

An Investigation on Psychological Burden, Factors and Coping
Mechanisms among Caregivers with Mental Ill Patients Attending
Follow up At JUMC, Psychiatric Clinic

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Abbreviations

| | |
|--------------|-----------------------------------|
| CMDs | Common Mental Disorders |
| HIV | Human Immune Virus |
| JUMC | Jimma University Medical Center |
| LMICs | Low and Middle Income Countries |
| PLWMI | People Living With Mental Illness |
| TB | Tuberculosis |
| ZBI | Zarit Burden Interview |
| WHO | World Health Organization |

ABSTRACTS

According to world health organization mental health is a state of well-being in which an individual can realize his or her own abilities, interact positively with others, cope with the stressors of life and study, work productively and fruitfully, and contribute to his or her family and community. Caregivers of mentally ill patients experience both subjective and objective types of burden. The aim of this study was to examine the psychological burden of care givers of mentally ill patients attending at their follow up at psychiatry clinic, Jimma university medical center, southwest Ethiopia, 2021. A hospital based cross sectional study was conducted in Jimma Medical center from June 1/ 2021 to July 1/ 2021. Non-probability sampling which is consecutive sampling technique was employed to select the study participants. A study was conducted on 409 care givers of mentally ill patients attending their follow up at psychiatric clinic, JUMC. Data was entered into Epi data 3.1 and exported to SPSS version 25 for analysis. Descriptive and analytical methods was carried out, frequency tables, graphs and pie charts used for the descriptive result. Both bivariate and multivariable logistic regression analysis employed to identify the contributing factors to psychological burden of care givers of patients with mentally ill patients. Statistical significance was declared at P-value < 0.05 in multivariable logistic regression analyses. A total of 409 of the respondents were interviewed in this study, yielded 95.8 % of the response rate. The proportion of psychological burden among care givers of mentally ill patients was 219 (55.9%) 95% CI 51.5-60.5% of which 16.8%, 30.6%, 42.1 and 10.5% were little or no burden, mild to moderate burden, moderate to severe burden and having severe psychological burden respectively. In multi-variable logistic regression analysis occupational status, age of care givers, family income, duration of giving care for the patient and giving care for other family members were having associated with psychological burden of care givers. In this study one out of two care givers had psychological burden among care givers giving care for mentally ill patients. Therefore creating community awareness about how to handling peoples living with mental illness at large and understanding of the care givers burden while giving care for the patient should be considered.

Key words: Care giver, mentally ill patients, psychological burden.

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Chapter one

1. Introduction

This section contain background of the study, statements of the problems, research questions, objectives of the study, significance of the study, scope of the study and operation deflection of basic terms

1.1. Background of the study

According to the World Health Organization's (WHO) definition, "Mental health is a state of well-being in which an individual can realize his or her own abilities, interact positively with others, cope with the stressors of life and study, work productively and fruitfully, and contribute to his or her family and community." It should be noted the definition does not refer exclusively to the absence of "mental illness", but also addresses the concept of "mental wellness (WHO, 2005).

However, mental health remains a neglected part of global efforts to improve health. People with mental health conditions experience widespread human rights violations, discrimination and stigma. More than 80% of people experiencing mental health conditions, including individuals experiencing neurological and substance use disorders, are without any form of quality, affordable mental health care. This is despite mental health conditions accounting for 1 in 5 years lived with disability globally, leading to more than US\$ 1 trillion per year in economic losses. Suicide mortality is high (close to 800 000 deaths per year), disproportionately affecting young people and elderly women in low- and middle-income countries. Mental health conditions are especially common for people affected by humanitarian crises and other forms of adversity (e.g. sexual violence) (WHO, 2019).

Caregivers play a key role in caring for people with mental illness, but living with it can have a significant cost for family members. Although no standard definition of caregiving exists, there is a general consensus that it involves the provision of extraordinary care, exceeding the bounds of what is normative or usual in family relationships and typically involves significant expenditure of time, energy, and money over potentially long periods of time and involves tasks that may be unpleasant or uncomfortable and could be psychologically stressful and/or physically exhausting (Schulz, Ph, Martire, & Ph, 2004). It is also a condition characterized by significant disturbance in cognitive, emotional regulation, and behavioral functioning. Common

mental illness includes schizophrenia, depression, bipolar, and anxiety disorders (American psychiatric association, 2013).

The chronic nature of mental illnesses, the gravity of symptoms, and the occurrence of relapses requiring hospital admissions cause significant changes in family dynamics and routine, expression of emotions, finances, quality of life, and interpersonal and social relationships of each family member. This situation can cause prolonged stress that may affect family caregivers and their own health (Busse et al., 2018; Grover, Hazari, Chakrabarti, & Avasthi, 2015; Yesufu-udechuku et al., 2015). Caregiving in mental illness is a demanding and exhausting activity that typically involves a considerable amount of time, energy, and money over potentially long periods of time, in tasks that may be unpleasant or uncomfortable and could be psychologically stressful and/or physically exhausting (Schulz et al., 2004).

Burden may be defined as the problems, difficulties, and negative life events influencing the life of family members concerned with a loved one with a mental illness (Tenner, Baillie, Dewitt, & Vege, 2013). Caregivers of mentally ill patients experience both subjective and objective types of burden. Subjective burden refers to the psychological reactions the caregivers experience, for example, a feeling of loss, sadness, anxiety, embarrassment in social situations, the stress of coping with disturbing behaviors, and the frustrations caused by altering relationships (Raj et al., 2016). The close-knit family structure and lack of adequate State resources to support people with mental illness place the onus of care on the family which is perceived to be the “natural” caregiver. Sociocultural expectations see the caregiving function as typically being discharged by either parents, children or the spouse and as an obligation that has morally binding undertones (Stanley, King, Thornton, & Kulathinal, 2016).

In Ethiopia, strategy has been developed to provide a general blueprint for responding to the mental health services, training and research needs. This strategy lays out the projected expansion of the mental health workforce needed to support the integration of mental health in primary health care. This scaling-up of training of mental health professionals will go hand-in-hand with a large-scale program of pre- and in-service training of general health workers in mental health care. In this way, all health workers will be equipped to deliver mental health care according to their level (FMOH, 2015).

1.2. Statement of the problem

According to the World Health Organization, mental disorders account for 13% of the total global burden of diseases worldwide. From this depression alone is currently the third

leading cause of global disease burden and it is predicted that it will be the leading cause of the global burden of disease by 2030 (WHO, 2012). Vigo and Thornicroft argue that the global burden of disease as reported by WHO underestimates the true effect of mental disorders on the population (Vigo, Thornicroft, & Atun, 2018). They noted that there has been a significant increase in the burden of mental disorders by 37.6% from 1990 to 2010 which is accounting for 7.4% of disability-adjusted life years (DALY), and 22.9% of all years lived with disability. Perhaps these figures may also be an underestimate of the true burden of mental disorders due to lack of data especially in low-income countries where over 75% of the people living with mental illness do not access services when in need (WHO, 2014).

Mental disorders not only a problem of low and middle income countries but also a significant public health challenges in the WHO European Region, being the leading cause of disability and the third leading cause of overall disease burden (as measured by disability adjusted life-years), following cardiovascular disease and cancers (WHO, 2007). By 2023, the WHO Special Initiative for Mental Health is aiming to increase treatment coverage for mental health conditions by ensuring access to mental health care for 100 million more people over its 5-year plan. Within this aim is to contribute to the broader GPW13 targets for increasing service coverage for severe mental health conditions to 50% and reducing suicide mortality by 15%. The high-level indicators of service coverage and suicide mortality are aligned with the indicators of the WHO Mental Health Action Plan 2013-2020, which WHO reports on every two years through the Mental Health Atlas (WHO, 2018).

The global prevalence of common mental disorders is approximately 1 in 5 adults (17.6%) (Steel et al., 2014). A recent WHO meta-analysis estimated that the prevalence of mental disorders was 22.1% in emergency settings (Charlson et al., 2019). In the United States (US) national Comorbidity survey, lifetime prevalence of mood and anxiety disorders was 20.8% and 28.8%, respectively (KESSLER1 et al., 2007). The population-based surveys in Africa generally showed higher prevalence of common mental disorder among the community from 10.8% in Kenya to 34.9% in South Africa (Okonji et al., 2008). Whereas, a 12.1% of life time prevalence and 5.8% of 12 month prevalence of common mental disorders (CMDs) were shown in Nigeria (Gureje et al., 2002). The prevalence of the common mental illness in Ethiopia general population was 21.58% (Kassa & Abajobir, 2018).

In developed countries indicated that more than seven in ten (72%) caregivers of People with Mental Illness (PWMI) experience significant burden (Verhaeghe & Bruynooghe, 2007). Different studies documented that magnitude of burden among caregivers of PWMI in sub-

Saharan countries is high ranging from 60 to 90% across different regions (Adewuya & Owoeye, 2010; Hidru, Wang, et al., 2016; Ogundipe, Olagunju, Lasebikan, & Coker, 2014).

Moreover, about (99%) caregivers who provide care for mentally ill patients stated that they experience moderate to severe levels of subjective burden (Hailemariam, 2015). Different studies conducted in different parts of the world regarding to the psychological burden of caregivers of mental illness patients like a study in India revealed that among caregivers of mental illness patient's severe burden accounted for 40.9% and moderate for 59.1% and his study concluded that caregivers of the mentally ill individuals do undergo a lot of burden (Sujata Chodankar Walke & Shreemathi S. Mayya, 2019). Similar studies conducted in Uttarakhand, India on caregivers of mentally ill patients also revealed that 24% of them reported symptoms of moderate-severe depression (Kumar & Varghese, 2019). Another study conducted in Egypt revealed that the most study caregivers (92.5%) suffered from moderate to severe and severe burden (Ebrahim, Al-attar, Gabra, & Osman, 2020). Likewise a study conducted in Iran among caregivers of schizophrenia patients indicates about 7.6% of individuals experienced "no to low" burden mild to moderate", 41.8% "moderate to severe" and 27.1% "severe" burden (Shamsaei, 2015). Moreover, in Ethiopian context, a recent study conducted on caregivers who are with several mental illnesses patients reported that the overall mean burden score was 45.3, highest for "urging" (mean=15.5); and "worrying" domains (mean=13.7), the identified factors were being female caregiver, first degree relative, experiencing distress and caring for patients with higher levels of symptomatology and disability were significantly associated with higher overall burden score (Fekadu, 2020). However, there was no enough research conducted on the psychological, burden, factors associated and coping mechanism among Caregivers of Mentally ill Patients Attending Follow Up. To fill this gap, the researcher is interested to conduct research in the areas.

In low and middle- income countries (LMICs) both man-made and natural disasters, such as armed conflict, earthquakes (in Nepal, Haiti), epidemics (such as Ebola and Zika), famine (Ethiopia) and COVID-19 in developing countries increase the incidence of mental and emotional health problems in the affected communities, and at the same time, they divert limited resources to areas other than mental health and directly or indirectly effects on the caregivers. Furthermore, factors associated with burdens of caregivers for mental ill families differ from study to studies from these; patients having mental disorders (Osundina ., Akanni , Omoreagba , & ., 2017), the number of hours spent with burden care (Oshodi et al., 2012). This study was to evaluate the psychological burden of caregiving among caregivers of people with mental illness

attending their follow-up at Jimma University Medical Center psychiatric clinic. So, to fill the research gap, the current study was attempted to answer the following research questions.

1.3. The basic research questions

- What is the level of psychological burden among caregivers of mental illness patients attending their follow-up at psychiatric clinic, Jimma University?
- What are the socio-economic factors affecting the caregivers of mentally ill patients?
- What are the health-related factors affecting the caregivers of mentally ill patients?
- What is the level of coping strategies among caregivers of mentally ill patients?

1.4. Objective of the study

1.4.1. General objective

The general objective of the study was to examine the psychological burden of caregivers of mental illness attending at Jimma University, psychiatry clinic, medical center, southwest Ethiopia, 2021.

1.4.2. Specific objectives

1. To determine the level of psychological burden among caregivers of mental illness patients attending their follow-up at psychiatric clinic, Jimma university.
2. To identify the socio-economic factors affecting the caregivers of mentally ill patients.
3. To investigate the health-related factors affecting the caregivers of mentally ill patients.
4. To determine the level of coping strategies among caregivers of mentally ill patients.

1.5. Significance of this study

The study was focused on psychological burden of caregivers of mental illness, because caregivers experience high levels of stress and their role can take a substantial mental and physical toll on their health as they care for the physical, emotional and economic needs of their family members/friends. This study was tried to give information about the magnitude and factors that contribute to psychological burden and provide more information for any intervening organizations in Jimma town. Additionally, the result of the study will have a positive contribution for policy makers, health providers, educators, and researchers to improve the health of caregivers of mentally ill patients.

1.6. Scope of the study

The scope of study was delimited in two ways, content delimitation and study area delimitation. The content scope of the study was focused to identify the level of psychological burden factors and coping mechanisms of care givers with mental illness and to identify factors affecting the level of psychological burden of care givers of mentally ill patients. The study was tried to assess the magnitude of psychological burden of care givers of mentally ill patients admitted to Jimma university medical center psychiatric clinic. The study was used the data from the care givers mainly.

1.7. Operational and standard definitions

Caregiver: in this study, caregiver means a family member/relative/any person who has most frequent contact with the patient, provides unpaid support to the patient financially, socially, psychologically, and physically, and has mostly been collateral in the patient's treatment in Jimma university medical center psychiatric clinic.

Mental ill: in this research mental illness means any patients who admit to Jimma university medical center psychiatric clinic to get treatments for psychological disorders such as disturbance in cognitive, emotional regulation, and behavioral functioning such as schizophrenia, depression, bipolar, anxiety disorders.

Psychological burden: in this study psychological burden was assessed by using validated tool of Zarit burden interview and it was categorized in to four categories: no burden, little, medium and high burden and finally an individual's having below medium is considered as no burden while an individuals scored medium and above was considered as having burden

Socio economic factors: in this research socio—economic factors means any social and economic burden on mentally ill patient care giver in jimma university psychiatry clinical center.

Health related factors: any health related burden factors on mentally ill care giver in jimma university psychiatry clinical center.

Coping mechanisms: in this study coping mechanism means any strategy that mentally ill caregiver uses to overcome psychological burden while care giving for their relative in jimma university psychiatry clinical center.

Chapter two

2. Literature review

2.1. Definition and basic concepts of mental illness

Mental health is defined by WHO as a state of wellbeing in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community (WHO, 2013). This definition portrays the importance of mental health and thus reflective of how integral it is to health and well-being as reflected in the WHO's definition of health; "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (WHO, 2013).

2.2. Historical view of mental illness and psychological burden

The history of mental health is punctuated with various movements. This includes the psychoanalytic, the behavioral, the self-help, and the community movements. These movements have been sustained over time and have merged into theory and practice. The less influential movements with shorter half-lives have been eclipsed. In the last decade we have witnessed a surge of activities which have been lumped together and described as global mental health. This movement is a relative newcomer to the global health movement (Bell, L.V 1980).

Throughout history there have been three general theories of the **etiology** of mental illness: supernatural, **somatogenic**, and **psychogenic**. Supernatural theories attribute mental illness to possession by evil or demonic spirits, displeasure of gods, eclipses, planetary gravitation, curses, and sin. Somatogenic theories identify disturbances in physical functioning resulting from either illness, genetic inheritance, or brain damage or imbalance. Psychogenic theories focus on traumatic or stressful experiences, maladaptive learned associations and cognitions, or distorted perceptions. Etiological theories of mental illness determine the care and treatment mentally ill individuals receive. As we will see below, an individual believed to be possessed by the devil will be viewed and treated differently from an individual believed to be suffering from an excess of yellow bile. Their treatments will also differ, from exorcism to blood-letting. The theories, however, remain the same (Forrest,D.1999). They coexist as well as recycle over time

2.2.1. Global view

Trephination is an example of the earliest supernatural explanation for mental illness. Prehistoric skulls and cave art from as early as 6500 BC have identified surgical drilling of holes in skulls to treat head injuries and epilepsy as well as to allow evil spirits trapped within the skull to be released (Restak, 2000). In 2700 BC Chinese medicine's concept of complementary

positive and negative bodily forces (“yin and yang”) attributed mental (and physical) illness to an imbalance between these forces. As such, a harmonious life that allowed for the proper balance of yin and yang and movement of vital air was essential (Tseng, 1973).

Greek physicians rejected supernatural explanations of mental disorders. It was around 400 BC that Hippocrates (460-370 BC) attempted to separate superstition and religion from medicine by systematizing the belief that a deficiency in or especially an excess of one of the four essential bodily fluids (i.e., humors) – blood, yellow bile, black bile, and phlegm – was responsible for physical and mental illness.

Modern treatments of mental illness are most associated with the establishment of hospitals and **asylums** beginning in the 16th century. Such institutions’ mission was to house and confine the mentally ill, the poor, the homeless, the unemployed, and the criminal. War and economic depression produced vast numbers of undesirables and these were separated from society and sent to these institutions. Two of the most well-known institutions, St. Mary of Bethlehem in London, known as Bedlam, and the Hôpital Général of Paris - which included La Salpêtrière, La Pitié, and La Bicêtre – began housing mentally ill patients in the mid-16th and 17th centuries.

By the 18th century protests rose over the conditions under which the mentally ill lived and the 18th and 19th centuries saw the growth of a more humanitarian view of mental illness. In 1785 Italian physician Vincenzo Chiarughi (1759-1820) removed the chains of patients at his St. Boniface hospital in Florence, Italy, and encouraged good hygiene and recreational and occupational training. More well known, French physician Philippe Pinel (1745-1826) and former patient Jean Baptise Pussin created a “**traitement moral**” at La Bicêtre and the Salpêtrière in 1793 and 1795 that also included unshackling patients, moving them to well aired and lit rooms, and encouraging purposeful activity and freedom to move about the grounds (Micale, 1985).

While in America had asylums for the mentally ill – such as the Pennsylvania Hospital in Philadelphia and the Williamsburg Hospital, established in 1756 and 1773 – the somatogenic theory of mental illness of the time – promoted especially by the father of America psychiatry, Benjamin Rush (1745-1813) – had led to treatments such as blood-letting, gyrotors, and tranquilizer chairs. When Tuke’s York Retreat became the model for half of the new private asylums established in the United States, however, psychogenic treatments such as compassionate care and physical labor became the hallmarks of the new American asylums, such as the Friends Asylum in Frankford, Pennsylvania and the Bloomingdale Asylum in New York City, established in 1817 and 1821 (Grob, 1994).

European psychiatry in the late 18th century and throughout the 19th century, however, struggled between somatogenic and psychogenic explanations of mental illness, particularly hysteria, which caused physical symptoms such as blindness or paralysis with no apparent physiological explanation. No longer viewed as resulting from a wandering uterus, Franz Anton Mesmer (1734-1815), influenced by contemporary discoveries in electricity, attributed hysterical symptoms to imbalances in a universal magnetic fluid found in individuals (Forrest, 1999).

Mental illness is considered a silent epidemic throughout most parts of Africa. Owing to structural and systemic barriers such as inadequate health care infrastructure, insufficient number of mental health specialists, and lack of access to all levels of care, (Collins et al., 2011; Becker & Kleinman, 2013) mental illness has been characterized as a neglected and increasingly burdensome problem affecting all segments of the population throughout Africa. Prioritizing mental health has also been difficult due to lack of resources, limited funding and no or ineffective mental health policies. Most governments, health policy-makers and funders historically have focused on communicable diseases that plague the continent, such as malaria, tuberculosis, HIV/AIDS (Group, Lancet Global Mental Health [L.G.M.H.], 2007). In addition, due to stigma and discrimination, many people suffer in silence and fail to reach their full potential (Patel, 2007; Collins et al., 2011). Furthermore, a considerable segment of the population in African countries is vulnerable to mental illness due to psychosocial and socioeconomic stressors such as poverty, migration, war, conflict and disasters (Okasha, 2002).

2.3. Magnitude of psychological burden of care givers of mental illness

A cross sectional study conducted in Brazilian psychiatric hospital shows the magnitude of severe burden was 31.2% as well as 38.4%,26.8% and 3.6% of care givers experienced moderate to severe burden, mild to moderate burden and little or no burden respectively (São, Ribeirão, & Paulo, 2019). Another research conducted in Universal College of Medical Sciences, Teaching Hospital, Nepal showed that the majority of the respondents (86%) were at moderate stress, followed by 14% with severe stress; this study revealed that caregivers were stressed with care giving, family and financial issues (Darlami, Ponnose, & Jose, 2015). According to study conducted in Farshchian psychiatry Hospital in Hamadan, Iran revealed that the magnitude of burden among care givers of mental ill patients, no to low” burden, 23.5% “mild to moderate”, 41.8% “moderate to severe” and 27.1% “severe” burden (Shamsaei, 2015). A cross-sectional study conducted in Karnataka, India shows that severe burden accounted for 40.9% and moderate for 59.1%. The highest amount of burden was seen in the areas of physical and mental

health, spouse related, and in areas of external support (Sujata Chodankar Walke & Shreemathi S. Mayya, 2019).

A qualitative study conducted in Kedah in Malaysia revealed that the family caregivers experienced four types of negative impact, including financial burdens and social, psychological and physical health (Azman, 2019). A research conducted in tertiary psychiatric hospital, Singapore on Psychological status and quality of life among primary caregivers of individuals with mental illness showed that the psychological status like depression was 18.3% of primary caregivers had symptoms of depression (based on PHQ-9 cut-off point of 10 or greater) while 12.7% had symptoms of anxiety (based on GAD-7 cut-off point of 10 or greater) (Jeyagurunathan et al., 2017). A study conducted in Saudi Arabia shows that the overall burden and the subscale scores were highest among caregivers caring for a close relative such as a parent (44.1%) son/daughter (39.1%), sibling (37.1%), or spouse (37.1%) (Alzahrani, Fallata, Alabdulwahab, Alsafi, & Bashawri, 2017).

A study conducted in Bareilly shows that 42.31% caregivers experienced severe burden. Caregivers of patients with low levels of education reported greater burden. Parents and spouses reported moderately higher level of burden, but siblings reported highest level of burden. Parents had greater psychological stress as compared to spouses and siblings. Caregivers with higher psychological stress found to have heavier caregiving burden (Kuchhal, Kuchhal, Arya, & Pardal, 2019).

Another study conducted in Nigeria revealed that more than half 56.75% of the study subjects experienced little or no burden and 43.25% of them experienced mild to severe burden (Akanni, 2017). Another study conducted in Saint Mary's Neuro psychiatric National Referral Hospital, Eretria showed that out of the total caregivers 52% of them reported severe level of burden, 32% reported a little and only 16% of the participants reported no caregiving burden (Hidru, Osman, & Lolokote, 2016). Similar study conducted in Egypt revealed that more than two-fifths of the caregivers were parents and had high level of burden. Nearly two-thirds had moderate level of psychological well-being (Fathy, Mohammed, Fathy, & Hady, 2018).

A study conducted in Uganda revealed that Family caregivers of people with dementia experience significant caregiving burden, with each item on the Zarit Burden Index endorsed by more than 70% of study participants. Nearly half [108 (47%)] of caregivers had Zarit Burden Interview scores >60, suggestive of severe caregiving burden (Ainamani, 2020). Similarly a qualitative study conducted in Ghana revealed that, caregivers reported various degrees of

burden, which included financial, social exclusion, emotional, depression, and inadequate time for other social responsibilities. Responsibilities around caregiving were mostly shared among close relatives but to a varying and limited extent. Religious prayers and the anticipation of cure were the main coping strategies adopted by caregivers, with expectation of new treatments being discovered (Ae-ngibise et al., 2015).

In Ethiopia there is a few studies conducted regarding to burden of care givers. To mention few, a study conducted in the Sodo district of the Gurage zone in shows that the overall mean burden score (95% confidence interval (CI)) was 45.3 (43.2, 47.4); highest for “urging” (mean=15.5; 95% CI=14.6, 16.4) and “worrying” domains (mean=13.7; 95% CI=12.9, 14.4) (Fekadu, 2020). And similarly a study conducted in Jimma, south West Ethiopia revealed that the mean score for burden among caregivers on family burden interview schedule was 23.00 ± 10.71 (Ayalew, Workicho, Tesfaye, Hailesilasie, & Abera, 2019).

2.4. Factors associated with psychological burden of care givers of mental ill patients

According to study conducted in India revealed that a significant association with burden of care givers were low level of income, spouse as a caregiver and duration of caregiving for more than 5-year duration were found to be significant (Sujata Chodankar Walke & Shreemathi S. Mayya, 2019). Similarly study conducted at tertiary psychiatric center, India revealed that age gender of the care giver was the only predictor variables for burden of care givers (Abdul & Mccarthy, 2016). Another study conducted in Iran also showed that the level of burden was significantly associated with age, gender, and educational level, relation to care recipient, caregiving duration (Shamsaei, 2015). Another study conducted in Pakistan also showed that the caregiver’s education and occupation were significant predictors of burden of care (Article, Siddiqui, & Khalid, 2019).

A study conducted in Brazil also revealed that factors independently associated with caregivers’ burden were being over 60 years of age, receiving no help with caregiving, contact days, and having other family members needing care (Lúcia et al., 2017). Similarly a study conducted in tertiary hospital Bareilly was revealed that caregivers of patients with low levels of education reported greater burden. Parents and spouses reported moderately higher level of burden, but siblings reported highest level of burden (Kuchhal et al., 2019). Another study in Pakistan revealed that the results suggest that the longer the duration of illness the more the burden experienced by the caregivers. Moreover, caregivers who were married, less educated, lived in rural area, had lower monthly income, provide longer hours of caregiving and used

avoidant coping behavior reported significantly higher caregiver burden than caregivers who were unmarried, more educated, lived in urban area and had better income (Article et al., 2019).

The study conducted in Eritrea shows that the predictor variables were caregiver’s age duration of caregiving and monthly household family income (Hidru, Osman, et al., 2016). Similarly a study conducted in Sodo district of the Gurage zone in south Ethiopia showed that Being a female caregiver, first degree relatives were significantly associated with a higher overall burden score (Fekadu, 2020). Another study conducted in Jimma, Age of the caregivers, being female caregiver, duration of contact hours with the patient per day, and providing care for patients who had a history of substance use in life, were positive predictors of higher burden among caregivers. Whereas, caregivers’ income, caregivers who had no formal education were negatively associated with higher burden among caregiver (Ayalew et al., 2019).

2.5. Conceptual frame work

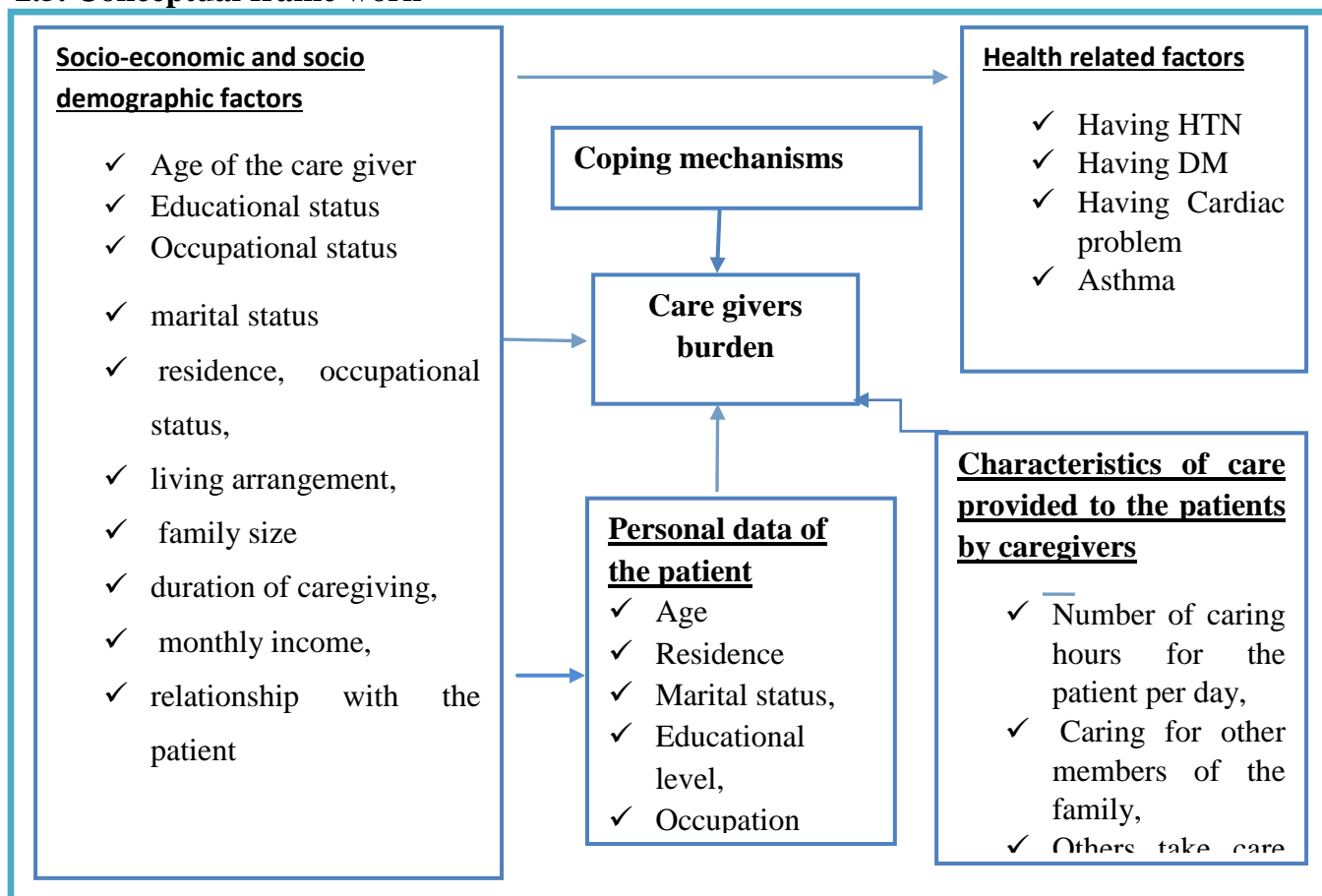


Figure 1: Conceptual frame work adapted by reviewing of different literatures, to assess Psychological burden among care givers of mentally ill patients attending follow up at Jimma University, psychiatric clinic, 2021.

Chapter three

3. Methodology

3.1. Study design

The study used a cross sectional study design, which is a type of observational research that analyzes data of variables collected at one given point in time across a sample population or a pre-defined subset. It is entirely descriptive. A cross-sectional descriptive survey assesses how frequently, widely, or severely the variable of interest occurs throughout a specific demographic. And also, analytical type of cross-sectional research investigates the association between two related or unrelated parameters. By (MS &Setia,2016.)

3.2. Study area and study period

The study was conducted at Jimma University Medical Center (JUMC) psychiatric clinic among caregivers of mentally ill patients. According to the hospital report, currently, it is the only teaching and referral hospital in the southwestern part of Ethiopia, providing services for approximately 15,000 inpatient attendants, 160,000 outpatient attendants, 11,000 emergency cases, and 4500 deliveries in a year coming to the hospital from the catchment population of about 15 million people. An average of 750–1000 psychiatric patients has follow-up visit at the psychiatric clinic every month. The clinic provides 24-h emergency service, outpatient regular service, and inpatient/admission services. Currently, the clinic has more than 40 inpatient beds for general adult and child psychiatric patients and substance abuse detoxification treatment. The study was conducted from June 1/ 2021 to July 1/ 2021.

3.3. Study Population

The subject of the study was selected from the total population of 409 care givers of people living with mental illness attended their follow up at JUMC, psychiatric clinic, all care givers who gave care for mentally ill patients attending psychiatric clinic which fulfill the inclusion criteria during data collection period.

3.4. Sample Size Determination and sampling procedure

The study sample was 409, the selection of the sample drawn by non-probability sampling which is consecutive sampling technique. The sample size was calculated by using a single population proportion formula with the assumption of 95% level of confidence, 5% marginal error, taking

the proportion of severe burden of caregivers of mental illness conducted previously in JUMC which was of 58.6% (Ayalew et al., 2019).

$$N = \frac{Z_{a/2}^2(p)(1-p)}{d^2}$$

$$d^2$$

a/2 =Critical value at 95% Confidence level of certainty (1.96)

P=magnitude of burden of caregivers (58.6%) among caregivers of mentally ill patients (Ayalew et al., 2019).

q=(1-p).

d= the margin of error (tolerance) between the sample and the population that is 0.05.

So, the sample size is, $n = \frac{(1.96)^2(0.586)(0.414)}{(0.05)^2} = 372$

Based on the above calculation sample size was found to be 372, but considering non-response of the respondents, I adjusted 10% (37 caregivers) of the non-response rate. The final sample was 409.

3.5. Sources of data

3.5.1. Primary data

For this research primary data was collected from the study participants about their socio economic condition, health status, psychological burden and coping strategies

3.5.2. Secondary data

Secondary data was collected from the patient charts

3.6. Instrument of data collection

The study used questionnaires and interviews to gather necessary information's on;

Socio economic factors: the study participants were interviewed about their age, income status, educational status, occupational level, residence, religion and ethnicity.

Health related characteristics: the study participants were interviewed regarding to their current health status on data collection period about chronic medical illness like diabetes mellitus , cardiac problem, hypertension and asthma.

Assessment of family burden scale: caregiver burden was assessed by using the 22-item Zarit Burden Interview (ZBI) (Bédard et al., 2001). The ZBI contains 22 items eliciting different aspects of caregiving burden, each scored on a 5-point Likert scale ranging from 'never' to 'nearly always.' Scores range from 0 to 88, with higher scores reflective of greater caregiving

burden. Following the guidance by Zarit and Zarit (1987), ZBI scores was categorized into four categories of increasing caregiving burden. The tool has been previously utilized among caregivers of mentally ill patients to measure the burden like in Uganda with Cronbach alpha ($\alpha=0.91$). Generally, a meta-analysis concluded that the reliability of the instrument is validated across different caregivers like cancer, dementia, physical illness, mental illness, etc. for any population (Bachner, D, & Psych, 2008).

Assessment of coping strategy: coping assessment was done by using the brief COPE tools which consists of 28 items measure of coping style derived from the longer COPE inventory. It is a self-administered scale and will be translated to the local language. The tool has a 4-point Likert scale (I haven't been doing this at all to I've been doing this a lot). It includes 14 subscales of two items each grouped into three coping categories by summing items accordingly (with higher scores indicating a greater intensity of use of the coping strategy). The three coping strategies and their associated subscales were problem-focused coping (active coping, planning, instrumental support, and religion scales; alpha .80); active emotional coping (venting, positive reframing, humour, acceptance, and emotional support scales; alpha .81); and avoidant emotional coping (self-distraction, denial, behavioral disengagement, self-blame, and substance use scales; alpha.88) (Schnider, Elhai, & Gray, 2007).

Questionnaires

The data was collected by using face to face interview and self-administered questionnaire.

3.7. Data Collection procedures

Data was collected face-to-face by trained four diploma nurses using a pretested and structured 'Afaan Oromoo and Amharic' language version questionnaires which was adapted from reviewed from existed literatures and supervised by Two BSc psychiatrist nurses. The socio-demographic characteristics, characteristics of care provided to the patients by caregivers, coping mechanisms and health related characteristics of caregivers was asked.

3.8. Pilot test

The instruments' of data collection were evaluated through conducting pilot test for one month before final data collection. The pilot test was help to check the reliability and validity of each instrument. Here some irrelevant items were discarded and some ambiguous items was modified as per the results of pilot test and the comment given by the experts. The pilot testing of instruments was conducted on 20 participants.

3.9. Validity and reliability

Face validity was employed to check the validity of all tools by professional experts working in the subject matter. Reliability was checked using Cronbach alpha (0.857) after conducting pretest and analysis of the data.

Inclusion criteria

- ✓ Age >18 years
- ✓ Any family member (first degree relative like ‘parents, siblings, off springs’, or spouse or others) who assist the patient in their daily functions, and meeting their needs and who look after the patient as priority work but who do not perform this work as a professional job.
- ✓ Duration of care should be at least 1 year

Exclusion criteria

- Caregivers with any intellectual disability or any disease that could affect their cognitive or mental functions
- The caregiver had a history of psychiatric disorder before being a caregiver
- The patient was not on medications

3.10. Study variables

| Study variables | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|
| independent variables | Dependent variables |
| Socio-demographic and socio-economic variables (sex, age of caregiver’s educational status, marital status, residence, occupational status, living arrangement, family size, duration of caregiving, monthly income, and relationship with the patient | Burden of care givers |
| Characteristics of care provided to the patients by caregivers variables (Number of caring hours for the patient per day, Caring for other members of the family, others take care of the patient with you.) | |
| Coping mechanisms | |
| Health related characteristics of caregiver Personal data of the patient variables (Having Hypertension , Having Diabetes mallets , Having Cardiac problem and Asthma | |
| Personal data of the patient (age, residence, marital status, educational level, occupation, and diagnosis. | |

3.11. Data processing and analysis

After checking for the completeness of the questionnaires, data was coded and entered into Epi-Data version 3.1 and exported to SPSS version 20 for analysis. Descriptive statistics like frequencies and percentages calculated for categorical variables. Mean median, standard deviation, and interquartile range was calculated for continuous variables. Assumptions like presence of normal distributions, and outliers were checked for continuous variables. Bivariate and multivariate logistic regression was conducted to identify candidate variables and independent predictors of the outcome variable at $p \leq 0.25$ and at p value 0.05 with 95% CI AOR respectively.

3.12. Ethical Consideration

Ethical clearance was obtained from Ethical Review Board of Jimma university college of Education and Behavioral sciences and it also get permission from Jimma University Medical Center. The aim of the study was explained to all concerned bodies including the study subjects. Each study participants was informed about the right to withdraw the consent and stop participation at any time without any form of prejudice. Privacy and confidentiality was maintained at each step of the study process. Consultation and counseling were provided for participants who have severe type of psychological burden. (Psychiatry association, 2013)

Chapter four

4. Result and Discussion

4.1 Socio-Demographic Characteristics of the patient and care givers

A total of 392 of the respondents were interviewed in this study, yielded 95.8 % of the response rate. The mean and standard deviation age of the patient were 30.75 ± 11.9 years. More than half 261(61.0%) of the patients were males. Regarding occupational status of the patients 108 (27.6%) were farmer followed by 66 (16.8%) were daily laborer and 51 (13.0%) are jobless. In the same way the educational status of the patient about 122 (31.1) of them was attended secondary school, whereas 71 (18.1) of them cannot read and write (Table 1).

Table 1 socio demographic and clinical characteristics mentally ill patients attending their follow up at psychiatric clinic, JUMC, 2021.

| Variables (N=392) | Categories | Frequency(n=392) | Percent (%) |
|---------------------------------------------|--------------------------|------------------|-------------|
| Age of the patient | ≤30 years | 235 | 59.9 |
| | 31-40 years | 87 | 22.2 |
| | ≥41 years | 70 | 17.9 |
| | Total | 392 | 100 |
| Sex of the patient | Female | 153 | 31.0 |
| | Male | 239 | 69.0 |
| | Total | 392 | 100.0 |
| Marital status | Married | 120 | 30.6 |
| | Single | 243 | 62.0 |
| | Divorced | 21 | 5.4 |
| | Widowed | 8 | 2.0 |
| | Total | 392 | 100.0 |
| Occupation of the patient | Farmer | 108 | 27.8 |
| | Daily laborer | 66 | 16.8 |
| | Government employee | 62 | 15.8 |
| | NGO | 9 | 2.3 |
| | House Wife | 96 | 24.5 |
| | Stop working | 51 | 13.0 |
| | Total | 392 | 100.0 |
| Educational status | Cannot read and write | 71 | 18.1 |
| | Can read and write | 19 | 4.8 |
| | Primary | 96 | 24.5 |
| | Secondary | 122 | 31.1 |
| | Above 12 | 84 | 21.4 |
| | Total | 392 | 100.0 |
| Psychiatric diagnosis of the patient | Schizophrenia | 151 | 38.5 |
| | Bibolar | 82 | 21.0 |
| | MDD | 116 | 29.6 |
| | Other psychotic disorder | 27 | 6.9 |
| | Other disorder | 16 | 4.0 |
| | Total | 392 | 100.0 |

4.2. Socio demographic characteristics of care givers

By default the gender distribution of care givers is equal which is 196 (50.0%) care givers were males and vice versa. The mean and standard deviation of care givers age was 39.38 ± 16.7 years old. Regarding to the ethnicity of the care givers nearly two-third 258 (65.8%) of the respondents was from Oromia. Similarly 250 (63.8%) of care givers were Muslims in religion. One hundred eight (27.6%) care givers attended primary education on the other hand, 76 (19.4%), 70 (17.9%), 71 (18.1%) and 67 (17.1%) of care givers were cannot read and write, can read and write, secondary and above 12 on their educational status respectively. Two third 253 (64.8%) of the study participants were married and 106 (27.0%) of care givers were single.

Regarding to occupational status of care givers about 128 (32.7%) of them were farmer, whereas 81 (20.7%), 53 (13.5%), 11 (2.8%), 72 (18.4%) and 23 (5.9%) were daily laborer, government employee, NGO, house wife and student in their occupational status respectively. More than half 233 (59.4%) of the study participants were from urban. Nearly, three -fourth 287 (73.2%) of care givers are living with the patients in the same house. 163 (41.6%) of people living with mental illness were receiving care by their mothers/fathers, in the same fashion 96 (24.5%) patients were received care from their daughters/son.

Regarding to home appliances in the care givers home only 86 (21.9%) was accessed for tap water, similarly 136 (34.7%), 105 (26.8%) and 65 (16.6%) of care givers have accessed for electricity, television and refrigerator respectively. Additionally, the housing condition for care givers about 198 (50.5%) of them had home made from clay and it was private, on the other hand 169 (43.1%) of givers home made from cement and it was for them privately (Table 2).

Similarly, regarding to home appliances in the care givers home only 86 (21.9%) was accessed for tap water, similarly 136 (34.7%), 105 (26.8%) and 65 (16.6%) of care givers have accessed for electricity, television and refrigerator respectively. Additionally, the housing condition for care givers about 198 (50.5%) of them had home made from clay and it was private, on the other hand 169 (43.1%) of givers home made from cement and it was for them privately.

Table 2 socio demographic characteristics of care givers of mentally ill patients attending their follow up at psychiatric clinic, JUMC, 2021.

| Variables | Categories | Frequency(n=392) | Percent (%) |
|-----------------------------------------|-----------------------|-------------------------|--------------------|
| Sex of care givers | Female | 196 | 50.0 |
| | Male | 196 | 50.0 |
| | Total | 392 | 100.0 |
| Age of care givers | ≤30 years | 137 | 34.9 |
| | 31-40 years | 99 | 25.3 |
| | ≥41 years | 156 | 39.8 |
| | Total | 362 | 100.0 |
| Ethnicity | Oromo | 258 | 65.8 |
| | Amhara | 40 | 10.2 |
| | Kaffa | 23 | 5.9 |
| | Dawuro | 23 | 5.9 |
| | Yemi | 29 | 7.4 |
| | Total | 392 | 100.0 |
| Religion | Muslim | 250 | 63.8 |
| | Orthodox | 65 | 16.6 |
| | Protestant | 71 | 18.1 |
| | Catholic | 6 | 2.5 |
| | Total | 392 | 100.0 |
| Educational status | Cannot read and write | 76 | 19.4 |
| | Can read and write | 70 | 17.6 |
| | Primary | 108 | 27.6 |
| | Secondary | 71 | 18.1 |
| | Above 12 | 67 | 17.1 |
| | Total | 392 | 100.0 |
| Marital status | Married | 254 | 64.8 |
| | Single | 106 | 27.0 |
| | Divorced | 28 | 7.1 |
| | Widowed | 4 | 1.0 |
| | Total | 392 | 100.0 |
| Occupational status | Farmer | 128 | 32.7 |
| | Daily laborer | 82 | 20.9 |
| | Government employee | 53 | 13.5 |
| | NGO | 11 | 2.8 |
| | House wife | 72 | 18.4 |
| | Student | 23 | 5.9 |
| | Total | 392 | 100.0 |
| Residence | Rural | 159 | 40.6 |
| | Urban | 233 | 59.4 |
| | Total | 392 | 100.0 |
| Monthly income | ≤1000 ETB | 167 | 42.6 |
| | 1001-2000 ETB | 96 | 24.5 |
| | >2000 ETB | 129 | 32.9 |
| | Total | 392 | 100.0 |
| Living with the home with the pt | Yes | 287 | 73.2 |
| | No | 105 | 26.8 |
| | Total | 392 | 100.0 |

Table 3 Home appliances and housing condition related characteristics of care givers of mentally ill patients attending their follow up at psychiatric clinic, JUMC, 2021.

| Variables | Categories | Frequency(n=392) | Percent (%) |
|--------------------------|----------------------------|------------------|-------------|
| Home appliances | Tap water | 86 | 21.9 |
| | Electric services | 136 | 34.7 |
| | Television | 105 | 26.8 |
| | Refrigerator | 65 | 16.6 |
| | Total | 392 | 100.0 |
| Housing condition | Made of clay and private | 198 | 50.5 |
| | Made of cement and private | 169 | 43.1 |
| | Made of clay and rented | 13 | 3.3 |
| | Made of cement and rented | 4 | 1.0 |
| | Government | 8 | 2.0 |

Regarding to duration of care giving for the patient two-third 260 (66.3%) of care givers were giving care for at least for five years.

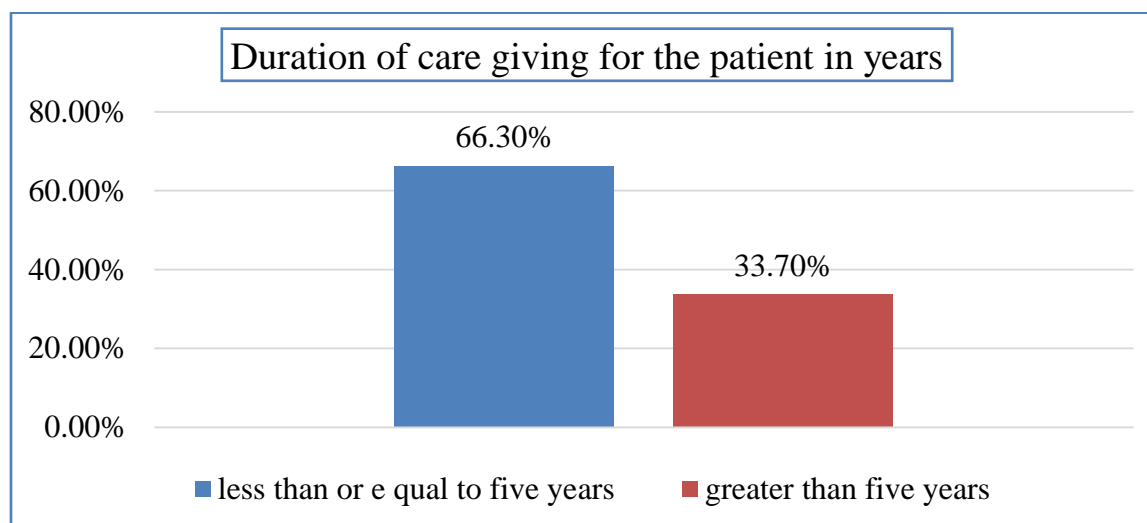


Figure 2 duration of care giving for the patient among care givers of mental ill patients, JUMC, 2021.

Regarding to care givers relationship with the patient about 163 (41.6%) of people living with mental illness were receiving care by their mothers/fathers, in the same fashion 96 (24.5%) patients were received care from their daughters/son (Figure 3).

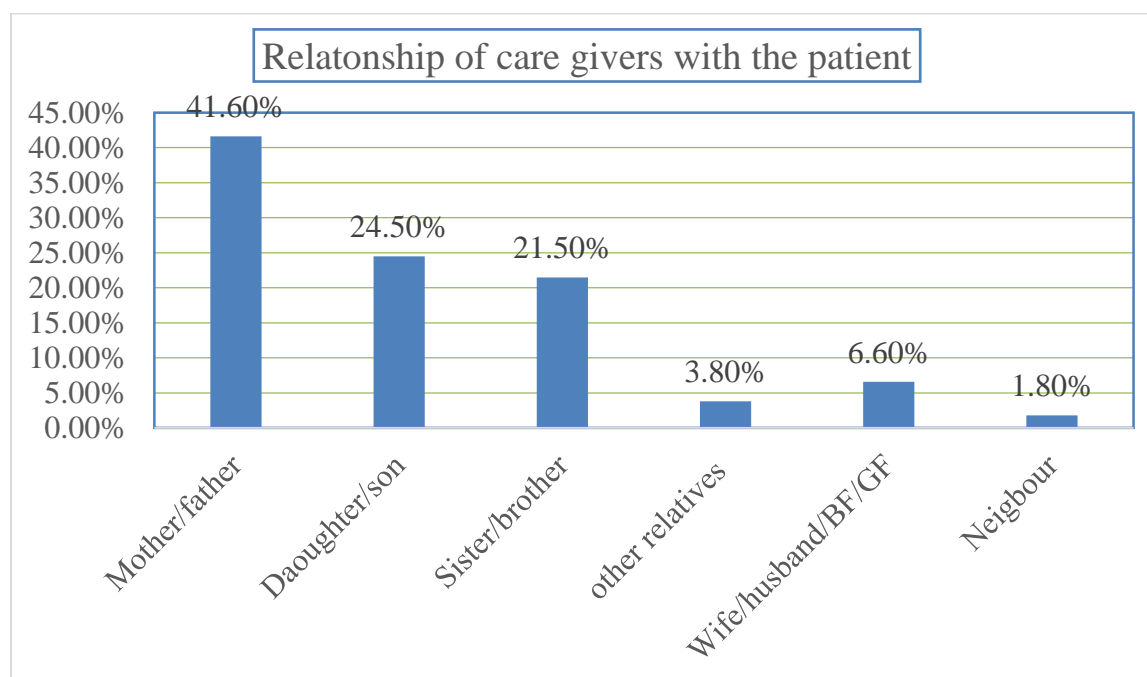


Figure 3 Relationship of care givers with the patient among care givers of mental illness patients attending their follow up at JUMC, 2021.

4.3. Characteristics of care provided to the patients by caregivers

Regarding to the number of caring hours for patient per day, the maximum caring hours giving by care givers for the patient is 24 hours and the minimum was 2 hours per day with the mean and standard deviation 8.41 ± 5.1 hours per day. More than 232 (59.2%) of the study participants were giving care for others in the family other than for patients. Almost nearly two-third 251 (64.0%) of the care givers were giving care for the patient with other care givers (Table 3).

Table 4 Characteristics of care provided to the patients by caregivers of mental illness JUMC, 2021.

| Variables | Category | Frequency | Percent |
|--------------------------------------------|----------|-----------|---------|
| Number of caring hours for patient per day | ≤8hrs | 262 | 66.8 |
| | >8hrs | 130 | 33.2 |
| Caring others in the family | Yes | 232 | 59.2 |
| | No | 160 | 40.8 |
| Did the other family support the patient | Yes | 251 | 64.0 |
| | No | 141 | 36.0 |

4.4. Health related characteristics of care givers

Out of 392 care givers participated in this study 121 (30.9%) of them reported as having any type of chronic illness. Among care givers who have chronic illness about 35 (28.9%) of them was

having diabetes mellitus and 61 (50.4%), 9 (7.4%) add 6 (5.0%) were having hypertension, cardiac problem and asthma respectively (Table 4).

Table 5: health related characteristics of care givers among care givers -with mental illness patients attending their follow up at JUMC, 2021.

| Variables | Categories | Frequency | Percent (%) |
|----------------------------------|-------------------|------------|--------------|
| Having chronic illness | Yes | 121 | 30.1 |
| | No | 271 | 69.9 |
| | Total | 392 | 100.0 |
| Types of chronic illness (n=121) | Diabetes mellitus | 35 | 28.9 |
| | Hypertension | 61 | 50.4 |
| | Cardiac problem | 9 | 7.4 |
| | Asthma | 6 | 5.0 |
| | Others * | 10 | 8.3 |
| | Total | 121 | 100.0 |

4.5. Level of psychological burden among care givers

In this study the mean and standard deviation of care givers psychological burden that had giving care for people living with mental illness was 40.16 ± 16.6 . The global burden of care givers of patients with mental illness was 219 (55.9%) 95% CI 51.5-60.5% of which 16.8% were little or no burden, 30.6% mild to moderate burden, 42.1% were moderate to severe burden and 10.5% were reported as having severe psychological burden of care givers for mental ill patients (Figure 4).

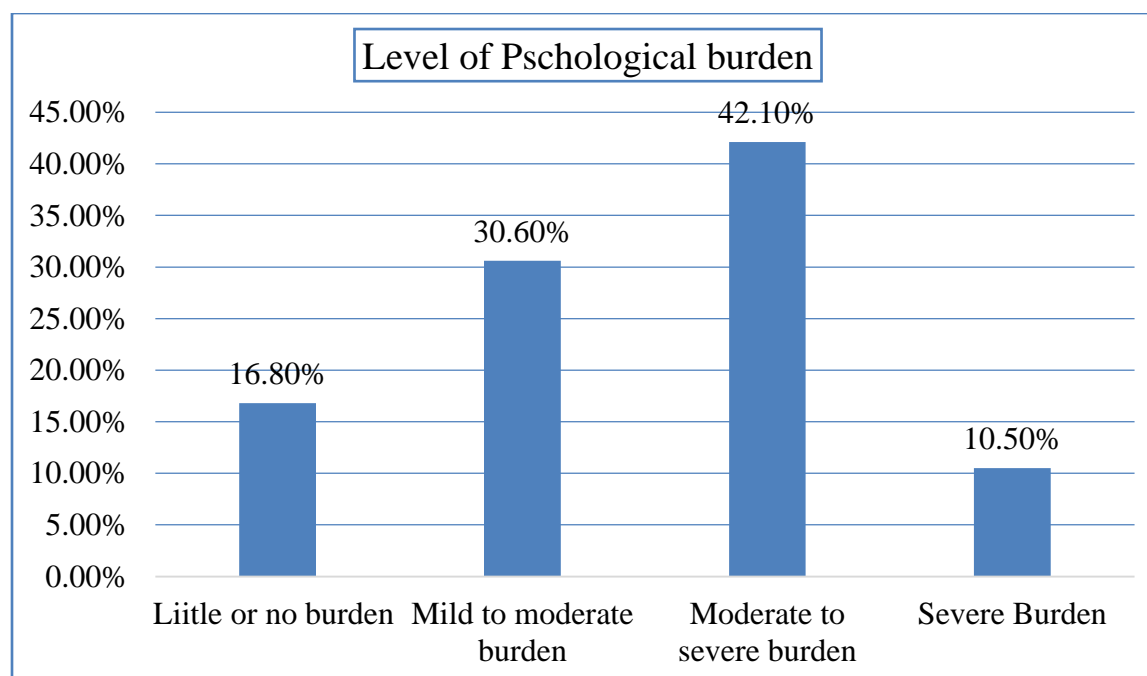


Figure 4 Level of psychological burden among care givers giving care for mentally ill patients, JUMC, 2021.

4.6. Distribution of coping strategies among care givers

The description of coping strategies of respondents while they are giving care for persons with mental illness were illustrated in the below table. The mean and standard deviation of self-destruction was 3.80 ± 1.40 . Similarly the mean and standard deviation of active coping among care givers of persons with mental illness was 4.10 ± 1.37 . However, religion was not considered as either avoidant or approach coping based on the brief cope inventory the mean and standard deviation of religion was 5.17 ± 1.77 (Table 5).

Table 6 Distribution of coping strategies among care givers of mentally ill patients attending their follow up at psychiatric clinic, JUMC, 2021.

| Serial number | Variables | Mean | SD | Range | |
|---------------|----------------------------|------|------|-------|-----|
| | | | | Min | Max |
| 1 | Self-destruction | 3.80 | 1.40 | 2 | 8 |
| 2 | Active coping | 4.10 | 1.37 | 2 | 8 |
| 3 | Denial | 2.86 | 1.32 | 2 | 7 |
| 4 | Substance use | 2.8 | 1.34 | 2 | 8 |
| 5 | Emotional support | 3.74 | 1.67 | 2 | 8 |
| 6 | Use of information support | 4.20 | 1.62 | 2 | 8 |
| 7 | Behavioral engagement | 3.40 | 1.51 | 2 | 8 |
| 8 | Venting | 3.20 | 1.36 | 2 | 7 |
| 9 | Positive reframing | 3.36 | 1.32 | 2 | 8 |
| 10 | Planning | 3.88 | 1.43 | 2 | 8 |
| 11 | Humor | 2.88 | 1.39 | 2 | 8 |
| 12 | Acceptance | 4.53 | 1.64 | 2 | 8 |
| 13 | Religion | 5.17 | 1.77 | 2 | 8 |
| 14 | Self-blame | 3.11 | 1.40 | 2 | 8 |

4.7. Factors associated with psychological burden of care givers

In order to identify the factors associated with psychological burden among care giver of people living with mental ill patients attending at JUMC psychiatric clinic, bivariate and multivariate logistic regression analysis were conducted. The variables at $p\text{-value} \leq 0.25$ on bivariate analysis which included occupation of the patient, educational status of the patient, sex of care givers, educational status of care givers, residence, caring of other member of the family, other take care of the patient with you, having chronic illness, age of care givers, income status and duration of care givers giving care for the patient. Out of this occupational status of the patient, caring other member of the family, age of care givers, income status and duration of giving care for the

patient were found to be a significant association with psychological burden of care givers by multivariate logistic regression at p-value <0.05.

The odds of having psychological burden was 3.9 times higher than among care givers of patients who are farmer in their occupation as compared to individuals or care givers of mental ill patients not having job in their occupation (AOR=3.9 (95 % CI 1.8-8.5, P<0.001). Similarly, the odds of having psychological burden of care givers giving care for mental ill patients was 3.6 times higher than among individuals or care givers of mental ill patients occupation are Government employee as compared to individuals or care givers from not having jobs (AOR=1.4 (95% CI 1.5,8.5, P=0.003). Additionally, the odds of having psychological burden was 7.4 times higher than among care givers of mental ill patient's occupation are housewife as compared to individuals or care givers from patients not having jobs (AOR=7.4 (95% CI 3.3,16.7,P<0.001).

Care givers of mentally ill patients whose age greater than 40 years old are 1.8 times more likely had psychological burden compared to care givers age are less than 30 years (AOR 1.8 (95% CI 1.06, 3.2, P=0.029). The odds of having psychological burden was 2 times higher than among care givers monthly income are greater than 2000 ETB as compared to individuals having monthly income less than 1000 ETB (AOR=2.0 (95 % CI 1.2, 3.5, P=0.008). Care givers who had gave car for the patient more than 5 years are 1.8 times more likely having psychological burden compared to care givers giving care for the patient less than 5 years (AOR=1.8 95% CI 1.08,3.0, P=0.024). Additionally, individuals who are giving care for other members of the family other than the patient are 1.6 times more likely having psychological burden compared to care givers didn't give care for other family member (AOR=1.6 95% CI 1.05, 2.07, P=0.029).

Binary and Multivariable logistic regression model to identify factors associated with Psychological burden among care givers of mentally ill patients in JUMC, Oromia, south west Ethiopia, 2021.

| Variables | Category | Outcome Variables | | COR 95%CI | AOR 95%CI |
|-----------------------------------------------------|-----------------------|---------------------------------|-----------------------------|---------------|-----------------|
| | | Having psychological burden (%) | No psychological burden (%) | | |
| Occupational status of the patient | Farmer | 65(60.2) | 43(39.8) | 3.6(1.8,7.4) | 3.9(1.8,8.4)* |
| | Daily laborer | 22(33.3) | 44(66.7) | 1.2(0.5,2.6) | 1.4(0.6,3.3) |
| | Government employee | 38(61.3) | 24(38.7) | 3.8(1.7,8.4) | 3.6(1.6,8.5)* |
| | NGO | 7(77.8) | 2(22.7) | 8.4(1.5,45.2) | 8.1(1.4,45.2)* |
| | House wife | 72(75.0) | 24(25.0) | 7.2(3.4,15.4) | 7.4(3.3,16.7)* |
| | No working | 15(70.6) | 36(29.4) | 1 | 1 |
| Educational status of the patient | Cannot read and write | 46(64.8) | 25(35.2) | 1 | 1 |
| | Can read and write | 7(36.8) | 12(63.2) | 0.3(0.1,0.9) | 0.7(0.3,1.6) |
| | Primary | 44(45.8) | 52(54.2) | 0.5(0.2,0.8) | 0.3(0.08,0.9) |
| | Secondary | 68(44.3) | 54(55.7) | 0.7(0.4,1.2) | 0.5(0.3,1.3) |
| | Above 12 | 54(64.3) | 30(35.7) | 0.9(0.5,1.8) | 1.05(0.5,2.2) |
| | Sex of care givers | Female | 88(57.5) | 65(42.5) | 1 |
| Male | | 131(54.8) | (45.2) | 1.5(0.9,2.2) | 1.6(0.9,2.7) |
| Educational status of care givers | Cannot read and write | 40(52.6) | 36(47.4) | 1 | 1 |
| | Can read and write | 37(52.9) | 33(47.1) | 1.1(0.5,1.9) | 0.8(0.4,1.8) |
| | Primary | 71(65.7) | 37(34.3) | 1.7(0.9,3.2) | 0.8(0.3,1.8) |
| | Secondary | 30(42.3) | 41(57.7) | 0.6(0.3,1.3) | 1.2(0.5,2.7) |
| | Above 12 | 41(61.2) | 26(38.8) | 1.4(0.7,2.8) | 0.5(0.2,1.1) |
| | Residence | Rural | 79(49.7) | 80(50.3) | 1 |
| Urban | | 140(39.9) | 93(60.1) | 1.5(1.01,2.3) | 1.3(0.7,2.2) |
| Caring of other member of the family | Yes | 113(48.7) | 119(51.3) | 1 | 1 |
| | No | 106(66.2) | 54(33.8) | 2.06(1.4,3.2) | 1.7(1.05,2.7)* |
| Other take care of the patient with you | Yes | 133(67.0) | 118(53.0) | 1 | 1 |
| | No | 86(61.0) | 55(39.0) | 1.4(0.9,2.1) | 1.2(0.7,1.9) |
| Having chronic illness | Yes | 77(63.6) | 44(36.4) | 1.6(1.02,2.5) | 0.99(0.5,1.6) |
| | No | 142(52.4) | 129(47.6) | 1 | 1 |
| Age of care givers | <30 | 67(48.9) | 70(51.1) | 1 | 1 |
| | 31-40 | 51(51.5) | 48(48.5) | 1.1(0.6,1.8) | 1.04(0.6,1.9) |
| | ≥40 years | 101(64.7) | 55(35.3) | 2.0(1.2,3.06) | 1.8(1.06,3.2)* |
| Income status (ETB) | ≤1000 | 82(49.1) | 85(50.9) | 1 | 1 |
| | 1001-2000 | 52(52.4) | 44(45.8) | 1.1(0.7,1.8) | 1.3(0.7,2.3) |
| | >2000 | 85(65.9) | 44(34.1) | 1.9(1.2,3.0) | 2.07(1.2,3.6)* |
| Duration of care givers giving care for the patient | ≤5 years | 136(52.7) | 124(47.7) | 1 | 1 |
| | >5 years | 37(28.0) | 95(72.0) | 2.8(1.8,4.4) | 1.8(1.08,3.01)* |

* Indicates the independent factors associated with psychological burden at $p < 0.05$.

4.2. Discussion of results

This study tried to assess the magnitude of psychological burden of care givers and associated factors among mentally ill patients admitted to psychiatric clinic of JUMC. The result of this study indicated that the magnitude of psychological burden of care givers of mentally ill patients was 219 ((55.9%) 95% CI 51.5-60.5%). The factors associated with psychological burden of care givers were occupational status of the patient, caring other member of the family, age of care givers, income status and duration of giving care for the patient.

In this study the mean age of care givers was 39.38 ± 16.7 years old its lower than a study conducted in Brazilian Hospital which was the mean age of care givers was 49 (\pm SD 12.8, range 23–77 years old) (São, Ribeiro, & Paulo, 2019). Similarly, in this study the sex distribution of care givers was by default 1 to 1, in contrast according to study conducted in in Universal College of Medical Sciences, Teaching Hospital, Bhairahawa, Nepal showed that only 26% of care givers were females (Darlami, Ponnose, & Jose, 2015).

This study revealed that about 27.6% of care givers attended primary school and 18.1% of care givers had attended secondary school. The current study is lower than a study conducted in Farshchian psychiatry Hospital in Hamadan, Iran which was 36.8% held primary school, 45.3% held high school (Shamsaei, 2015).

In this study the proportion of psychological burden of moderate to severe burden was 42.1%, this finding is in slightly line with study conducted in Brazil which was the proportion of moderate to severe was 38.4%, this finding is also somewhat in line with a study conducted in Farshchian psychiatry Hospital in Hamadan, Iran which the proportion of moderate to severe burden was 41.8% (São, Ribeiro, & Paulo, 2019; Shamsaei, 2015).

However, the finding of this study was found to be lower than compared to those of studies conducted in Farshchian psychiatry Hospital in Hamadan, Iran which was the proportion of severe burden was 27.1% (Shamsaei, 2015), this study also lower than a study conducted in India which was the proportion of severe burden was 40.9% and the proportion of moderate burden was 59.1% (Sujata Chodankar Walke & Shreemathi S. Mayya, 2019). This study is lower than a study conducted in Nigeria which the proportion of mild to severe burden was 43.25% (Akanni, 2017). The possible reason might be due to methodological differences and socio cultural and economic differences.

In this study duration of caregiving for more than 5-year were 1.8 times higher as compared to care givers giving care for less than 5 years. Similar studies are supported this study like a study done India, Iran and Eritrea (Hidru, Osman, & Lolokote, 2016). The possible justification is due to that as the duration of care giving becomes increasing the psychological burden also increases because of the disease is becomes more chronic or worse as a result the care givers also becomes developing burden.

The odds of having psychological burden was 1.8 times higher than among care givers age greater than 40 years old compared to their counterparts. Similar studies are supported this study like a study done in Brazil, Iran and Eritrea (Hidru et al., 2016; Lúcia et al., 2017; Shamsaei, 2015). The possible justification could be if the care givers age increases the mentality and the power or energy of giving care to the patient is reduced and it implies that the psychological burden of care givers will be high.

The odds of having psychological burden was 1.7 times higher among care givers caring of other member of the family as compared to who didn't give care for other family members. However, there is no similar study supported this finding, the possible justification was that if care givers are giving care other than the mentally ill patients in the family, the burden is being dual. Additionally, the psychological burden was 2.0 times higher among care givers family income > 2000 ETB as compared to having < 1000 ETB, this finding is also not supported by another study but in this case if family income is high the family member including mentally ill patient can easily access different substances which could be aggravated their illness and it will be increased psychological burden indirectly to care givers.

Additionally, the psychological burden was 2.0 times higher among care givers family income > 2000 ETB as compared to having < 1000 ETB, this finding is also not supported by another study but in this case if family income is high the family member including mentally ill patient can easily access different substances which could be aggravated their illness and it will be increased psychological burden indirectly to care givers.

Chapter five

5. Summary, conclusion and recommendation

5.1. Summary

The result of this study indicated that the magnitude of psychological burden of care givers of mentally ill patients was 219 ((55.9%) 95% CI 51.5-60.5%). The factors associated with psychological burden of care givers were occupational status of the patient, caring other member of the family, age of care givers, income status and duration of giving care for the patient.

The mean age of care givers was 39.38 ± 16.7 years old its lower than a study conducted in Brazilian Hospital which was the mean age of care givers was 49 (\pm SD 12.8, range 23–77 years old). About 27.6% of care givers attended primary school and 18.1% of care givers had attended secondary school.

Psychological burden of moderate to severe burden was 42.1%, this finding is in slightly line with study conducted in Brazil which was the proportion of moderate to severe was 38.4% and duration of caregiving for more than 5-year were 1.8 times higher as compared to care givers giving care for less than 5 years.

On the other hand, the odds of having psychological burden was 1.8 times higher than among care givers age greater than 40 years old compared to their co The odds of having psychological burden was 1.7 times higher among care givers caring of other member of the family as compared to who didn't give care for other family members. However, there is no similar study supported this finding, the possible justification s that if care givers are giving care other than the mentally ill patients in the family the burden is being dual.

Concerning Level of psychological burden among care givers, the mean and standard deviation of care givers psychological burden that had giving care for people living with mental illness was 40.16 ± 16.6 . The global burden of care givers of patients with mental illness was 219 (55.9%) 95% CI 51.5-60.5% of which 16.8% were little or no burden, 30.6% mild to moderate burden, 42.1% were moderate to severe burden and 10.5% were reported as having severe psychological burden of care givers for mental ill patients.

Regarding to coping mechanism, the mean and standard deviation of self-destruction was 3.80 ± 1.40 . Similarly the mean and standard deviation of active coping among care givers of mentally ill patients was 4.10 ± 1.37 . However, religion was not consider as either avoidant or

approach coping based on the brief cope inventory the mean and standard deviation of religion was 5.17 ± 1.77 .

In order to identify the factors associated with psychological burden among care giver of people living with mental ill patients attending at JUMC psychiatric clinic, bivariate and multivariate logistic regression analysis indicated that, the variables at $p\text{-value} \leq 0.25$ on bivariate analysis which included occupation of the patient, educational status of the patient, sex of care givers, educational status of care givers, residence, caring of other member of the family, other take care of the patient with you, having chronic illness, age of care givers, income status and duration of care givers giving care for the patient.

5.2 Conclusion

In this study magnitude of general psychological burden of care givers of mentally ill patients attending their follow up at psychiatric clinic of JUMC was 55.9% (95% CI 51.5-60.5%) of which 16.8% were little or no burden, 30.6% mild to moderate burden, 42.1% were moderate to severe burden and 10.5% were reported as having severe psychological burden of care givers for mental ill patients. This study also assessed the coping strategies of respondents while they giving care for mentally ill patients. Among coping mechanism the mean and standard deviation of self-destruction was 3.80 ± 1.40 . Similarly, the mean and standard deviation of active coping among care givers of mentally ill patients was 4.10 ± 1.37 . However, religion was not consider as either avoidant or approach coping based on the brief cope inventory the mean and standard deviation of religion was 5.17 ± 1.77 . Finally, factors associated with care givers psychological burden age of care givers, caring of other family members, duration of caring the patient, monthly income and occupational status of the patient were the independent predictor variables of knowledge about psychological burden.

5.3 Recommendation

Based on the findings of the study, the following recommendations are given.

- Detail assessment and early diagnosis on the care givers, and early communication with professionally skilled counselors will improve health care
- Counseling practices should be practiced by giving education the techniques of behavioral change and psychotherapy
- Well organized counseling unit and specialty on counseling psychology need to be Established by Jimma University in Jimma Medical Center.

- Jimma Town Health Office should facilitate health education program to enhance awareness and knowledge about the caring of individuals with mental illness
- Working integrated with different stake holders to promote psychological counseling and handling for care givers of mentally ill patients.
- Should encourage and enhance health facilities to give regular health education program
- Should conduct routinely health education program for care givers about how to give care for peoples living with mental ill patients through increase psychological characteristics such as social support systems, family relationships and cultural beliefs.
- In the future researchers should conduct other longitudinal studies in order to know the causal factors of psychological burden of care givers of mental ill patients.

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Appendix

Annex A; English version questionnaires

| Part one; Demographic and socio economic characteristics patients | | | |
|------------------------------------------------------------------------------|----------------------------------|------------------------------------------------------------------------------------------------------------|--------|
| s.n | Questions | Response | Remark |
| 101 | Age of the patient | _____ year | |
| 102 | Sex | 1. Female 2. Male | |
| 103 | Marital status of the patient | 1. Married 2. Single 3. Divorced 4. Widowed | |
| 104 | Occupation | 1. Farmer 2. Daily laborer 3. Government employee 4. NGO 5. House Wife | |
| 105. | Educational level of the patient | 1. Cannot read and cannot read 2. Can read and write 3. Primary 4. Secondary 5. Above 12 | |
| 106 | Types of diagnosis | _____ | |
| Part II demographic and socio economic characteristics of care givers | | | |
| 201 | sex | _____ | |
| 202 | Age | _____ | |
| 203 | Ethnicity | 1. Oromo 2. Amhara 3. Kaffa 4. Dawuro 5. Yemi 6. Others | |
| 204 | Religion | 1. Muslim 2. Orthodox 3. Protestant 4. Catholic 5. Others | |
| 205 | Educational status | 1. Can't read and write 2. Can read and write 3. primary(1-8) 4. secondary (9-12) 5. above 12 | |
| 206 | Marital status | 1. Married 2. Single 3. Divorced 4. Widowed | |
| 207 | Occupational status | 1. Farmer 2. Daily laborer 3. Government employee 4. NGO | |

| | | | | | |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|----------------------|-----------------------------|
| | | 5. House Wife | | | |
| 208 | Residence | 1. Rural 2. Urban | | | |
| 209 | Family income | In ETB_____ | | | |
| 210 | Duration of care giving | In years_____ | | | |
| 211 | Relationship with patient | 1. Mother/father 2. Daughter/son 3. Sister/brother 4. Other relative 5. Wife/husband/partner/boyfriend/girlfriend 6. Neighbor 7. Others | | | |
| 212 | Living with the same house with patient | 1. Yes 2. No | | | |
| Part three: Characteristics of care provided to the patients by caregivers | | | | | |
| 301 | Number of caring hours for patient per day | In hours _____ | | | |
| 302 | Caring for other members of the family | 1. Yes 2. No | | | |
| 303 | Others take care of the patient with you. | 1. Yes 2. No | | | |
| Part Four: health related characteristics of care givers | | | | | |
| 401 | Do you have any chronic illness | 1. Yes 2. No | If no skip to 501 | | |
| 402 | For q401 if yes which type of chronic illness | 1. DM 2. HTN 3. Cardiac problem 4. Asthma 5. Others | | | |
| Part Five: Questionnaires to assess the burden of care givers | | | | | |
| Items | | Scores | | | |
| | | Never (0) | Rarely (1) | Sometimes (2) | Quite frequently (3) |
| 501 | Own house Do you feel that your relative asks for more help than he/she needs? | | | | |
| 502 | Do you feel that because of the time you spend with your relative that you don't have enough time for yourself? | | | | |
| 503 | Do you feel stressed | | | | |

| | | | | | | |
|-----|--------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|
| | between caring for your relative and trying to meet other responsibilities for your family or work? | | | | | |
| 504 | Do you feel embarrassed over your relative's behaviour? | | | | | |
| 405 | Do you feel angry when you are around your relative? | | | | | |
| 506 | Do you feel that your relative currently affects our relationships with other family members or friends in a negative way? | | | | | |
| 507 | Are you afraid what the future holds for your relative? | | | | | |
| 508 | Do you feel your relative is dependent on you? | | | | | |
| 509 | Do you feel strained when you are around your relative? | | | | | |
| 510 | Do you feel your health has suffered because of your involvement with your relative? | | | | | |
| 511 | Do you feel that you don't have as much privacy as you would like because of your relative? | | | | | |
| 512 | Do you feel that your social life has suffered because you are caring for your relative? | | | | | |
| 513 | Do you feel uncomfortable about having friends over because of your relative? | | | | | |
| 514 | Do you feel that your relative seems to expect you to take care of him/her as if you were the only one he/she could depend on? | | | | | |
| 515 | Do you feel that you don't have enough money to take care of your relative in addition to the rest of your expenses? | | | | | |
| 516 | Do you feel that you will be unable to take care of | | | | | |

| | | | | | | |
|-----|-------------------------------------------------------------------------------|--|--|--|--|--|
| | your relative much longer? | | | | | |
| 517 | Do you feel you have lost control of your life since your relative's illness? | | | | | |
| 518 | Do you wish you could leave the care of your relative to someone else? | | | | | |
| 519 | Do you feel uncertain about what to do about your relative? | | | | | |
| 520 | Do you feel you should be doing more for your relative? | | | | | |
| 521 | Do you feel you could do a better job in caring for your relative? | | | | | |
| 522 | Overall, how burdened do you feel in caring for your relative? | | | | | |

Part Six: coping strategy characteristics of care givers

| ITEMES | | Scores | | | |
|--------|----------------------------------------------------------------------------------|---------------------------------|------------------|---------------------|----------------------------------|
| | | I haven't doing this at all (1) | A little bit (2) | A medium amount (3) | I have been doing this a lot (4) |
| 601 | I've been turning to work or other activities to take my mind off things. | | | | |
| 602 | I've been concentrating my efforts on doing something about the situation I'm in | | | | |
| 603 | I've been saying to myself "this isn't real" | | | | |
| 604 | I've been using alcohol or other drugs to make myself feel better | | | | |
| 605 | I've been getting emotional support from others | | | | |
| 606 | I've been giving up trying to deal with it | | | | |
| 607 | I've been taking action to try to make the situation better. | | | | |
| 608 | I've been refusing to believe that it has happened. | | | | |
| 609 | I've been saying things to let my unpleasant feelings escape. | | | | |
| 610 | I've been getting help and advice from other people | | | | |

| | | | | | |
|-----|--------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
| 611 | I've been using alcohol or other drugs to help me get through it. | | | | |
| 612 | I've been trying to see it in a different light, to make it seem more positive | | | | |
| 613 | I've been criticizing myself. | | | | |
| 614 | I have been trying to come up with a strategy about what to do. | | | | |
| 615 | I've been getting comfort and understanding from someone. | | | | |
| 616 | I've been giving up the attempt to cope. | | | | |
| 617 | I've been looking for something good in what is happening | | | | |
| 618 | I've been making jokes about it. | | | | |
| 619 | I've been doing something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping, or shopping. | | | | |
| 620 | I've been accepting the reality of the fact that it has happened | | | | |
| 621 | I've been expressing my negative feelings. | | | | |
| 622 | I've been trying to find comfort in my religion or spiritual beliefs. | | | | |
| 623 | I've been trying to get advice or help from other people about what to do. | | | | |
| 624 | I've been learning to live with it | | | | |
| 625 | I've been thinking hard about what steps to take. | | | | |
| 526 | I've been blaming myself for things that happened | | | | |
| 627 | I've been praying or meditating | | | | |
| 628 | I've been making fun of the Situation. | | | | |

Thank for your participation!

Annex B; Afaan oromo version questionnaires

| Kutaa Tokko; odeeffanoo baayyinaa fi hawasaa diinagdee dhukkubsatotaa irratti xiyyeefate | | | |
|------------------------------------------------------------------------------------------------------------|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|-------|
| Lakk | Gaaffilee | Deebii | Yaada |
| 101 | Umrii dhukkubsataa | Waggaa _____ | |
| 102 | Saala | 1. Dubara 2. Dhiira | |
| 103 | Haala gaaila dhukkubsataa | 1. Kan fuudhe/heerumte 2. Kan hin fuune/hin heerumne 3. Kan addaan baate/bahe 4. Kan irraa due/duute | |
| 104 | Hojii | 1. Qonnaan bulaa 2. Dafqaan bulaa 3. Hojjataa mootummaa 4. Hojjataa mitimootummaa 5. Haadha warraa | |
| 105. | Sadarkaa barumsaa dhukkubsataa | 1. Kan dubbisuf barressuu hin dandeenye 2. Kan dubbisuf barressuu dandau 3. Sadarkaa jalqabaa 4. Sadarkaa lammaffaa 5. 12 ol | |
| 106 | Gosa dhukkubaa | _____ | |
| Gaaffilee kutaa II odeeffannoo baayyinaa fi hawaasa diinagdee dhukkubsachiftotaa irratti xiyyeefate | | | |
| 201 | Saala | 1. Dubara 2. Dhiira | |
| 202 | Umrii | _____ | |
| 203 | Sanyii/Qomoo | 1. Oromoo 2. Amaara 3. Kafaa 4. Dawroo 5. Yamii 6. Kan biroo | |
| 204 | Amantaa | 1. Musliima 2. Ortodoksii 3. Protestantii 4. Kaatolikii 5. Kan biroo | |

| | | | |
|------------------------------------------------------------------------|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 205 | Sadarkaa barumsaa | <ol style="list-style-type: none"> 1. Kan dubbisuuf barreessuu hin dandeenye 2. Kan dubbisuuf barreessuu dandau 3. Sadarkaa tokkoffaa (1-8) 4. Sadarkaa lammaffaa (9-12) 5. 12 ol | |
| 206 | Haala gaailaa | <ol style="list-style-type: none"> 5. Kan fuudhe/Kan heerumte 6. Kam hin fuune/kan hin heerumne 7. Kan addaa baate/bahe 8. Kan irraa due/kan irraa duute | |
| 207 | Hojii | <ol style="list-style-type: none"> 1. Qonnaan bulaa 2. Dafqaan bulaa 3. Hojjataa mootummaa 4. Hojjataa mitimootummaa 5. Haadha warraa | |
| 208 | Teessoo | <ol style="list-style-type: none"> 1. Baadiyyaa 2. Magaalaa | |
| 209 | Galii maatii | ETB _____ | |
| 210 | Turtii dhukkubsachiisummaa | Waggaadhaan _____ | |
| 211 | Walitti dhufeenya dhukkubsataa waliini | <ol style="list-style-type: none"> 1. Haadha/Abbaa 2. Intala / Ilma 3. Obboleetti / Obboleessa 4. Fira kan biraa 5. Haadha warraa/ Abbaa warraa / Kaadhimaa 6. Ollaa 7. Kan biroo | |
| 212 | Dhukkubsataa waliin mana tokko jiraattu | <ol style="list-style-type: none"> 1. Eeyye 2. Lakki | |
| 213 | Haala galii maatiichaa | <ol style="list-style-type: none"> 1. Olaanaa 2. Giddugaleessa 3. Gadaanaa 4. Baayyee gadaanaa | |
| 214 | Qodaa mana keessaa qabanu | <ol style="list-style-type: none"> 1. Bishaan bombaa 2. Tajaajila Ibsaa 3. Televiziyoona 4. Diilalleessaa/Friijii | |
| 215 | Haala mana jireenyaa | <ol style="list-style-type: none"> 1. Kan dhunfaa dhoqqeedhaan ijaarame 2. Kan dhunfaa simintoodhaan ijaarame 3. Kan kiraa Dhoqqeedhaan ijaarame 4. Kan kiraa simmintoodhaan ijaarame 5. Kan mootummaa | |
| Kutaa Sadii – Haala Kununsa dhukkubsataaf guddistootaan godhamu | | | |

| | | | |
|-----|---------------------------------------------------|----------------------|--|
| 301 | Sa'atii guyya guyyaan kunuunsa dhukkubsataaf oolu | Sa'aatii_____ | |
| 302 | Kunnunsa maatii birootiif ni godhama | 1. Eeyye 2. Lakki | |
| 303 | Maatiin biraa dhukkubsataaf kunnunsa ni godha | 1. Eeyye 2. Lakki | |

Kutaa Afur-Haala fayyaa kununsistootaa waliin wal qabate

| | | | |
|-----|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------|---------------------------|
| 401 | Dhukkuba dhaabbataa/isinirra ture qabdu | 1. Eeyye 2. Lakki | Yoo lakki tae 501tti cehi |
| 402 | Gaaffii 401f deebiin keessan eeyye yoo tae dhukkuba gosa kami | 1. Dhiibbaa dhiigaa 2. Dhukkuba sukkaaraa 3. Dhukkuba onnee 4. Asmii 5. Kan biroo | |

Kutaa shan-Dhiibbaa kununsitootaa hubachuuf gaaffii qophaae

| Gosoota | | ውጤቶች | | | | |
|---------|------------------------------------------------------------------------------------------------------------------|--------------|-------------------|-------------------|-------------------|----------------|
| | | Gonkumaa (0) | Yeroo xiqqoof (1) | Al tokko tokko(2) | Yeroo baayyee (3) | Yeroo hunda(4) |
| 501 | Mana kessanitti firri keessan gargaarsa isa barbaachisu ol waan gaafatu isinitti fakkaataa ? | | | | | |
| 502 | Fira keessan waliin yemmuu taatan ofii keesaniif yeroo barbaachisu akka hin kennine isinitti dhagahama ? | | | | | |
| 503 | Fira keessan kunuunsuu fi maatii yookin hojii keessan gidduutti itti gaafatamummaa biraa bahachuuf ni dhiphattu? | | | | | |
| 504 | Amala fira keessaniin ni yeellaatu? | | | | | |
| 405 | Fira keessan waliin yammuu taatan ni aartu? | | | | | |
| 506 | Firri keessan walitti dhufeenya maatii biraa yookiin hiriyoota | | | | | |

| | | | | | | |
|-----|----------------------------------------------------------------------------------------------------------|--|--|--|--|--|
| | keessan waliin qabdan ni booreessa jettanii yaaddu? | | | | | |
| 507 | Firri keessan gara fuuladuraatti wanti isa muudatu isin yaaddessa? | | | | | |
| 508 | Firri keessan isinirratti akka maxxane isinitti dhagahama? | | | | | |
| 509 | Naannoo fira keessanii yemmuu taatan ni dhiphattuu? | | | | | |
| 510 | Gargaarsa fira keessaniif gootaniin akka fayyaan keessan miidhamaa jiru isinitti dhagahama? | | | | | |
| 511 | Fira keessaniin kan kae of dhaggeeffachuuf yeroo akka dhabdan isinitti dhagahama? | | | | | |
| 512 | Fira keessaniin kan kae walitti dhuffeenyi hawaasummaa keessanii miidhamaa akka jiru isinitti dhagahama? | | | | | |
| 513 | Fira keessaniin kan kae hiriyoota keessan arguuf ni yeellaatu? | | | | | |
| 514 | Firri keessan kunuunsa argachuuf isin qofa kan filatu/filattu isinitti fakkaataa? | | | | | |
| 515 | Baasii ofii keessanii alatti fira keessan kunuunsuuf qarshii gahaa akka hin qabne isinitti dhagahama? | | | | | |
| 516 | Fira keessan yeroo dheeraf kunuunsuu akka hin dandeenye isinitti dhagahamaa? | | | | | |
| 517 | Dhukkuba fira keessanii booda jiruu keessan toachuu akka dadhabdan isinitti dhagahamaa? | | | | | |
| 518 | Kunuunsa fira keessanii nama biraatti dhiisuu ni barbaadduu? | | | | | |

| | | | | | | |
|------|---------------------------------------------------------------------------------------|--|--|--|--|--|
| 519 | Waaee fira keessanii maal gochuu akka qabdan wallaaltaniittuu? | | | | | |
| 5 20 | Fira keesaniif caalaatti akka hojjachuu qabdan isinitti dhagahama? | | | | | |
| 521 | Fira keessan kunuunsuuf hojii dabalataa hojjachuu akka dandeessan isinitti dhagahama? | | | | | |
| 522 | Walumaa galatti fira keessan kunuunsuuf ba'aa hammamiitu isinitti dhagahama? | | | | | |

Kutaa jaha –Gahumsa Kunuunsa kennitoota beekuuf gaaffii bahe

| Gosoota | | Kana gonkumaa hin godhu (1) | Xiqqoo (2) | Giddu Galeessummaan (3) | Kana yeroo heddu nan godha (4) |
|----------------|---------------------------------------------------------------------------------------------------|-----------------------------|------------------------------------------------------------------------------------------|-------------------------|--------------------------------|
| | | 601 | Sammuu koo bilisa gochuuf gara hojiitii yookiin wantoota biraatti fuula naannesseen ture | | |
| 602 | Haalan amma jirurratti waan tokko gochuuf yaalaan jira | | | | |
| 603 | Ofii kootiif “kun dhugaa miti” jedhaan ture | | | | |
| 604 | Miirri gaariin akka natti dhagahamuuf alkoolii yookin qoricha sammuu adoochuutti fayyadamaan ture | | | | |
| 605 | Gargaarsa xinsammuu namoota kan boroo irraa argachaan ture | | | | |
| 606 | Kana dandamachuuf abdii kuteen ture | | | | |
| 607 | Haalicha foyyeessuuf yaalii garaa garaa taasiseen ture | | | | |
| 608 | Waan uumame tae jedhee amanuuf rakkadheen ture | | | | |
| 609 | Yeroo namatti hin tolle sana | | | | |

| | | | | | |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
| | darbuuf waan hin taane hasa'aan ture | | | | |
| 610 | Namoota kaan irraa gargaarsaaf gorsa argachaan ture | | | | |
| 611 | Haala sana keessaa bahuuf Alkoolii yookin qorichoota sammuu adoocha fayyadamaan ture | | | | |
| 612 | Dhugaa akka tae fakkeessuuf ilaalcha addaatiin ilaaluuf yaalera | | | | |
| 613 | Of ceepha'aan ture | | | | |
| 614 | Maal gochuu akkan qabu tooftaa barbaadaan ture | | | | |
| 615 | Sababa nama tokkootiin aara galfataan jira | | | | |
| 616 | Dandamachuuf yaalii gochuu dhiiseera | | | | |
| 617 | Waan ta'aa jiru keessaa waan baroo tokko barbaadaan ture | | | | |
| 618 | Wantaa kanan qoossa jirrituu | | | | |
| 619 | Waan uumame akka na irraanfachiisuuf mana fiilmii deemuu,TV ilaaluu,dubbisuu,guyyaa hojjachuu, rafuu fi gabaa deemuufaan hojjataa ture | | | | |
| 620 | Dhugaa uumame amanee fudhataan jira | | | | |
| 621 | Wantoota natti dhagahame ibsachaan ture | | | | |
| 622 | Amantaa kootiin of tasgabbeessaan ture | | | | |
| 623 | Maal gochuu akkan qabu gorsaa fi gargaarsa namoota biro irraa gaafachaan ture | | | | |
| 624 | Wajjin jirachuu barachaan jira | | | | |
| 625 | Tarkaanfiwwan akkamii fudhachuu akkan qabu cimee itti yaadaan ture | | | | |
| 526 | Waan uumameef of qeeqaan | | | | |

| | | | | | |
|-----|--------------------------------|--|--|--|--|
| | ture | | | | |
| 627 | Waaqa kadhataan ture | | | | |
| 628 | Haalichaan itti bohaaraan ture | | | | |

Annex C; Amharic version questionnaires

| ክፍል አንድ; የስነሕዝብ እና ማህበራዊ ኢኮኖሚያዊ ባህሪዎች ህመምተኞች | | | |
|----------------------------------------------------------|------------------|---------------------------------------------------------------------------------------------------|-------------|
| ት.ቁ | ጥያቄዎች | ምላሽ | ምርመራ |
| 101 | የታካሚው ዕድሜ | _____ አመት | |
| 102 | ፆታ | 3. ሴት 4. ወንድ | |
| 103 | የታካሚው የጋብቻ ሁኔታ | 9. ያገባ/ያገባች 10. ያላገባ/ያላገባች 11. የተፋታች/የፈታ 12. መበለት (ባል የሞተባት/ሚስት የሞተችበት) | |
| 104 | ሥራ | 6. ገበሬ 7. ዕለታዊ ሠራተኛ 8. የመንግስት ሰራተኛ 9. መንግስታዊ ያልሆነ ድርጅት 10. የቤት እመቤት | |
| 105. | የታካሚው የትምህርት ደረጃ | 6. ማንበብ አልተቻለም ማንበብም አይችልም 7. ማንበብ እና መጻፍ ይችላል 8. የመጀመሪያ ደረጃ 9. ሁለተኛ ደረጃ 10. ከ 12 በላይ | |
| 106 | የምርመራ ዓይነቶች | _____ | |
| የእንክብካቤ ሰጪዎች ክፍል II የስነ-ህዝብ እና ማህበራዊ ኢኮኖሚያዊ ባህሪዎች | | | |
| 201 | ፆታ | 2. ሴት 2. ወንድ | |
| 202 | ዕድሜ | _____ | |
| 203 | ቤሔር | 7. አሮሞ 8. አማራ 9. ካፋ 10. ዳውሮ 11. ዩሚ 12. ሌሎች | |
| 204 | ሃይማኖት | 6. ሙስሊም 7. ኦርቶዶክስ 8. ፕሮቴስታንት | |

| | | | |
|----------------------------------------------------|----------------------------|-------------------------------------------------------------------------------------------------------------------------------|--|
| | | 9. ካቶሊክ 10. ሌሎች | |
| 205 | የትምህርት ሁኔታ | 6. ማንበብ እና መጻፍ የማትችል/የማይችል 7. ማንበብ እና መጻፍ የምትችል/የሚችል 8. የመጀመሪያ (1-8) 9. ሁለተኛ (9-12) 10. ከ 12 በላይ | |
| 206 | የጋብቻ ሁኔታ | 13. ያገባ/ያገባች 14. ያላገባ/ያላገባች 15. የተፋታች/የፈታ 16. መበለት (ባል የሞተባት/ሚስት የሞተችበት) | |
| 207 | የሥራ ሁኔታ | 6. ገበሬ 7. ዕለታዊ ሠራተኛ 8. የመንግስት ሰራተኛ 9. መንግስታዊ ያልሆነ ድርጅት 10. የቤት እመቤት | |
| 208 | አድራሻ | 3. ገጠር 4. የከተማ | |
| 209 | የቤተሰብ ገቢ | በ ETB _____ | |
| 210 | የእንክብካቤ መስጫ ጊዜ | ዓመታት ውስጥ _____ | |
| 211 | ከሕመምተኛ ጋር ያለ ግንኙነት | 8. እናት አባት 9. ሴት ልጅ / ወንድ ልጅ 10. እህት / ወንድም 11. ሌላ ዘመድ 12. ሚስት / ባል / አጋር / የወንድ / የሴት ጓደኛ 13. ጎረቤት 14. ሌሎች | |
| 212 | ከታካሚ ጋር ከአንድ ቤት ጋር አብሮ መኖር | 3. አዎ 4. አይ | |
| 213 | የቤተሰብ ኢኮኖሚ ደረጃ በርሶ እይታ | 5. ከፋተኛ 6. መካከለኛ 7. ዝቅተኛ 8. በጣም ዝቅተኛ | |
| 214 | ያላቸው የቤት መገልገያ ቁሳቁስ | 5. የቧንቧ ዉሃ 6. የኤሌክትሮኒክስ አገልግሎት 7. ቴሌቪዥን 8. ፍሪጅ | |
| 215 | የመኖሪያ ቤት ሁኔታ | 6. በጭቃ የተሰራና የግል 7. በሲሚንቶ የተሰራና የግል 8. በጭቃ የተሰራና የክራይ 9. በሲሚንቶ የተሰራና የክራይ 10. የመንግስት | |
| ክፍል ሶስት - በአሳዳጊዎች ለታካሚዎች የሚሰጠው እንክብካቤ ባህሪዎች | | | |

| | | | |
|-----|-----------------------------------|-----------------|--|
| 301 | በየቀኑ ለታካሚ የእንክብካቤ ሰዓቶች ብዛት | በሰዓታት ውስጥ _____ | |
| 302 | ሌሎች የቤተሰብ አባላት እንክብካቤ ማድረግ | 3. አዎ 4. አይ | |
| 303 | ሌሎች ደግሞ ታካሚውን ከእርስዎ ጋር ይንከባከባሉ :: | 3. አዎ 4. አይ | |

ክፍል አራት-ከእንክብካቤ ሰዎች ጤና ጋር የተያያዙ ባህሪዎች

| | | | |
|-----|---------------------------------------|-------------------------------------------------------------|--------------|
| 401 | ማንኛውም ሥር የሰደደ በሽታ አለዎት | 3. አዎ 4. አይ | ወደ 501 ካልዘለሉ |
| 402 | ለ ቁ. 401 አዎ ከሆነ የትኛው ዓይነት ሥር የሰደደ በሽታ | 6. ደም ጊፊት 7. የሱካር በሽታ 8. የልብ ችግር 9. አስም 10. ሌሎች | |

ክፍል አምስት የእንክብካቤ ሰጪዎችን ሽክም ለመገምገም መጠይቆች

| ዕቃዎች | ውጤቶች | | | | |
|--------------------------------------------------------------------------------|----------|-------------|--------------|---------------|-------------------|
| | በጭራሽ (0) | አልፎ አልፎ (1) | አንዳንድ ጊዜ (2) | በጣም ብዙ ጊዜ (3) | ሁልጊዜ ማለት ይቻላል (4) |
| 501 የራስዎ ቤት ዘመድዎ ከሚፈልገው በላይ እርዳታ እንደሚጠይቅ ይስማምታል ? | | | | | |
| 502 ከዘመድዎ ጋር በሚያሳልፉት ጊዜ ለራስዎ በቂ ጊዜ እንደሌለዎት ይስማምታል? | | | | | |
| 503 ዘመድዎን በመንከባከብ እና ለቤተሰብዎ ወይም ለሥራዎ ሌሎች ኃላፊነቶችን ለመወጣት በመሞከር መካከል ውጥረት ይስማምታል? | | | | | |
| 504 በዘመድዎ ባህሪ ላይ ሀፍረት ይስማምታል ? | | | | | |

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| 405 | ከዘመድዎ ጋር በሚሆኑበት ጊዜ ቁጣ ይሰማዎታል? | | | | | |
| 506 | ዘመድዎ በአሁኑ ጊዜ ከሌሎች የቤተሰብ አባላት ወይም ጓደኞች ጋር ያለንን ግንኙነት በአሉታዊ መልኩ እንደሚነካ ይሰማዎታል? | | | | | |
| 507 | ለዘመድዎ የወደፊት ዕጣ ምን እንደሚሆን ይፈራሉ? | | | | | |
| 508 | ዘመድዎ በአንተ ላይ ጥገኛ እንደሆነ ይሰማዎታል? | | | | | |
| 509 | ከዘመድዎ ጋር በሚኖሩበት ጊዜ ውጥረት ይሰማዎታል? | | | | | |
| 510 | ከዘመድዎ ጋር ባለዎት ተሳትፎ ምክንያት ጤንነትዎ እንደተጎዳ ይሰማዎታል? | | | | | |
| 511 | በዘመድዎ ምክንያት የሚፈልጉትን ያህል ግላዊነት እንደሌለዎት ይሰማዎታል? | | | | | |
| 512 | ዘመድዎን በመንከባከብዎ ምክንያት ማህበራዊ ኑሮዎ እንደተጎዳ ይሰማዎታል? | | | | | |
| 513 | በዘመድዎ ምክንያት ጓደኞች ማግኘታቸው ምቹት አይሰማዎትም? | | | | | |
| 514 | ዘመድዎ እሱ / እሷ ብቻ ሊተማመንበት የሚችል ይመስል እርሱን / እርሷን / እርሷን እንደምትጠብቅ የሚጠብቅዎት መስሎ ይሰማዎታል? | | | | | |
| 515 | ከቀሩት ወጪዎችዎ በተጨማሪ ዘመድዎን ለመንከባከብ በቂ ገንዘብ እንደሌለዎት | | | | | |

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| | ይሰማዎታል? | | | | | |
| 516 | ዘመድዎን ረዘም ላለ ጊዜ መንከባከብ እንደማይችሉ ይሰማዎታል? | | | | | |
| 517 | ከዘመድዎ ሕመም በኋላ ሕይወትዎን መቆጣጠር እንደተሳኛት ይሰማዎታል? | | | | | |
| 518 | የዘመድዎን እንክብካቤ ለሌላ ሰው መተውት ፈልጋለህ? | | | | | |
| 519 | በዘመድዎ ላይ ምን ማድረግ እንዳለብዎ እርግጠኛ አለመሆን ይሰማዎታል? | | | | | |
| 520 | ለዘመድዎ የበለጠ መሥራት እንዳለብዎ ይሰማዎታል? | | | | | |
| 521 | ዘመድዎን ለመንከባከብ የተሻለ ሥራ መሥራት እንደሚችሉ ይሰማዎታል? | | | | | |
| 522 | በአጠቃላይ ፣ ዘመድዎን ለመንከባከብ ምን ያህል ሽክም ይሰማዎታል? | | | | | |

ክፍል ስድስት የእንክብካቤ ሰጭዎችን የመርከብ ስትራቴጂ ባህሪዎች

| ዕቃዎች | ውጤቶች | | | |
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| | ይህንን በጭራሽ አላደርገውም (1) | ትንሽ (2) | መካከለኛ መጠን (3) | ይህን ብዙ ጊዜ እሰራ ነበር (4) |
| 601 | ነገሮችን ወደ ከእምሮዬ ለማራቅ ወደ ሥራ ወይም ወደ ሌሎች ሥራዎች ዞራ ነበር :: | | | |
| 602 | አሁን ባለሁበት ሁኔታ ላይ አንድ ነገር ለማድረግ ጥረቴን አተኩራያለሁ | | | |
| 603 | ለራሴ “ይህ እውነት አይደለም” እያልኩኝ ነበር | | | |
| 604 | ጥሩ ስሜት | | | |

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| | እንዲሰማኝ አልኮል ወይም ሌሎች አደጋዎች እጆችን እጠቀም ነበር | | | | |
| 605 | ከሌሎች ስሜታዊ ድጋፍ እያገኘሁ ነው | | | | |
| 606 | እሱን ለመቋቋም ተልቅ አስተዋፆ አደርግ ነበር | | | | |
| 607 | ሁኔታውን የተሻለ ለማድረግ ለመሞከር እርምጃ እየወሰድኩ ነበር :: | | | | |
| 608 | ተከስቷል ብሎ ለማመን አሻፈረኝ አልኩ :: | | | | |
| 609 | ደስ የማይል ስሜቴን እንዲያመልጥ ነገሮችን ስናገር ቆይቻለሁ :: | | | | |
| 610 | ከሌሎች ሰዎች እርዳታ እና ምክር እያገኘሁ ነው | | | | |
| 611 | አልኮልን አልያም ሌሎች አደጋዎች እጆችን እንድወስድ ይረዱኝ ነበር :: | | | | |
| 612 | የበለጠ አዎንታዊ /አወነት/ እንዲመስል ለማድረግ በተለየ ሁኔታ ለማየት ሞክራለሁ | | | | |
| 613 | እራሴን እየነቀፍኩ ነበር :: | | | | |
| 614 | ምን ማድረግ እንዳለብኝ ስትራቴጂ ለማውጣት እየሞከርኩ ነው :: | | | | |
| 615 | ከአንድ ሰው መፅናናትን እና መረዳትን እያገኘሁ ነው :: | | | | |
| 616 | ለመቋቋም ሙከራውን ትቺዋለሁ :: | | | | |
| 617 | በሚሆነው ነገር ውስጥ አንድ ጥሩ ነገር ፈልጌ ነበር | | | | |
| 618 | በዚህ ጉዳይ ላይ ቀልድ እየሠራሁ ነበር :: | | | | |
| 619 | እኔ ወደ ፊልሞች | | | | |

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| | መሄድ ፣ ቱሌቪዥን ማየት ፣ ማንበብ ፣ ቀን መስራት ፣ መተኛት ወይም መገባደጥ ያሉ ነገሮችን ባነሰ ሁኔታ እንዳደርግ ሆኖ ነበር ። | | | | |
| 620 | የተከሰተውን እውነታ እየተቀበልኩ ነው | | | | |
| 621 | አሉታዊ ስሜቶቼን እየገለጽኩ ነበር ። | | | | |
| 622 | በሃይማኖቱ ወይም በመንፈሳዊ እምነቶቼ መፅናናትን ለማግኘት እየሞከርኩ ነው ። | | | | |
| 623 | ምን ማድረግ እንዳለብኝ ከሌሎች ሰዎች ምክር ለማግኘት ወይም ለማገዝ እየሞከርኩ ነበር ። | | | | |
| 624 | አብሬው መኖርን እየተማርኩ ነው | | | | |
| 625 | ምን እርምጃዎችን መውሰድ እንዳለብኝ ጠንክር ብዬ አስብ ነበር ። | | | | |
| 526 | ለተፈጠረው ነገር እራሴን እወቅሳለሁ | | | | |
| 627 | እየጸለይኩ ወይም እያሰላሰልኩ ነበር | | | | |
| 628 | በሁኔታው እየተዘናናዉ ነበር | | | | |