العلمية	المؤسسة	الاقرار بالموافقة	التوقيع
1.	د. [illegible]	رئيس	أستاذ		نعم	
2.	د. [illegible]	أمين السر	استاذ مساعد	كلية الطب	نعم	
3.	[illegible]	عضو	استاذ مساعد	كلية الطب	نعم	
		عضو				

اعتماد عميد الكلية
أ.د. نوري عبد المجيد مجبر

وزارة التعليم العالي والبحث العلمي
جامعة المرقب
عميد الكلية
كلية الطب البشري / الخمس

الخمس .. ليبيا .. ☎ 2628701 - 2628601 - 053 2628602 053 2628602
www.elmergib.edu.ly medical_info@elmergib.edu.ly

Figure C. 2 Ethical committee approval (Turkish)



YÜKSEK EĞİTİM VE BİLİMSEL ARAŞTIRMA BAKANLIĞI – LİBYA
AL – MARGEB ÜNİVERSİTESİ
BEŞERİ TIP FAKÜLTESİ – AL KHUMS

NO: 372
TARİH: 09/07/2017

Al – Margeb Üniversitesi , Tıp fakültesindeki bilimsel kurul
Bay/ MOHAMED SALEH SRYH
Konu: Önerilen çalışmanız için bilimsel kurulun onayı.
Önerilen çalışmanın başlığı:" LİBYA'NIN TRABLUSGARB ŞEHRİNDE YETİŞKİN YER DEĞİŞTİREN KİŞİLER ARASINA RUH SAĞLIK VE YAŞAM KALİTESİ DEĞERLENDİRME"

Çalışmadan sorumlu araştırmacı sıfatınız ile bahsedilen çalışmayı yürütmek için talebiniz Bilimsel kurul tarafından tartışılmış ve incelenmiştir.

Aşağıdaki belgeler incelenmiş ve kabul edilmiştir:
1- Araştırma önerisin örneği(başlık – önsöz – araştırma hedefleri – araştırma metodu – referanslar)
2- Anketin İngilizce kopyası.
3- Anketin Arapça kopyası.

Yukarıda adı geçen araştırmacı tarafından sunulan teklife göre önerilen araştırmayı yapmak için aşağıda imzamız bulunan kişiler olarak onaylıyoruz. Onay kararı , araştırmacı , yardımcı araştırmacı ve onlar tarafından herhangi birinin katılımı olmadan alınmıştır.

Bilimsel kurul, araştırmadaki ilerlemeden, çalışma bağlamındaki değişikliklerinden , protokoldeki revizyondan ve hasta bilgileri/açıklanmış onaydan haberdar olmalıdır. Ayrıca çalışmanın son raporun bir örneğini kurula sunmasını talep ediyoruz.

Kurulda, aşağıda adları ve sıfatları belirtilen kişilerden oluşmuştur:

	Adı	Sıfatı	Bilimsel derece	Kurum	Onay kararı	imza
1	Nuri Abdulmajed Mojbar	Başkan	Prof.		Evet	//imzası//
2	Khalıd Al- Bolatı	Sekreter	Yardımcı Doçent	Tıp Fakültesi	Evet	//imzası//
2	Musbah Ibrahım Al-Shamam	Üye	Yardımcı doçent	Tıp Fakültesi	Evet	//imzası//

Yüksek Eğitim Bakanlığı – Al Margeb Üniversitesi – Beşeri Tıp Fakültesi – Fakülte Dekanı mührü

Fakülte Dekanı : Prof.Dr. Nuri Abdulmajed Mojbar //imzası//

BULVAR TERCÜME
Recep DEMİRBAŞ
Atatürk Bulvarı İnce Han No:103/27
Kat: 4 Kızılay / ANKARA
Tel & Fax: 0312 417 28 32
Çankaya V.D. T.C. No: 604 543 2752

İş bu Belge, Ben Yeminli Tercüman SUHAİLA YALÇINKAYA Tarafından Aslına Uygun Olarak Arapça'dan Türkçe'ye Çevrilmiştir.

İş bu Belgenin Arapça'dan Türkçe'ye/ Türkçe'den Arapça'ya Dairemizde Kimliği Saklı Yeminli Tercümanımız SUHAİLA YALÇINKAYA Tarafından Tercüme Edildiğini Onaylarım.

Figure C. 3 Libyan Ministry of Social Affairs Approval (Arabic)

GOVERNMENT OF NATIONAL ACCORD

Ministry Of Social Affairs

حكومة الوفاق الوطني

وزارة الشؤون الاجتماعية

الرقم الإشاري 3381

التاريخ 2017/8/8

السادة/ مدير ادارة الشؤون الانسانية والمساعدات

مدير ادارة التنمية الاسرية

تحية طيبة

بناءً على تعليمات سيادة الوكيل .... نحيل اليكم الطلب المقدم من الطالب محمد صالح اسريح والذي يرغب في جمع البيانات الخاصة برسالة الدكتوراه تحت عنوان (تقييم الصحة النفسية وجودة الحياة بين الاشخاص النازحين داخليا في مدينة طرابلس).

لذا ..... يطلب منكم التعاون مع المذكور اعلاه وذلك بتسهيل مهامه في جمع كافة البيانات المتعلقة بموضوع رسالته ..

مع وافر التقدير والاحترام

،،،والسلام عليكم،،،

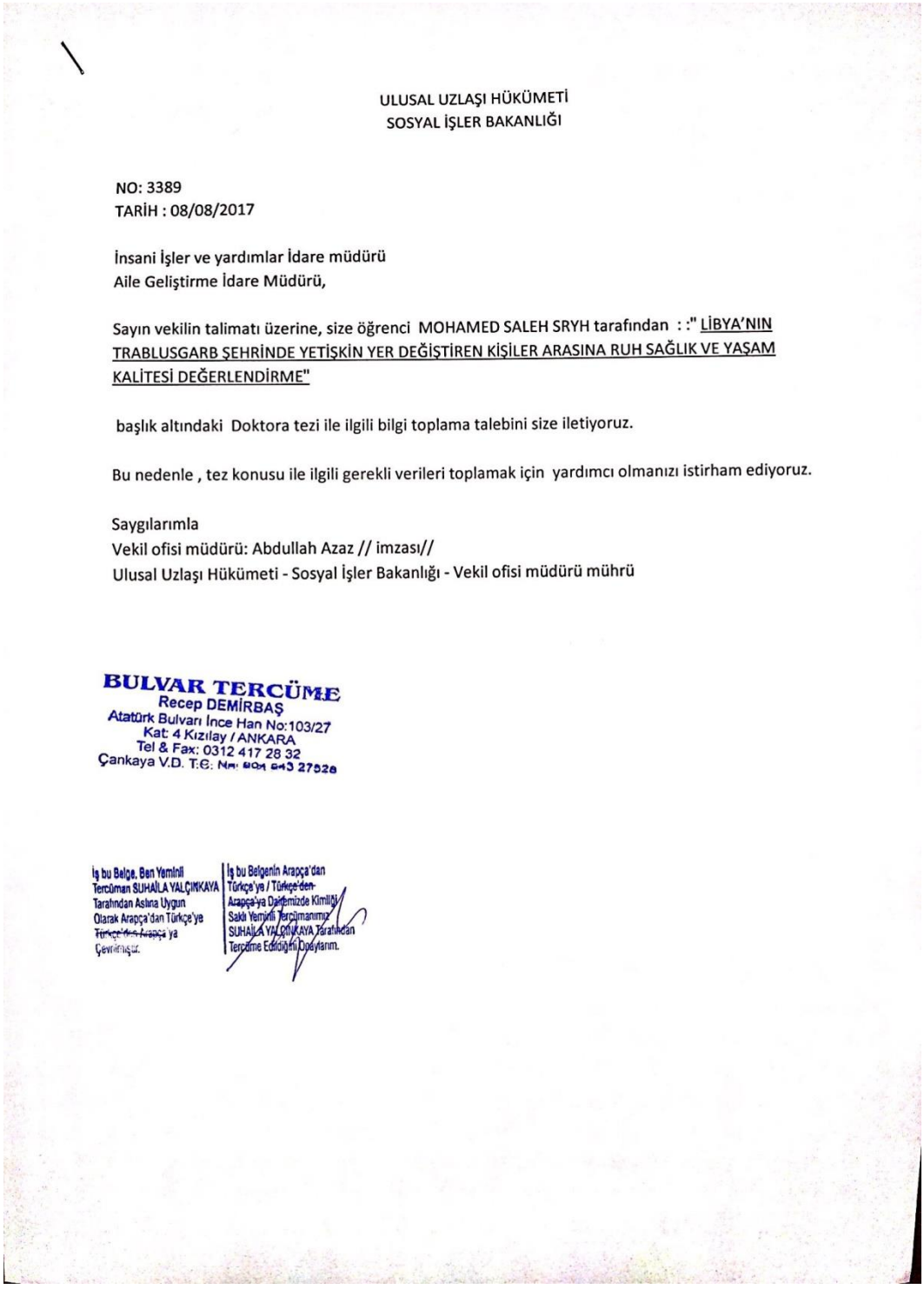
عبدالله عزاز

مدير مكتب الوكيل

وزارة الشؤون الاجتماعية

www.socialaffairs.gov.ly info@socialaffairs.gov.ly 021 463 1057 021 463 1053 021 463 1055

Figure C. 4 Libyan Ministry of Social Affairs Approval (Turkish)



ULUSAL UZLAŞI HÜKÜMETİ
SOSYAL İŞLER BAKANLIĞI

NO: 3389
TARİH : 08/08/2017

İnsani İşler ve yardımlar İdare müdürü
Aile Geliştirme İdare Müdürü,

Sayın vekilin talimatı üzerine, size öğrenci MOHAMED SALEH SRYH tarafından : :" LİBYA'NIN TRABLUSGARB ŞEHRİNDE YETİŞKİN YER DEĞİŞTİREN KİŞİLER ARASINA RUH SAĞLIK VE YAŞAM KALİTESİ DEĞERLENDİRME"

başlık altındaki Doktora tezi ile ilgili bilgi toplama talebini size iletiyoruz.

Bu nedenle , tez konusu ile ilgili gerekli verileri toplamak için yardımcı olmanızı istirham ediyoruz.

Saygılarımla
Vekil ofisi müdürü: Abdullah Azaz // imzası//
Ulusal Uzlaşı Hükümeti - Sosyal İşler Bakanlığı - Vekil ofisi müdürü mührü

BULVAR TERCÜME
Recep DEMİRBAŞ
Atatürk Bulvarı İnce Han No:103/27
Kat: 4 Kızılay / ANKARA
Tel & Fax: 0312 417 28 32
Çankaya V.D. T.C. No: 804 643 2752

İş bu Belge, Ben Yeminli Tercüman SUHAİLA YALÇINKAYA Tarafından Aslına Uygun Olarak Arapça'dan Türkçe'ye ~~Türkçe'den Arapça~~ ya Çevirmiştir.

İş bu Belgenin Arapça'dan Türkçe'ye / ~~Türkçe'den Arapça~~'ya Dairemizde Kimliği Saklı Yeminli Tercümanımız SUHAİLA YALÇINKAYA Tarafından Tercüme Edildiğini Onaylarım.

Figure C. 5 Tawerga Local Council Approval (Arabic)

حكومة الوفاق الوطني

وزارة الحكم المحلي

المجلس المحلي تـاورغـاء

الرقم الإشاري 17.6.226

التاريخ / /

الموافق 2017/08/6 م

السادة / رؤساء المخيمات

تحية طيبة"

السيد/ د.محمد صالح اسريح

في الوقت ... الذي نثمن فيه حرصكم على الأهالي في تقديم أي معلومات دقيقة الا بعد الرجوع لإدارة المجلس .

ومساهمة منا ...في ابراز قضيتنا بظروفنا السيئة داخل هذه المخيمات المخصصة لاهالي مدينة تاورغاء .

عليه ...

ونظرا لقيام المذكور أعلاه بتقديم دراسة تتضمن الصحة النفسية وجودة الحياة بين الأشخاص النازحين داخليا بمدينة طرابلس .

الأمر يتطلب منكم ... مساعدته في ذلك وتذليل الصعاب له في إنجاح المطلوب

... ولكم فائق تقدرينا و احترامنا ...

سالم محمد أعميش

مدير إدارة الشؤون الادارية والمالية

صورة - إلى

السيد/ رئيس المجلس المحلي تاورغاء للعلم

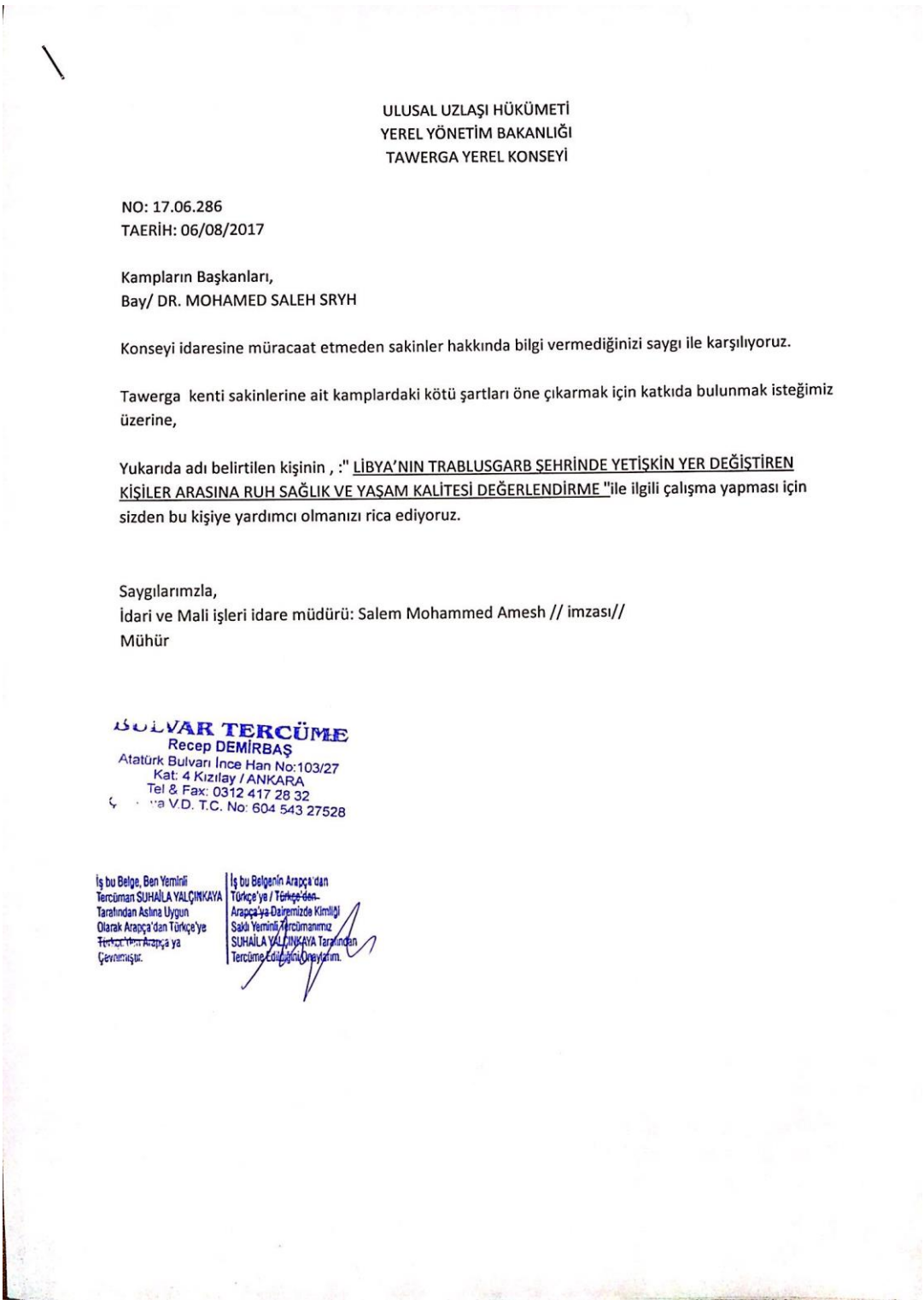
السيد/ مدير مكتب المتابعة بالمجلس

الملف الدوري العام

سالم *** رح شعبان 2017م

E-mail:taw.libya@yahoo.com 091 679 7987 - 092 660 8984 - 091 411 3836

Figure C. 6 Tawerga Local Council Approval (Turkish)



ULUSAL UZLAŞI HÜKÜMETİ
YEREL YÖNETİM BAKANLIĞI
TAWERGA YEREL KONSEYİ

NO: 17.06.286
TAERİH: 06/08/2017

Kampların Başkanları,
Bay/ DR. MOHAMED SALEH SRYH

Konseyi idaresine müracaat etmeden sakinler hakkında bilgi vermediğinizi saygı ile karşılıyoruz.

Tawerga kenti sakinlerine ait kamplardaki kötü şartları öne çıkarmak için katkıda bulunmak isteğimiz üzerine,

Yukarıda adı belirtilen kişinin , :" LİBYA'NIN TRABLUSGARB ŞEHRİNDE YETİŞKİN YER DEĞİŞTİREN KİŞİLER ARASINA RUH SAĞLIK VE YAŞAM KALİTESİ DEĞERLENDİRME "ile ilgili çalışma yapması için sizden bu kişiye yardımcı olmanızı rica ediyoruz.

Saygılarımzla,
İdari ve Mali işleri idare müdürü: Salem Mohammed Amesh // imzası//
Mühür

BULVAR TERCÜME
Recep DEMİRBAŞ
Atatürk Bulvarı İnce Han No:103/27
Kat: 4 Kızılay / ANKARA
Tel & Fax: 0312 417 28 32
...a V.D. T.C. No: 604 543 27528

İş bu Belge, Ben Yeminli Tercüman SUHAİLA YALÇINKAYA Tarafından Aslına Uygun Olarak Arapça'dan Türkçe'ye ~~Türkçe'den Arapça~~ ya Çevrilmiştir.

İş bu Belgenin Arapça'dan Türkçe'ye / ~~Türkçe'den Arapça~~'ya Dairemizde Kimliği Saklı Yeminli Tercümanımız SUHAİLA YALÇINKAYA Tarafından Tercüme Edildiğini Onaylarım.

Appendix D: Health Educational Leaflets

Figure D. 1 Health Educational Leaflets (English)

Figure D. 2 Health Educational Leaflets (Arabic)

Appendix E: Logistic regression model (first step results)

Table E. 1 IDPs risk of depression by demographic, socio-economic variables by type of residency (Tripoli 2017)

	Depression					
	Private			Camp		
	OR	**CI**	**p**	**OR**	**CI**	**p**
Age	NE					
18-24				8.953	0.658-121.813	0.100
25-44				1.826	0.224-14.862	0.573
45-65				0.480	0.059-3.904	0.493
>65					**Ref.**	
Marital status	NE					
Married					**Ref.**	
Single				2.465	0.652-9.314	0.183
Widow/Sep./Divorced				1.885	0.387-9185	0.433
Education				NE		
Illiterate	-	-	0.999			
Lit,Prim,Sec	2.306	0.667-7.975	0.187			
University+		**Ref.**				
Family type				NE		
Nuclear		**Ref.**				
Single parent	12.706	0.979-164.858	0.052			
Extended	1.053	0.413-2.686	0.914			
Work enrollment	NE					
Enrolled					**Ref.**	
Not regularly enrolled				0.626	0.166-2.361	0.489
Not enrolled				0.796	0.226-2.807	0.723
Income				NE		
<450	3.374	0.843-13.496	0.086			
≥450		**Ref.**				
Financial support				NE		
Yes	0.781	0.130-4.673	0.786			
No		**Ref.**				
Social support						
Yes	2.010	0.443-9.119	0.366	3.774	1.306-10.906	**0.014**
No		**Ref.**			**Ref.**	
City of origin				NE		
Tawerga	5.595	0.763-41.033	0.090			
Other		**Ref.**				
Disp. time						
<72		**Ref.**		2.524	0.814-7.824	0.109
≥73	0.276	0.038-2.003	0.203		**Ref.**	
Disp. change						
Yes	0.868	0.190-3.971	0.855		**Ref.**	
No		**Ref.**		3.806	1.456-9.946	**0.006**
Chronic disease				NE		
Yes	3.966	1.138-13.824	**0.031**			
No		**Ref.**				
Physician visit				NE		
Yes	1.342	0.519-3.472	0.544			
No		**Ref.**				

Table E. 2 IDPs risk of anxiety by demographic, socio-economic variables by type of residency (Tripoli 2017)

	Anxiety					
	Private			Camp		
	OR	**CI**	**p**	**OR**	**CI**	**p**
Education				NE		
Illiterate	-	-	0.999			
Lit,Prim,Sec	2.169	0.618-7.620	0.227			
University+		**Ref.**				
Family type				NE		
Nuclear		**Ref.**				
Single parent	4.839	0.692-33.846	0.112			
Extended	0.562	0.205-1.537	0.261			
Income				NE		
<450	4.892	1.192-20.077	**0.028**			
≥450		**Ref.**				
Financial support				NE		
Yes	2.213	0.390-12.558	0.370			
No		**Ref.**				
Social support				NE		
Yes	1.518	0.348-6.627	0.579			
No		**Ref.**				
City of origin				NE		
Tawerga	4.326	0.768-24.378	0.097			
Other		**Ref.**				
Disp. time				NE		
<72		**Ref.**				
≥73	0.678	0.126-3.665	0.652			
Cause of displacement				NE		
General violence	3.812	0.911-15.958	0.067			
Security issues		**Ref.**				
Disp. change				NE		
Yes	0.920	0.196-4.327	0.916			
No		**Ref.**				
Chronic disease				NE		
Yes	1.240	0.384-4.001	0.719			
No		**Ref.**				
Physician visit				NE		
Yes	1.865	0.662-5.259	0.238			
No		**Ref.**				

Table E. 3 IDPs risk of stress by demographic, socio-economic variables by type of residency (Tripoli 2017)

	Stress					
	Private			Camp		
	OR	**CI**	**p**	**OR**	**CI**	**p**
Gender	NE					
Male					**Ref.**	
Female				1.037	0.406-2.648	0.939
Age	NE					
18-24				2.242	0.820-6.131	0.116
25-44					**Ref.**	
45-65				0.672	0.171-2.640	0.569
>65				0.537	-	1.000
Education	NE					
Illiterate				-	-	0.999
Lit,Prim,Sec					**Ref.**	
University+				2.717	1.175-6.281	**0.019**
Family type				NE		
Nuclear		**Ref.**				
Single parent	3.316	0.700-15.697	0.131			
Extended	1.002	0.413-2.431	0.699			
Work enrollment	NE					
Enrolled					**Ref.**	
Not regularly enrolled				2.100	0.617-7.142	0.235
Not enrolled				1.987	0.714-5.530	0.189
Income				NE		
<450		**Ref.**				
≥450	0.254	0.058-1.110	0.069			
City of origin				NE		
Tawerga	12.186	1.337-111.028	**0.027**			
Other		**Ref.**				
Disp. time						
<72		**Ref.**		2.515	0.933-6.780	0.068
≥73	0.147	0.016-1.397	0.095		**Ref.**	
Cause of displacement				NE		
General violence	6.033	1.235-29.478	**0.026**			
Security issues		**Ref.**				
Displacement change	NE					
Yes					**Ref.**	
No				2.711	1.214-6.056	**0.015**
Chronic disease	NE					
Yes				4.406	0.863-22.485	0.075
No					**Ref.**	

Table E. 4 IDPs risk of low PCS score by demographic, socio-economic variables, DASS scores by type of residency (Tripoli 2017)

	PCS					
	Private			Camp		
	OR	CI	p	OR	CI	p
Gender						
Male		**Ref.**			**Ref.**	
Female	1.418	0.256-7.852	0.689	0.234	0.015-3.733	0.304
Age						
18-24		**Ref.**			**Ref.**	
25-44	0.232	0.002-25.836	0.543	-	-	0.999
45-65	0.569	0.004-86.878	0.826	-	-	0.999
>65	2.200	0.009-550.699	0.780	-	-	1.000
Marital status	NE					
Married				0.544	0.053-5.590	0.608
Single					**Ref.**	
Widow/Sep./Divorced				-	-	0.999
Education						
Illiterate	-	-	0.999	-	-	0.999
Lit,Prim,Sec	0.439	0.064-3.031	0.404	5.669	0.342-94.004	0.226
University+		**Ref.**			**Ref.**	
Family type				NE		
Nuclear		**Ref.**				
Single parent	3.109	0.270-35.778	0.363			
Extended	3.705	0.543-25.265	0.181			
Family size				NE		
1-5	1.150	0.199-6.630	0.876			
6-10		**Ref.**				
≥11	0.848	0.145-4.972	0.855			
Family integrity				NE		
Yes		**Ref.**				
No	0.962	0.190-4.874	0.963			
Work enrollment				NE		
Enrolled		**Ref.**				
Not regularly enrolled	1.441	0.212-9.798	0.709			
Not enrolled	1.663	0.067-41.022	0.756			
Income						
<450	2.066	0.126-33.781	0.611	-	-	0.998
≥450		**Ref.**			**Ref.**	
Chronic disease						
Yes	7.712	1.298-45.818	**0.025**	-	-	0.999
No		**Ref.**			**Ref.**	
Physical disability	NE					
Yes				-	-	0.999
No					**Ref.**	
Physician visit				NE		
Yes	3.948	0.809-19.263	0.089			
No		**Ref.**				
City of origin				NE		
Tawerga	0.188	0.013-2.821	0.227			
Other		**Ref.**				
Disp. time				NE		
<72		**Ref.**				
≥73	10.438	0.732-148.928	0.084			
Disp. change				NE		
Yes	10.943	1.342-89.239	**0.025**			
No		**Ref.**				
Depression						
Yes	4.543	0.915-22.542	0.064	0.403	0.029-5.591	0.498
No		**Ref.**			**Ref.**	
Anxiety						
Yes	1.129	0.132-9.657	0.912	2.686	0.193-37.404	0.462
No		**Ref.**			**Ref.**	
Stress						
Yes	2.826	0.356-22.458	0.326	74.015	2.511-2181.572	**0.013**
No		**Ref.**			**Ref.**	

Table E. 5 IDPs risk of low MCS score by demographic, socio-economic variables, DASS scores by type of residency (Tripoli 2017)

	MCS					
	Private			Camp		
	OR	**CI**	**p**	**OR**	**CI**	**p**
Gender				NE		
Male		**Ref.**				
Female	1.447	0.539-3.884	0.463			
Age						
18-24	2.426	0.339-17.353	0.377	-	-	0.999
25-44		**Ref.**			**Ref.**	
45-65	1.366	0.369-5.054	0.640	0.122	0.005-3.290	0.211
>65	0.522	0.027-10.025	0.666	0.697	-	1.000
Marital status	NE					
Married					**Ref.**	
Single				0.360	0.006-20.206	0.619
Widow/Sep./Divorced				40.220	0.899-1799.765	0.057
Education						
Illiterate	-	-	0.999	-	-	1.000
Lit,Prim,Sec	0.680	0.212-2.177	0.515	7.791	0.545-111.362	0.130
University+		**Ref.**			**Ref.**	
Family type				NE		
Nuclear		**Ref.**				
Single parent	2.932	0.582-14.777	0.192			
Extended	1.846	0.684-4.983	0.226			
Work enrollment	NE					
Enrolled					**Ref.**	
Not regularly enrolled				6.268	0.163-241.126	0.324
Not enrolled				-	-	0.999
Income	NE					
<450				-	-	0.999
≥450					**Ref.**	
Financial support				NE		
Yes	0.576	0.148-2.234	0.425			
No		**Ref.**				
Chronic disease						
Yes	8.436	2.533-28.090	**<0.001**	0.661	0.017-25.581	0.824
No		**Ref.**			**Ref.**	
Physician visit				NE		
Yes	1.532	0.544-4.319	0.420			
No		**Ref.**				
City of origin				NE		
Tawerga	0.616	0.106-3.587	0.590			
Other		**Ref.**				
Disp. time						
<72		**Ref.**		2.121	0.150-29.953	0.578
≥73	2.812	0.465-17.003	0.260		**Ref.**	
Depression						
Yes	3.027	0.997-9.191	0.051	0.104	0004-2.708	0.173
No		**Ref.**			**Ref.**	
Anxiety						
Yes	1.512	0.448-5.101	0.505	1.999	0.162-24.733	0.589
No		**Ref.**			**Ref.**	
Stress						
Yes	3.137	0.798-12.327	0.102	186.628	5.778-6027.671	**0.003**
No		**Ref.**			**Ref.**	

Table E. 6 IDPs risk of low PCS and MCS scores by demographic, socio-economic variables, DASS scores, and type of residency (Tripoli 2017)

	PCS			MCS		
	OR	CI	p	OR	CI	p
Type of residency			**<0.001**			**<0.001**
Private		**Ref.**			**Ref.**	
Camp	3.838	2.086-7.061		3.082	1.727-5.502	
Depression			**0.010**			**0.003**
Yes	2.675	1.264-5.665		2.856	1.423-5.732	
No		**Ref.**			**Ref.**	
Anxiety			**0.046**			0.077
Yes	2.048	1.012-4.142		1.783	0.938-3.387	
No		**Ref.**			**Ref.**	
Stress			0.104			**<0.001**
Yes	1.903	0.876-4.133		3.160	1.581-6.317	
No		**Ref.**			**Ref.**	
Chronic disease			**<0.001**			**<0.001**
Yes	8.899	3.708-21.356		5.630	2.537-12.490	
No		**Ref.**			**Ref.**	
Displacement change			0.302	-	-	-
Yes	1.457	0.714-2.974		-	-	-
No		**Ref.**		-	-	-

Appendix F: Screen View of Turnitin

TEZİN TAM BAŞLIĞI: MENTAL HEALTH AND QUALITY OF LIFE ASSESSMENT AMONG ADULT INTERNALLY DISPLACED PERSONS (IDPs) IN TRIPOLI CITY LIBYA

ÖĞRENCİNİN ADI SOYADI: MOHAMED SRYH

DOSYANIN TOPLAM SAYFASI: 119

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Gönderen:	Mohamed Sryh
Ödev başlığı:	MENTAL HEALTH AND QUALITY O...
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Dosya adı:	Y_OF_LIFE_ASSESSMENT_AMONG.
Dosya boyutu:	326.28K
Sayfa sayısı:	119
Kelime sayısı:	31,459
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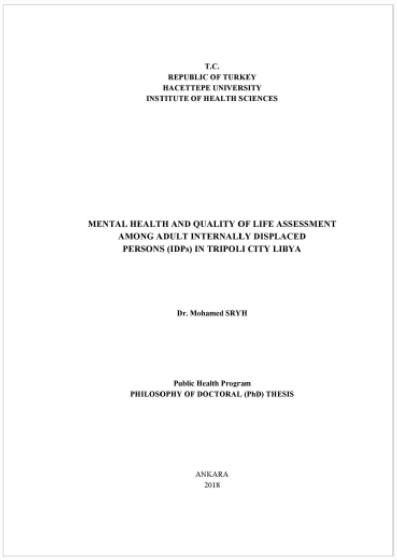

T.C.
REPUBLIC OF TURKEY
HACETTEPE UNIVERSITY
INSTITUTE OF HEALTH SCIENCES

MENTAL HEALTH AND QUALITY OF LIFE ASSESSMENT
AMONG ADULT INTERNALLY DISPLACED
PERSONS (IDPs) IN TRIPOLI CITY LIBYA

Dr. Mohamed SRYH

Public Health Program
PHILOSOPHY OF DOCTORAL (PhD) THESIS

ANKARA
2018

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- Master of Community Health Science- UKM Kualalumpur/Malaysia (2009-2011)
- MBBCh- Elmergib university- Alkoms/Libya (1999-2006)

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- 2010-2011 Residents Physician at Mselata Hospital
- 2011-2012 Head of Health Service Office- Alkoms Ministry Of Health
- 2012-2019 Assistant Lecturer- Medical Faculty Elmergib University
- 2012-2013 Exam and Course Coordinator- Medical Faculty Elmergib University
- 2013 Medical Control- Libyan Ministry of Health- Istanbul
- 2012-2013 Head of Community and Family Medicine Dep.- Medical Faculty Elmergib University

IV- Scientific Activities

- Mohamed Sryh & Azimatun Noor Aizuddin (2010). Job Satisfaction Among Libyan General Physicians In Public Sector. 3rd International Public Health Conference & 20th National Public Health Colloquium 28-29 August 2013. https://www.academia.edu/38221732/job_satisfaction_among_libyan_general_physicians.pdf
- Public Health Conference October 2009 UKM Kualalumpur Malaysia (Attendance)
- 9th International Conference for Environmental Development in Arab World Egypt 2012 (Participant)
- 3rd International Public Health Conference & 20th National Public Health Colloquium
28-29 August 2013 Kuching, Sarawak, Malaysia (Participant)
- Health System Reformation Conference Tripoli Libya 2013 (Participant/Organizer)