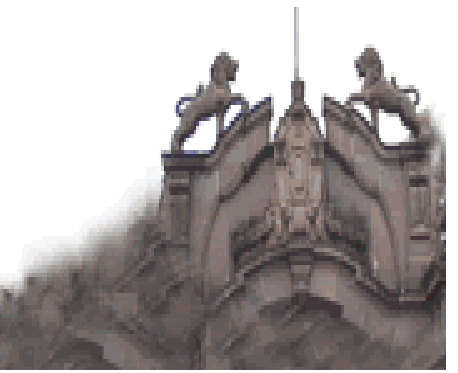


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COLLEGE OF EDUCATION AND BEHAVIORAL STUDIES

SCHOOL OF PSYCHOLOGY

**PSYCHOLOGICAL PROBLEMS OF PARENTS OF CHILDREN WITH
CANCER DISEASE AT TIKUR ANBESSA SPECIALIZED REFERRAL
HOSPITAL, ADDIS ABABA**

BY:

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NOVEMBER, 2020

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ADDIS ABABA UNIVERSITY
COLLEGE OF EDUCATION AND BEHAVIORAL STUDIES
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**Psychological Problems of Parents of Children with Cancer Disease at
Tikur Anbessa Specialized Referral Hospital, Addis Ababa**

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**A Thesis Submitted to the School of Psychology of Addis Ababa University in
Partial Fulfillment of the Requirements for the Master of Arts Degree in
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**Psychological Problems of Parents of Children with Cancer Disease at Tikur
Anbessa Specialized Referral Hospital, Addis Ababa**

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Abbreviations

ASA:	American Psychiatric Association
DASS:	Depression, Anxiety and Stress scale
FMH:	Federal Ministry of Health
GBD:	Global Burden of Diseases
GAD:	Generalized Anxiety Disorder
LMIC:	Low- and Middle-Income Countries
MFMER:	Mayo Foundation for Medical Education and Research
NCD _s :	Non-communicable Diseases
OCD:	Obsessive Compulsive Disorder
PTSD:	Posttraumatic Stress Disorder
SPSS:	Statistical Package for Social Sciences
SSA:	Sub Saharan Africa
TAPCCO:	Tessfa Addis Parents and Children Cancer organization
WHO:	World Health Organization

ABSTRACT

The major objective of this study was to examine the psychological problems of parents of children with cancer disease in Tekur Anbesa specialized referral hospital. The study was employed descriptive survey design with quantitative research method. The data were collected from 199 parents of children with cancer disease using simple random sampling technique. A standardized DAS scale was used to measure the psychological problems of study participants. To analyze the collected data both descriptive ((frequency, percentage, mean and standard deviation) and inferential statistics (Independent sample t-test and One-way ANOVA) was computed. The result from descriptive statistics showed that majority(57.29%) of study participants had mild, moderate, sever, and extremely sever state of depression and similarly more than half of study participants also reported mild, moderate, sever and extremely sever level of anxiety. With regard to stress; however, majority (64.82%) of study participants had a normal state of stress. The independent t-test also revealed that there was not a variation in psychological problems (depression, anxiety and stress) between male and female parents of children with cancer disease. The result from one way- ANOVA also showed that there is no statistically significant difference in depression, anxiety and stress among emerged, young and middle adult parents of children with cancer disease. With regard to educational status, the one way- ANOVA similarly showed that no significant difference in depression, anxiety and stress between non-educated and high-school completed, non-educated and diploma and above holders, primary school completed and high-school completed, primary school completed and diploma and above holders, high-school completed and diploma and above holder parents of children with cancer disease. However, one way ANOVA showed that non-educated parents had higher psychological problems (I.e. depression and anxiety) than primary school completed parents. Based on the finding of the study the researcher; therefore, recommended for Tikur Anbesa specialized referral hospital to improve and make it strong their guidance and counseling system.

CHAPTER ONE

INTRODUCTION

1.1. Background of the Study

American Cancer Society (2018) defines “Cancer” as it is a group of diseases characterized by the uncontrolled growth and spread of abnormal cells. It can result in death.

The reason why the disease develops remains unknown for many types of cancers, particularly those that occur during childhood, there are many known cancer causes, including lifestyle factors, such as tobacco use and excess body weight, and non-modifiable factors, such as inherited genetic mutations, hormones, and immune conditions. (American Cancer Society, 2018).

Max Roser and Hannah Ritchie (2018) state one of the world’s largest health problems is cancer and the global Burden of disease estimate that 9.5 million people died prematurely as a result of cancer in 2017. Children and adolescents under 14 years old accounts for around one percent of cancer death this equates around 110,000 children per year.

Also one national study has shown that (Yohannes, Alula and Belaineh, 2013) cancer is mentioned as an emerging public health issue in Africa, with estimates of 715 000 new cases and 542 000 cancer deaths in 2008. A third of cancer deaths in Africa are potentially preventable, many are caused by chronic infection and tobacco use. An ageing and growing population, together with the adoption of lifestyle habits such as smoking, physical inactivity, and unhealthy, high-calorie, western diets all contribute to the rise of cancer burden in Africa.

Among some the Non communicable diseases, cancer is the major contributor to the high level of mortality and morbidity in Ethiopia (FMH, 2015).

According to Globocan (2012), in Ethiopia, cancer accounts for about 5.8% of total national mortality. Although population-based data do not exist in the country except for Addis Ababa, it is estimated that the annual incidence of cancer is around 60,960 cases and the annual mortality is over 44,000. Patients often present with advanced stages of cancer. Over 80% of deaths from

NCDs are caused by four main diseases cardiovascular disorders, cancer, diabetes mellitus and chronic obstructive pulmonary disease. These four major NCDs share similar risk factors. Modification of risk factors has been shown to reduce morbidity and mortality in people at greater risk.

Tigeneh (2015) state that in Ethiopia oncology practice is so young, awareness even among medical professionals is much lower than expected (Oncology is a branch of medicine that deals with the prevention, diagnosis, and treatment of cancer). In Ethiopia like most sub-Saharan Africa countries, registry of cancer is not available. The Ethiopian oncology service in an organized way was started in Tikur Anbessa Specialized Hospital in 1998 Ethiopian calendar.

Diagnosing cancer in family and particularly in children is often a source of stress in the entire family and can have a psychological effect on parents of child with cancer; parents of cancer patients go through predictable and permanent lifestyle changes after their children are diagnosed with cancer. Some parents of cancer patients may cope adequately with the diagnosis, but a significant number suffer from mental weariness, nervousness, PTSD and feelings of hopelessness (Iqbal A. Siddiqal, 2002 as cited in Shukrya K. Al-Malik, et al 2016).

A sense of vulnerability and awareness of the inability to protect a loved one can lead to an intense sense of hopelessness. Denial or blaming others for the diagnosis may occur in close family members as well. Seeing a loved one vulnerable and fearful can create much distress, especially if this is a big change from the patient's normal personality (Aziza , 2011).

If one patient start treatment for their disease it takes a minimum of 6 months and a maximum of 2 years and above duration based on the type of diagnosis. As far as the knowledge of the researcher is concerned, there is shortage of study regarding psychological problem of parents with children of cancer patients. This study therefore attempts to examine the psychological problems of parents whose children suffer from cancer disease at Tikur Anbessa Specialized Referral Hospital.

1.2. Statement of the problem

The report of the Federal Ministry of Health of Ethiopia (2015) mentioned that the only oncology center in the country is Tikur Anbessa Specialized Hospital. Based on the registries in the center, about 80% of reported cases of cancer are diagnosed at advanced stages, where little can be done to treat the disease. Of those cancer cases diagnosed, children account for 20%. Twelve thousand one hundred ninety two children are reported annually with all forms of cancer diseases in the Ethiopia and Eighty thousand eight hundred die of this disease every Year.

According to Stuber, et al (1994) diagnosing cancer disease in one's child causes psychological devastation for the whole family and, especially for mothers and fathers in particular. Since mothers and fathers could not able to help their sick child cope with the disease they feel depressed. This study prepared to understand Psychological Problems of Parents of Children with Cancer.

Childhood cancer sometimes goes undiagnosed and untreated because people don't have access to specialized medical service they need especially rural areas people do not have the means (finance or transport, etc.) to seek medical help. Even when they get a chance to come urban area for the treatment of their children's they are wasting long time by referring one hospital to other and they come in very late stage when the disease become very serious .

The length (duration) and intensity of treatment can also be as distressing as the disease itself, negatively affecting their functionality as parents and in turn the child's ability to handle the treatment. As a primary care provider mother's and father's responsibility increases substantially starting a vicious cycle of anxiety and socio-economic uncertainty leading them to psychological problems much more than the other family members. Regardless of the alarming prevalence of NCDs and their potential wide-range psychological impact on the totality of patients' and parents' living status, it remained to be a loosely treated issue in national research undertakings. Yet, a focus on the psychological dimension (particularly depression, anxiety and stress) of one of the NCDs cancer. Moreover, in the absence of evidence-based psychological interventions, the human, social and economic costs of NCDs will continue to grow and overwhelm the

capacity of countries to address them. With such conviction, this study was conceived to be undertaken.

1.3. Research questions

The research questions of this study are:

- What is the level of psychological problems experienced by parents of children with cancer disease?
- Is there gender difference in psychological problems among parents of children diagnosed with cancer disease?
- Is there age difference in psychological problems among parents of children diagnosed with cancer disease?
- Is there educational status difference in psychological problems among parents of children diagnosed with cancer disease?

1.4. Objectives of the study

1.4.1 General objective

The general objective of this study was to examine the psychological problems of parents of children diagnosed with cancer disease in Tikur Anbessa Specialized Referral Hospital.

1.4.2 Specific objective

The specific objectives of this study are:

- To examine the level of psychological problems of parents of children diagnosed with cancer disease.
- To examine if there is gender difference in the psychological problems of parents of children diagnosed cancer with disease.
- To examine if there is age difference in the psychological problems of parents of children diagnosed with cancer disease.

- To examine if there is educational status difference in psychological problems of parents of children diagnosed with cancer.

1.5. Significance of the study

Based on the findings of the study and the recommendations given, this study may help psychologists and other related healthcare givers to enhance the families quality of life by decreasing the psychosocial pressure posed by the diseases. Likewise, concerned government bodies can use the finding of the study for policy making and designing evidence-based psychosocial interventions.

Also, the evidences accumulated by this study is believed to help clinicians to consider the psychological aspects of the parents of children with cancer disease during routine visits, that parents could experience, Depression, Anxiety and stress as the result of the pressure posed during taking care of their children. In addition, it will increase awareness of the challenges parents face as a result of their child's diagnosis with cancer. On top of that, it will also assist health and other concerned institutions who are working in the area of childhood cancer directly or indirectly and will also serve as a source for further investigation for other researches in the area.

1.6. Delimitation of the study

There are many types of non-communicable diseases that could be investigated, but the Current study focused on cancer diseases. There are a lot of psychological problems faced in parents of children with cancer that need to be studied; but this study was delimited to depression, anxiety and stress. The study is also delimited to only Tikur Anbesa Specialized Referral Hospital.

Furthermore, the study is confined to parents taking medical care for their children's at Tikur Anbessa Specialized Hospital both inpatient and outpatient levels, also there are different organization who support cancer patients and their parents, But this research is delimited in parents that live in the Tessfa Addis parents and children cancer organization which work cooperatively with Tikur Anbesa Specialized hospital.

1.7. Limitation of the study

Some limitations are observed in the present study. One of the major limitations was inability to access adequate local literatures. Because of this, the researcher was challenged to support the result of the present study through local studies. The other limitation was the data collection process of this study was based on self-reported scales (DAS). Hence, there may be some potential that respondents could made bias because of wrong interpretation (understanding) of the items because most of the research participants are illiterate; however, it would be better if other data collection instruments like interview were included in the study for depth findings.

1.8. Operational definition of terms

Psychological problems: in this study psychological problem refers to depression, anxiety, and stress of parents whose children suffer from cancer measured by Depression, Anxiety, and Stress Scale (DASS)

Parents: - biological parents (mother and father) of children who are suffering from cancer.

Children: - individuals whose age are less than 13 year and who are diagnosed with cancer disease and attending treatment for their disease at Tikur Anbessa Specialized Hospital pediatrics department.

Cancer: - is a type of chronic disease that begins when a particular cell or group of cells in the body begin to multiply and grow without control.

CHAPTER TWO

LITERATURE REVIEW

This chapter deals with review of related literatures related to psychological problems of parents whose Children suffer from cancer, The chapter has six main sections that provide general view on specific elements that Over View of Mental Health and Mental Illness, Defining Chronic Illness, Defining cancer, Describing Childhood Cancer, Psychological problems of parents of children with cancer, Gender difference in psychological problems of parents whose children suffer from cancer .

2.1. Over View of Mental Health and Mental Illness

Mental health is more than the mere lack of mental disorders. It is a state of complete physical, mental and social well-being and not merely the absence of disease, Concepts of mental health include subjective well-being, perceived self efficacy, autonomy, competence, intergenerational dependence and recognition of the ability to realize one's intellectual and emotional potential (WHO, 2012).

Mental problems are highly prevalent in patients with NCDs and portend adverse disease outcomes and increased health care costs. It is well recognized that many individuals with chronic illnesses also have co-morbid unrecognized mental health disorders (Gabriel, 2010).

According to American Psychiatric Association (APA) in (August, 2018), Mental illnesses are health conditions involving changes in emotion, thinking or behavior (or a combination of these). Mental illnesses are associated with distress and/or problems functioning in social, work or family activities.

It has also been defined as a state of well-being whereby individuals recognize their abilities, are able to cope with the normal stresses of life, work productively and fruitfully, and make a contribution to their communities. (WHO, 2012)

Mayo Foundation for Medical Education and Research (MFMER) (1998-2020), state that Mental illness, also called mental health disorders, refers to a wide range of mental health conditions disorders that affect your mood, thinking and behavior. Examples of mental illness include depression, anxiety disorders, schizophrenia, eating disorders and addictive behaviors.

This study describes one of the chronic illnesses that affect mental health of parents of children with cancer disease but we need to define chronic Illness first.

2.2. Defining Chronic Illness

Chronic diseases are non-communicable illnesses that are prolonged in duration, do not resolve spontaneously, and are rarely cured completely. Also conditions that last 1 year or more and require ongoing medical attention or limit activities of daily living or both. Chronic diseases such as heart disease, cancer, and diabetes are the leading causes of death and disability in the United States (National Center for Chronic Disease Prevention and Health Promotion, 2020).

Chronic diseases are the major cause of death and disability worldwide. Chronic diseases took the lives of over 35 million people in 2005, including many young people and those in middle age. 80% of chronic disease deaths occur in low and middle income countries and half are in women. Without action to address the causes, deaths from chronic disease will increase by 17% between 2005 and 2015. The threat is growing the number of people, families and a community afflicted is increasing. This growing threat is an underappreciated cause of poverty and hinders the economic development of many countries. These chronic diseases are cardiovascular diseases, mainly heart disease and stroke; cancer; chronic respiratory diseases; diabetes; others, such as mental disorders, vision and hearing impairment, oral diseases, bone and joint disorders, and genetic disorders (World Health Organization, 2005).

2.3. Defining cancer

Cancer is a broad term describes the disease that results when cellular changes cause the uncontrolled growth and division of cells. Some types of cancer cause rapid cell growth, while others cause cells to grow and divide at a slower rate. Certain forms of cancer result in visible growths called tumors, while others, such as leukemia, do not. Most of the body's cells have specific functions and fixed life spans. While it may sound like a bad thing, cell death is part of a

natural and beneficial phenomenon called apoptosis. A cell receives instructions to die so that the body can replace it with a newer cell that functions better. Cancerous cells lack the components that instruct them to stop dividing and to die. As a result, they build up in the body, using oxygen and nutrients that would usually nourish other cells. Cancerous cells can form tumors, impair the immune system and cause other changes that prevent the body from functioning regularly (Rachel, 2018).

The global cancer burden is estimated to have risen to 18.1 million new cases and 9.6 million deaths in 2018. One in 5 men and one in 6 women worldwide develop cancer during their lifetime, and one in 8 men and one in 11 women die from the disease. Worldwide, the total number of people who are alive within 5 years of a cancer diagnosis, called the 5-year prevalence, is estimated to be 43.8 million. The increasing cancer burden is due to several factors, including population growth and ageing as well as the changing prevalence of certain causes of cancer linked to social and economic development. This is particularly true in rapidly growing economies, where a shift is observed from cancers related to poverty and infections to cancers associated with lifestyles more typical of industrialized countries (WHO, 2018).

Also Aziza, (2011) explain that Cancer also known as malignant tumor, is a group of disease involving abnormal cell growth with the potential to invade or spread to other part of the body. It is one of the four major non-communicable disease alongside with cardiovascular diseases, diabetes and chronic obstructive diseases.

According to Ferlay, Bray and Mathers (2008), childhood cancer comprise only a small percentage of the global cancer burden with 84% of childhood cancers occurring in low income and middle-income countries.

Charles (2016) states that cancer affects cells that grow out-of-control and invade other tissues. Cells become cancerous due to the accumulation of defects, or mutations, in their DNA. Certain inherited genetic defects, infections, environmental factors, and poor lifestyle choices can also damage DNA and lead to cancer. Most of the time, cells are able to detect and repair DNA damage. If a cell is severely damaged and cannot repair itself it undergoes so-called programmed

cell death or apoptosis. Cancer occurs when damaged cells grow, divide, and spread abnormally instead of self-destructing as they should.

Ethiopia Annual incidence and mortality of all cancer types reported by Globocan in 2008 were 51 700 and 41 600, respectively. For people under the age of 75 years, the risk of being diagnosed with cancer is 11.3% and the risk of dying from the disease is 9.4%. 5-year prevalence for 2003–08 was 224.2 per 100 000 people.

However, Researchers can be defined as a higher estimate of incidence, of up to 150 000 cases per year of which fewer than 1% receive specialist treatment , has been made on the basis of extrapolations from the only cancer referral centre in the country, located at the Black Lion Hospital in Addis Ababa (Yohannes, Alula and Belaineh ,2013).

2.4. Describing Childhood Cancer

According to estimates by the world Health Organization 2018, cancer incidence ratio could be increased annually to 15 million new cases in the year 2020. Cancer as a debilitating and prevalent disease is one of the main causes of child mortality (Panganiban C. et al., 2011), and it's as a life threatening event for children and their families (Ward et al., 2014).

Leukemia, blood cancer, is the most common cancer in children with accounting about 30% prevalence and due to its high morbidity, long hospitalization time, high treatment costs and psychological problems in the patient and his family has a heavy social burden (Shields et al., 2003).

According to America's Children and the Environment, (2017) Cancer in childhood is rare compared with cancer in adults, but still causes more deaths than any factor, other than injuries, among children from infancy to age 15 years. The annual incidence of childhood cancer has increased slightly over the last 30 years; however, mortality has declined significantly for many cancers due largely to improvements in treatment. Part of the increase in incidence may be explained by better diagnostic imaging or changing classification of tumors, specifically brain tumors.

According to Annie (2018) Cancer is the leading cause of death caused by disease in children under the age of 15. Every year, approximately 9,000 children are diagnosed with cancer and approximately 1,500 die as a result of the disease. However, each year, more and more children are survivors of cancer. More than 70 percent of children with cancer survive the disease. These children may experience medical and physical effects, psychological effects, and cognitive and neuropsychological effects, all of which can impact their experience transitioning back into the lives and routines they had prior to diagnosis. Therefore, mental health interventions are vitally important in helping children and their families cope adaptively to ensure positive long-term adjustment.

There are different types of cancer that affect children. Leukemia, also referred as blood cancer, affects the bone marrow causing anemia, bleeding and infections. Another type of cancer is Hodgkin's disease which originate in a single lymph node or a single chain of nodes and metastasizes to spleen, liver bone marrow and lungs. Wilms' tumor, cancer of intra-abdominal and kidney, is another type of childhood cancer. Osteogenic sarcoma is the most common type of bone cancer in children. Brain tumor and neuroblastoma are also other types of cancers that affect children (Silverstri, 2008, as cited in Atsednesh , 2014).

Childhood cancer is an increasing and prevalent type of chronic illness worldwide. Malaysian cancer registry report, for instance, indicate that approximately 37 in every 100,000 Malaysian children aged 0 to 15 years are at risk of developing cancer with slightly higher incidence in males compared with females. With a total population of approximately 27.5 million as in December, 2010, 1,500 childrens expected to be diagnosed with cancer every year whilst childhood cancer more than 5% of the total number of newly reported cancer cases every year, it is significant cause of chilled mortality in the country and the incidence is increasing (Aziza, 2011).

2.5. Psychological problems of parents of children with cancer

According to Albert (2018), Parents face different psychological problems after they know their children has a cancer among these: The first feeling many parents say they feel is shock. Parents often describe feeling numb and dazed; as if they had the wind knocked out of them or had been hit over the head, Fear and denial Parents may feel scared, anxious and panicky about what is

going to happen and what the future holds. Sadness is natural to feel sad or depressed at times. Every parent wants their child to be healthy, happy and care free, Guilt is very common for a parent to feel guilty if their child has cancer. Some people wonder if it was something they did or didn't do that caused the cancer, or they feel that it is a punishment for something they did in the past. Sometimes, parents blame themselves for not noticing their child's symptoms quickly enough. Anger is normal to feel angry at times. Parents may feel angry with the hospital staff for putting their child through tests and treatment. They may feel angry that they have to cope with such uncertainty, and the unfamiliar world of hospitals, doctors and nurses, Grief is not just about death. Grief is a normal response to distress or loss due to child suffers from cancer.

According to Tommy *et al.* (2019), Parents of children with cancer experience existential, physical, psychological, and social struggles. They describe an unstable situation after diagnosis and having focused their attention towards protecting their child during treatment. After the end of curative treatment, they experience challenges with transitioning back to life as it was before the diagnosis and dealing with their own emotional scars and fears related to the child's cancer.

2.5.1 Depression among parents of children with cancer disease

According to WHO (2017) definition of Depressive disorders are characterized by sadness, loss of interest or pleasure, feelings of guilt or low self worth, disturbed sleep or appetite, feelings of tiredness, and poor concentration. Depression can be long-lasting or recurrent, substantially impairing an individual's ability to function at work or school or cope with daily life.

The recent version of DSM -5 state that, depression also known as major depressive disorder or clinical depression is a common and serious mood disorder. Those who suffer from depression experience persistent feelings of sadness and hopelessness and loss interest in activities they once enjoyed.

World Health Organization (2012), state that Depression is a significant contributor to the global burden of disease and affects people in all communities across the world. Today, depression is estimated to affect 350 million people. The World Mental Health Survey conducted in 17 countries found that on average about 1 in 20 people reported having an episode of depression in

the previous year. Depressive disorders often start at a young age; they reduce people's functioning and often are recurring. For these reasons, depression is the leading cause of disability worldwide in terms of total years lost due to disability. The demand for curbing depression and other mental health conditions is on the rise globally. A recent World Health Assembly called on the World Health Organization and its member states to take action in this direction.

Depression is a common mental disorder that presents with depressed mood, loss of interest or pleasure, decreased energy, feelings of guilt or low self-worth, disturbed sleep or appetite, and poor concentration. Moreover, depression often comes with symptoms of anxiety. These problems can become chronic or recurrent and lead to substantial impairments in an individual's ability to take care of his or her everyday responsibilities. At its worst, depression can lead to suicide. Almost 1 million lives are lost yearly due to suicide, which translates to 3000 suicide deaths every day. For every person who completes a suicide, 20 or more may attempt to end his or her life (WHO, 2012).

Many medical and psychological literatures such as Canadian Cancer Society (2018) explain that Depression is severe emotional problem in which the person cannot stop feeling sad or "down" or "empty," and constantly feels helpless and hopeless. Depressed people often struggle with anxiety and irritability, a lack of motivation, a loss of pleasure in things they used to like to do, and problems with eating, sleeping, and aches and pains. It is normal for parents to feel a deep sadness and constant worry after a child is diagnosed with cancer. This is a traumatic and unexpected event that has drastically changed their family's life. Their hopes and dreams for a happy, healthy, carefree child have been dashed. Thinking about what the upcoming weeks and months will bring can add to that depression. Parents may suffer from depression or anxiety as they start to realize the impact of a child's cancer diagnosis on the family. They may think about all the decisions they have to make and everything they have to do. Hopelessness and despair can easily set in. They may find it hard to sleep or eat. They may feel like they don't have the energy to do everything that needs to get done; attention spans are short. The ability to think clearly and to care for they becomes monstrous tasks .Their worries may feel overwhelming. Unfortunately,

there is no hiding from these painful emotions. Feeling sad, depressed or worried will come up time and again during their child's treatment and recovery.

The prevalence of depression among parents of children diagnosed with cancer in this study was borderline depression, 7.3 %, moderate depression 6.2%, severe depression, 6.5 % and extreme severe depression 3.3%. Parents of children diagnosed with cancer are at a greater risk of development of depression due to the fact that the disease is life threatening (Helina, 2017).

Also Edwards and Clarke (2004) had conducted a research on the psychological impact of cancer diagnosis on families and had identified that depression and anxiety were accounted by family members with 20.8% and 15% of variance respectively.

Furthermore, Kazak (2005) had reviewed researches that were conducted in the area of childhood cancer survivors and their families and reported that families exhibit high distress levels during initial diagnosis of their children with cancer.

Pollock et al (2013), on the other hand, compared the physiological and psychological stress among parents with children diagnosed with cancer with those of healthy once and identified that parents of children with cancer exhibited higher levels of physiological symptoms of stress than their counter parts.

Most people feel depressed at times if they are losing a loved one, getting fired from a job, going through a divorce, and other difficult situations can lead a person to feel sad, lonely, scared, nervous, or anxious. Depression is more than just sadness. It interferes with daily life and causes pain for you and everyone who cares about you. It's a common illness, but a very serious one. The term "depression" often characterizes feelings of being sad, discouraged, hopeless, irritable, unmotivated, as well as a general lack of interest or pleasure in life. When these feelings last for a short period of time, it may be called a passing case of "the blues." But it's likely to be a depressive disorder when they last for more than two weeks and interfere with regular daily activities (www.adaa.org).

Factors which can lead to depression or other psychological conditions among the parents of children diagnosed with cancer include the deterioration of the child's health, any behavioral or

conduct problems on the part of the child, frequent visits to hospitals and a previous diagnosis of cancer in the family. Looking after a child with cancer can also result in health problems that do not usually occur among parents with healthy children (Khalaseh G. Shiryazdi, 2008 as cited in Shukrya K. Al-Malik, et al 2016).

2.5.2 Anxiety among parents of children with cancer disease

Anxiety is defined as a feeling of worry, nervousness or unease about something with an uncertain outcome (Oxford dictionary, 2015).

Anxiety disorders refer to a group of mental disorders characterized by feelings of anxiety and fear, including generalized anxiety disorder (GAD), panic disorder, phobias, social anxiety disorder, obsessive-compulsive disorder (OCD) and post-traumatic stress disorder (PTSD). As with depression, symptoms can range from mild to severe. The duration of symptoms typically experienced by people with anxiety disorders makes it more a chronic than episodic disorder (WHO, 2017).

Anxiety was found to be more prevalent in parents whose children are in active treatment than otherwise. In particular, parents whose children had higher treatment intensity, poorer child health status and shorter time since diagnosis reported poorer quality of life than counterparts. Parents of relapsed children reported higher anxiety levels than parents of surviving and deceased children. This indicates that parents are in need of ongoing psychological support during the course of their child's illness. (Azziza otman, 2011).

According to Azad et al, (2018) Parents are one of the most important sources of emotional support for children with cancer and are in contact with health-care professionals in all phases of the disease. Childhood cancer disrupts the family function and is one of the most intense stressors that parents can have. Parents also experience financial and psychosocial distress due to their children cancer. Daily role functioning, cancer communication, cancer care giving, recurrence of the disease, and life-threatening cancer are factors that aggravate the parents' distress. Childhood cancer may also affect parents' relationship, which is another reason for elevated anxiety and depression among parents. Parents of children with cancer experienced high levels of anxiety and depression.

2.5.3. Stress among parents of children with cancer disease

Stress is a response given by our body to overcome a threat or demand. When you sense danger whether it's real or imagined the body's defenses kick into high gear in a rapid, automatic process known as the "fight-or-flight" reaction or the "stress response." The stress response is the body's way of protecting you. When working properly, it helps you stay focused, energetic, and alert. But beyond a certain point, stress stops being helpful and starts causing major damage to your health, mood, productivity, relationships, and your quality of life (Jeanne, et al. 2019).

Oxford dictionary (2015) defines stress as a state of mental or emotional strain or tension resulting from adverse or demanding circumstances.

Stress is a widespread phenomenon all around during all human lifespan. All people have experienced it throughout their history and throughout human history. Stress is one the special characteristics of life and its presence have been much highlighted so that in fine arts and literature of all eras it has been addressed. The reason of the widen presence and inclusiveness of stress in human communities is the complexity of human social, personal, and ecological environment, multiple and simultaneously interactions of human with surrounding issues, and diversity in stress expression. In psychological sciences, stress is a feeling of mental press and tension. Low levels of stress might be desired, useful, and even healthy. Stress, in its positive form, can improve the bio psycho social health and facilitate performance. Furthermore, positive stress is considered as an important factor to motivation, adaptation, and reaction to surrounding environment. However, high levels of stress could result in biological, psychological, and social problems and even serious harms to people (Amir, Esfandiar and Maryam, 2015) .

At the most basic level, stress is our body's response to pressures from a situation or life event (called a 'stressor'). What counts as a 'stressor' can vary hugely from person to person and differs according to our social and economic circumstances, the environment we live in, our genetic makeup and physiology. Some common features of stressors include experiencing something new or unexpected, something that threatens your competence/ego, and a feeling of little control over a situation (Mental Health Foundation, 2018).

Hilary (2018), state that childhood cancer is extremely stressful, for the patient and for the whole family. Stress begins at the time of diagnosis, when families are confronted by the tremendous burden of understanding the disease and medical terms, and facing the possibility of the child's death at a young age. Family life is disrupted as families struggle with a 'new normal' that consists of frequent hospital visits, overwhelming medical bills, and a questionable future. And then there are the stressful and sometimes painful medical procedures. Treatment for childhood cancers is often more intensive than for adult cancers, in part because the disease is more rapidly progressing than adult cancers, but also because children's bodies can tolerate more than adults can. This means that the side effects of treatment nausea, fatigue, diarrhea, vomiting, and hair loss can also be more severe. The transition into survivorship brings its own set of challenges as families readjust to home and family life, and children re-enter school and social settings. There is a constant fear of relapse which leaves families on guard is that headache normal.

2.6. Gender difference in psychological problems of parents whose children suffer from cancer

According to Stuber, et al, (1994) Diagnosing cancer disease in one's child causes psychological devastation to the whole family and, especially for mothers and fathers in particular. Since mothers and fathers could not able to help their sick child cope with the disease they feel depressed.

While depression is the leading cause of disability for both males and females, the burden of depression is 50% higher for females than males. In fact, depression is the leading cause of disease burden for women in both high-income and low- and middle-income countries (WHO, 2008). Research in developing countries suggests that maternal depression may be a risk factor for poor growth in young children (Rahman et al, 2008).

It has been established that parents' emotional and behavioral functioning may affect the child's psychological functioning. Highly distressed parents are more likely to have highly distressed children, and vice versa. In pediatric oncology research, similar relationships are evident. Robinson and associates identified significant associations between mothers' and fathers' distress and their reports of their child internalizing symptoms including depression and anxiety.

Parents' distress prior to their children undergoing cancer treatment procedures were found to be positively correlated with children's report of pain, whereas parents' concern was negatively associated with children's reported pain and distress. Likewise, there is also an association between parent and child distress outcomes. Specifically, a child's negative functioning can adversely affect his or her parents' psychological adjustment. Maternal psychological problems were more frequently identified among mothers whose children displayed problematic behavior and emotions compared to those children who demonstrated well-functioning behavior (Azizah Othman, 2011).

Gender difference of parental distress experienced by Taiwanese mothers and fathers 164 couples whose children were undergoing treatment for cancer were investigated and Mothers averaged significantly higher levels than fathers for all forms of distress. Mothers and Fathers whose children had been diagnosed within the previous 2 month reported higher levels of depression, anxiety, and global stress than those in other group. Both mothers and fathers whose children had been diagnosed within the past 2 month reported greater marital dissatisfaction than parents whose children were in the other treatment group (Chao-Hsing, 2002).

Shukrya et al. (2016) study showed a high prevalence of depresses, particularly major depression, among the parents of children diagnosed with cancer in Basrah. Depression was significantly more common and more severe among mothers and among parents with a lower income; as such, gender and income were significant independent predicators of depression.

One major cognitive theorist is Aaron Beck in his Beck's Theory (1967) state that people suffering from depression and found that they appraised events in a negative way. Beck believed that depression prone individuals develop a negative self-schema. They possess a set of beliefs and expectations about themselves that are essentially negative and pessimistic. Beck claimed that negative schemas may be acquired in childhood as a result of a traumatic event.

CHAPTER THREE

METHODOLOGY

This section provides an overview about research methods. The following specific issues are addressed: study design, study setting, study population, Sample Size Determination and Sampling Techniques, tools of data collection, procedures of data collection, pilot study, method of data analysis and ethical consideration is include.

3.1. Research Design

This study aimed to investigate the psychological problems of parents whose children suffering from cancer. Therefore, in this study, descriptive survey design with quantitative approach was employed.

The reason why the researchers decided to employ this design is that descriptive research design helps to measure people's attitude, feeling and perception. These designs also accurately and systematically describe a population, situation or phenomenon (Shona Mc Combes, 2019).

3.2. Study Setting

Tikur Anbessa Specialized Hospital is a referral and teaching Hospital located in Arada sub city of Addis Ababa, selected purposively and used as a site for the study because of the fact that it is the largest governmental hospital with a magnificent patient flow, including largest varieties of patients with NCDs. Further, it is an active area of research where professionals and clients are expected to be highly cooperative for research activities.

Tikur Anbessa Specialized Hospital is a very huge referral hospital and provides clinical service for approximately 370,000- 400,000 patients a year but the exact number is not known. In 2010, the hospital treated more than 260,000 patients in total, including more than 2000 adults and more than 200 children with cancer. Treatments offered at the Black Lion Hospital cancer centre include anticancer drugs, surgery, and radiotherapy. However, because patients come late to hospital to get treatment, most patients become chronically sick and need palliative care. (Yohannes, Alula and Belaineh, 2013).

Tikur Anbessa Specialized Hospital is one of the biggest cancer treatment centers in the country that provides all sorts of treatment including chemo therapy, surgery and radiotherapy treatment. Since the hospital is the first in its kind in the country to give cancer treatment many patients come from the regions to this hospital with referral paper. 20-30 new case children come to this hospital every month (Tikur Anbessa Specialized Hospital, 2019).

The other setting of the thesis was Tessfa Addis parents and Children cancer organization (TAPCCO). It is located in Arada sub-city around 70 Derega. The institution is a very organized and it has a capacity to hold 50 parents and 50 children. This shelter give different facilities for children with cancer disease and their parents among this facilities giving shelter service, transportation, medication and clothes takes the priority.

3.3. Population of the study

The total populations under this investigation were parents whose children suffer from cancer and coming to Tikur Anbessa specialized Hospital Pediatrics Oncology Ward for the treatment of their children in both inpatient and outpatient level and at Tessfa Addis parents and children cancer organization.

The total population under investigation was Biological parents (199 parents) who have a child diagnosed with cancer and undertaking cancer treatment in the inpatient and outpatient departments at Tikur Anbessa and at Tessfa Addis parents' child hood cancer organization.

Among the total population small participant (48) parents was taken from D7 in patient ward because they discharge every time, also (57) participants are taken from Tessfa Addis parents' child hood cancer organization, and the remaining large numbers of participant (94) are taken from outpatient of Tikur Anbessa, which has large amount of patients 3 times per week in clinic days. These parents have taken us total population of the study because these parents are actively following their treatment and stay long time in the hospital also the hospital has this patient record in organized way in the data recording system. (Tikur Anbessa Hospital, 2012e.c)

3.4. Sample Size Determination and Sampling Techniques

The following formula was employed to calculate sample size of the study participants

$$n = Z^2 P (1-P) / d^2$$

Where n = Sample Size

Z = Z statistics for level of confidence

P = expected prevalence or proportion (in proportion of one) and

D = precision

The study also used the following assumptions: level of confidence interval (CI) of 95%, or Z value 1.96, since the prevalence of conflict is unknown in the study population the researcher took the prevalence of 50% assumption, with: - CI of 95% the d value 0.025.

$$= 1.96^2 \times 0.5(1-0.5) / 0.025$$

$$= 0.960 / 0.0025$$

$$= 384$$

So, the calculated sample size from this formula is 384. If the sample from this represent a Significant (>5%) proportion of population, then I was forced to calculate the sample using the below Finite Population correction factor sample size calculation formula (Susan Rose, 2015).

$$n_a = nr / 1 + (nr - 1) / N$$

Where

n_a = the adjusted sample size,

nr = the original required sample size and

N = population size.

$$n_a = 384 / 1 + (384 - 1) / 410$$

$$n_a = 384 / 1.93$$

$$n_a = 199$$

3.5. Tools for Data Collection

Questionnaire was the instrument in this study. It was expected that this tool be participant-friendly because parents were assumed to complete the papers as their convenient time. This questionnaire consisting of two sections, (i) socio-demographic Details (ii) detection of depression, Anxiety and stress was given to the parents.

The items were written in Plain Amharic language. The Amharic version of DASS 21 had been used repeatedly by different Local projects at different times. These questionnaires were filled by the researcher and other supporters if there is illiterate parents and language barrier.

The instrument that was used in this study is Depression Anxiety Stress Scales (DASS 21). DASS-21 is a very well-known simple and short version of scale that measures the negative emotional states of depression, anxiety and stress. The scale consists of three self-report subscales that comprise seven items with related content.

The depression subscale assesses dysphoria, hopelessness, devaluation of life, self-depreciation, and lack of interest/involvement, anhedonia, and inertia.

The anxiety subscale measures autonomic arousal, skeletal muscle effects, situational anxiety, and subjective experience of anxious affect.

The stress subscale measures relaxation difficulty, nervous arousal, agitation, irritability and impatience. Participants are requested to use a 4-point severity/frequency scale to rate the extent to which they had experienced each negative state over the past week (Lovibond & Lovibond, 1995).

The DASS-21 symptom is based on 4-point severity scale ranging from 0 to 3 measures and scores are categorized into normal, mild, moderate, severe and extremely severe (Lovibond & Lovibond, 1995b) for each subscale, as per the DASS manual. The minimum score is zero and the maximum score is 21.

The final score of DASS-21 can be categorized based on cutoff points as listed in Table 1. Items 1, 6, 8, 11, 12, 14, & 18 are components of the stress subscale; items 2, 4, 7, 9, 15, 19, & 20 stand for anxiety whereas the depression subscale consists of 3, 5, 10, 13, 16, 17, & 21.

Reliability for the three subscales was found to be 0.71 for depression, 0.79 for anxiety and 0.81 for stress in the Australian population (Lovibond & Lovibond, 1995a).

Table 1: DASS-21 severity ratings

Severity	Depression	Anxiety	Stress
Normal	0-4	0-3	0-7
Mild	5-6	4-5	8-9
Moderate	7-10	6-7	10-12
Severe	11-13	8-9	13-16
Extremely Severe	13+	9+	16+

Source: Lovibond and Lovibond, 1995b

3.6. Data Collection Procedures

In the processes of data collection, certain procedures were followed. Thus, before administering data collection instruments it is needed pre test and pilot the standardized instrument DASS-21 among the participants and it was done. Respondents was given necessary clarification to respond to questions; they were encouraged to ask question if anything is not clear during administration of instruments, The respondents also assured that the response they provide is confidential.

After the researcher secured permission to undertake a research activity from Tikur Anbesa Specialized Hospital's medical director, the researcher trained two onsite professionals regarding the objectives of the study, the contents of the instruments, the response categories, the study's inclusion criteria (only Biological parents) and on some ethical considerations. Also give them awareness (trainings) for them about the whole aim of the research and how to fill standardized

measurements of DASS-21. The researcher, together with the assistants, then made acquaintance with the different hospital staffs working at the pediatric oncology unit and TAPCCO who were directly involved in the treatment of cancer in the inpatient, outpatients and shelter.

The instrument was then administered on individual basis by the researcher and the assistants on the particular weekdays it was dedicated for short period, but it takes very long time because of the distribution of corona virus in the country. It becomes a very big challenge for the researcher.

The data collection from the available participants had no time limit and had taken place in the hospital waiting halls and at the shelter. Moreover, the participants were informed to provide their own responses and that there were no correct or wrong answers.

3.7. Pilot study

The pilot study started by translated the DASS 21 scale into an Amharic version. The translated questionnaire was then administered to parents of children with cancer disease in Tikur Anbessa specialized Hospital in pediatrics ward for inpatient attendants. The pilot study was conducted on 30 selected parents by using convenient sampling technique. The participants had similar background with the main research participants but not included in the main research. 18 of the participants were males and the remaining 12 were females. All the collected data were analyzed using the Statistical Package for Social Science (SPSS).

The purpose of the pilot study is to examine the feasibility of an approach that is intended to be used in larger scale study. Also to check the reliability of the tool, the total amount of time required for completion, and find out if the wording, instruction and response categories of the translated version of the instrument as a whole were clear and comprehensible to respondents.

Thus, efforts were done to make sure if the translated scale was reliable enough to measure the three constructs of the DASS 21scale in the study population. Then reliability index of Cronbach's coefficient alpha 0.72, 0.68 and 0.76 was computed for the depression, anxiety and stress subscales, respectively. And the overall Cronbach's coefficient alpha of the scale was 0.82.

3.8. Method of Data Analysis

To analyze the data collected from study participants using standardized questionnaires the following data analysis method were used.

- Descriptive statistics like frequency and percentage was used to examine the level of psychological problems of parents whose children suffer from cancer disease.
- Independent sample t-test was used to examine gender difference in psychological problems among parents of children diagnosed with cancer disease.
- One way -ANOVA was used to examine age and educational status difference in psychological problems among parents of children diagnosed with cancer disease.

3.9. Ethical Consideration

Ethics in research is an important aspect and comprises different aspects of the research. Researchers must uphold and conduct their research with high moral and professional obligation (Krueger & Neuman, 2006).

Ethics in research is an important aspect and comprises different issues such as informed consent, confidentiality, anonymity and courtesy”. Therefore, ethical consideration is an important and integral part of this study. In this study, the researcher was contact first with the administrator or medical director of the hospital, the head of pediatrics oncology unit, the manager of Tessfa Adiss parents and children cancer organization and explain the topic of the research that the researcher will undertake, next to get permission to go ahead the activity.

Furthermore, informed consent was asking from the study participants and discusses issues related to purpose of the study, benefits and potential risks of participation, ways of maintaining confidentiality of the information and assurance of participants’ freedom to withdraw from the study any time, protecting privacy of the participants.

CHAPTER FOUR

RESULTS

This chapter clearly presents the result of the study in accordance with the objectives of the study in five sections. The first section presents the demographic characteristics of the participants using descriptive statistics of frequency and percentage, the second section elaborates the level of psychological problems experienced by parents of children with cancer disease, the third section illustrates whether there is gender difference in psychological problems among parents of children with cancer disease, the fourth section depicts whether there is age difference in psychological problems among parents of children with cancer diseases and the final section shows whether there is educational status difference in psychological problems among parents of children with cancer diseases.

4.1. Background characteristics of participants

In this section of the study the background characteristics of study participants are clearly described using descriptive statistics of frequency and percentage. The background characteristic of participants includes gender, age and educational status. Table 2 below understandably shows the background characteristics of study participants.

Table 2: Summary of background characteristics of study participants (N=199)

Characteristic	Frequency (n)	Percentage (%)
Sex		
Male	107	53.77
Female	92	46.23
Age		
20-25(emerging adults)	39	19.60
26-40(young adults)	120	60.30
41-65(middle adults)	40	20.10
Educational status		
Illiterate	62	31.15
1-8 (primary school)	53	26.63
9-12(secondary school)	42	21.11
Diploma and above	42	21.11

Out of 199 participants of the study 107(53.77%) of them were males and the remained 92(46.23%) were females. With regard to the age, the majority (60.30%) of study participants were young adults, ageing between 26 and 40 years as compared to the middle adults (20.10%), ageing between 20 and 25 years, and emerging adults (19.60%), ageing between 41 and 65 years. Likewise, the finding of the study reveals that 62(31.15%) participants had not any formal education, 53(26.63%) of participants were completed primary education, 42(21.11%) participants were completed high-school education and the rest 42(21.11%) had diploma and above.

4.2. Level of psychological problems of parents of children with cancer disease

The first objective of this study was examining the level of psychological problems of parents whose children are suffering from cancer disease. In order to determine the status of psychological problems of the study participants the scoring norm of the DAS scale was used. Therefore, the level of psychological problems (depression, anxiety and stress) of study participants as normal, mild, moderate, sever and extremely sever is determined based on these categorized scores. The result is clearly shown in table 3 below.

Table 3: level of psychological problems of parents whose children suffering from cancer disease(N=199)

Variables	Normal		Mild		Moderate		Severe		Extremely sever	
	N	%	N	%	N	%	N	%	N	%
Depression	85	42.71	48	24.12	42	21.10	21	10.55	3	1.51
Anxiety	97	48.74	54	27.14	34	17.09	9	4.52	5	2.51
Stress	129	64.82	30	15.08	31	15.58	9	4.52	0	0

As shown in table 3 above, Majority (42.71%) of parents whose children suffering from cancer had normal state of depression .Generally, the result of the study shows that majority (57.29%) of parents had reported some sort of depression.

With regard to anxiety, 48.74% of parents whose children suffering from cancer disease had reported a normal state of anxiety. Furthermore, the study depicts that more than half of parents whose children suffering from cancer were shown some sort of anxiety although its degree was vary across the individuals.

As far as the stress level of study participants considered, the majority of parents (64.82%) were reported a normal state of stress. This is to mean that most of the participants had a good sense of relaxation, nervous arousal, agitation, irritability and impatience.

4.3. Gender difference in psychological problems

The second objective of the study was examining whether there is gender difference in psychological problems (depression, anxiety and stress) among parents whose children sufferers from cancer disease. To find out the result an independent t-test was computed. The result clearly shown in table 4 below.

Table 4: Gender difference in psychological problems among parents whose children suffering with cancer disease (N=199)

Variables	Male		Females		t-value	df	sig.(2-tailed)
	Mean	Sd	Mean	Sd			
Depression	5.42	2.90	6.04	3.49	-1.36	197	.177
Anxiety	3.69	2.35	4.09	2.49	-1.15	197	.253
Stress	6.12	2.89	7.15	3.21	-1.67	197	.095

Significant at $p < 0.05$

As it is showed in the above table 4, an independent t-test was conducted to see if there is gender difference in psychological problems (depression, anxiety and stress) among parents of whose children suffering with cancer disease.

With regard to depression, the result of the study revealed that there is no significant difference ($t(197) = -1.36$, $p = .177$) between male ($Mean = 5.42, SD = 2.90$) and female ($Mean = 6.04$,

$SD=3.49$)parents of children with cancer disease. Likewise, no significant difference ($t(1997)=-1.15, p=.253$) in anxiety was found between male($Mean=3.69,SD=2.35$) and female($Mean=4.09, SD=2.49$) parents of children with cancer disease. The result of the study similarly showed that there is no significant difference ($t(197)=-1.67, p=.095$)in stress among male($Mean=6.12, SD=2.89$) and female($Mean=7.15, SD=3.21$) parents of children with cancer disease. Therefore, the result of the study generally suggested that there is not a variation in psychological problems (depression, anxiety and stress) between male and female parents of Children with cancer disease.

4.4. Age difference in psychological problems

The third objective of the study was examining whether there is psychological problems (depression, anxiety and stress) difference among emerging adult (20-25), young adult (26-40) and middle adult (41-65) parents whose children suffering from cancer diseases. To assess psychological problems difference among these parents one way- ANOVA is computed. The table 5 and 6 below shows the descriptive statistics (Mean, SD) of psychological problem scores and one way- ANOVA results of the study participants.

Table 5: Descriptive statistics of psychological problem scores in terms of age of the participants (N=199)

Variables	categories	N	Mean	SD
Depression	20-25(Emerging adults)	39	5.69	3.47
	26-40(Young adults)	120	5.72	2.95
	41-65(Middle adults)	40	5.70	6.67
Anxiety	20-25(Emerging adults)	39	4.21	2.02
	26-40(Young adults)	120	3.78	2.55
	41-65(Middle adults)	40	3.83	2.35
Stress	20-25(Emerging adults)	39	6.46	2.83
	26-40(Young adults)	120	6.84	3.20
	41-65(Middle adults)	40	6.76	3.06

The above table 5 shows the mean score of psychological problems of emerging, young and middle adults whose children suffering from cancer disease. Hence the result shows that all emerging, young and middle adult parents of children with cancer disease had almost the same state of depression, anxiety and stress. The result of the study within the specific dimensions, however; shows that parents mean score of stress is higher than depression and anxiety. This means that stress is stress is more common among parents of children with cancer disease.

Table 6: Age difference in psychological problems (depression, anxiety and stress) among parents whose children suffering with cancer disease (N=199)

Variables	Source of variation	Some of square	Df	Mean square	F	Sig.
Depression	Between group	.021	2	.011	.001	.999
	Within group	2019.074	196	10.301		
	Total	2019.095	198			
Anxiety	Between group	5.359	2	2.679	.457	.634
	Within group	1148.501	196	5.860		
	Total	1153.859	198			
Stress	Between group	4.338	2	2.169	.230	.795
	Within group	1848.084	196	0.43		
	Total	1852.422	198			

Significant at $p < 0.05$

The above table 6 presented one way- ANOVA results for psychological problems (depression, anxiety, and stress) among emerging, young and middle adult parents of whose children suffering from cancer disease. Hence, with regard to depression the result of the study revealed that there is no statistically significant difference ($F(2,196)=.001, p=.999$) among emerging ($Mean=5.69, SD=3.47$), young ($Mean=5.72, SD=2.95$) and middle ($Mean=5.70, SD=6.67$) adults whose children are suffering from cancer diseases. Similarly, no significant difference ($F(2,196)=.457, p=.634$) in the state of anxiety was found among emerging ($Mean=4.21, SD=2.02$), young ($Mean=3.78, SD=2.55$) and middle ($Mean=3.83, SD=2.35$) adults whose children are suffering from cancer diseases. Furthermore, the result of the study shows that, there is no significant difference ($F(2,196)=.230, P=.789$) in stress among emerging ($Mean=6.46, SD=2.83$), young ($Mean=6.84, SD=3.20$) and middle ($Mean=6.76, SD=3.06$) adults whose children are suffering from cancer diseases. Therefore, the result of the

study generally indicated that age variation is not a factor for difference in psychological problems among parents of children with cancer disease.

4.5. Educational status difference in psychological problems

Examining the psychological problem (depression, anxiety and stress) differences among non-educated, primary school completed, high-school completed, and diploma and above holder parents of children with cancer disease was the final objective of the study. One way- ANOVA was computed to examine psychological problems among parents of these groups. Table 7 and 8 below shows the descriptive statistics (Mean, SD) of psychological problem scores and one way-ANOVA results of the study participants with respect to their educational status.

Table 7: Descriptive statistics of psychological problem scores in terms of educational status of the participants (N=199)

Variables	Categories	N	Mean	SD
Depression	Illiterate	62	6.60	3.54
	1-8(primary school completed)	53	5.08	2.50
	9-12(secondary school completed)	42	5.24	3.41
	Diploma and above	42	5.67	3.03
Anxiety	Illiterate	62	4.53	2.56
	1-8(primary school completed)	53	3.15	2.00
	9-12(secondary school completed)	42	3.67	2.47
	Diploma and above	42	4.02	2.41
Stress	Illiterate	62	7.60	3.02
	1-8(primary school completed)	53	6.28	2.84
	9-12(secondary school completed)	42	6.33	3.00
	Diploma and above	42	6.55	3.28

As it is shown in the above table 7 , the depression mean score of Illiterate (*Mean*= 6.60, *SD*= 3.54)parents of children with cancer disease is slightly higher than those of primary school(*Mean*=5.08,*SD*= 2.50), secondary-school(*Mean*=5.24,*SD*=3.41)and diploma and above (Mean= 5.67, SD= 3.03) completed parents of children with cancer disease. With regard to anxiety, similarly found that the mean score of Illiterate (*Mean*= 4.53, *SD*= 2.56)parents of children with cancer disease is somewhat higher than those of primary school(*Mean*= 3.15, *SD*= 2.00), secondary school(*Mean*=3.67,*SD*=2.47)and diploma and above(*Mean*= 4.02, *SD*= 2.41) completed parents of children with cancer disease. Likewise, the stress mean score of Illiterate

(Mean= 7.60, SD= 3.02)parents of children with cancer disease is slightly higher than those of primary school(Mean=6.28,SD=2.84), secondary school(Mean=6.33,SD=3.00)and diploma and above(Mean= 6.55, SD= 3.28) completed parents of children with cancer disease

Table 8: Educational status difference in psychological problems (depression, anxiety and stress) among parents whose children suffering with cancer disease (N=199)

Variables	Source of variation	Some of square	Df	Mean square	F	Sig.
Depression	Between group	79.526	3	26.509	2.66	.049
	Within group	1939.570	195	9.947		
	Total	2019.095	198			
Anxiety	Between group	57.322	3	19.107	3.40	.019
	Within group	1096.537	195	5.623		
	Total	1153.859	198			
Stress	Between group	65.010	3	21.670	2.36	.072
	Within group	1787.412	195	9.166		
	Total	1852.422	198			

Significant at $p < 0.05$

As it indicated in table 8 above, one way ANOVA was computed to see if there is psychological problems (depression, anxiety and stress difference) difference among parents of children with cancer diseases with respect to their educational status. Hence, the result of the study with regard to depression found a statistically significant difference ($F(3,195)=2.66, p=0.049$) among Illiterate (Mean=6.60,SD=3.54), primary school (Mean=5.08,SD=2.50), secondary school (Mean=5.24, SD=3.42) and diploma and above (Mean=5.67, SD=3.03) completed parents of children with cancer disease. With regard to anxiety, similarly a statistically significant ($F(3,195)=3.40, p=.019$) dereference was found among Illiterate (Mean= 4.53, SD= 2.56), primary school(Mean= 3.15, SD=2.00), secondary school(Mean=3.67, SD=2.47), and diploma and above(Mean=4.02,SD=2.41) completed parents of children with cancer disease. However, no statistically significant difference ($F(3,195)=2.36, p=.072$) in stress was found among Illiterate (Mean=7.60, SD=3.02), primary school(Mean= 6.28, SD=2.84), secondary school (Mean= 6.33, SD=3.00) and diploma and above(Mean=6.55, SD=3.28) completed parents of children with cancer disease.

As it is observed in the above table 8, the computed one ANOVA shows a significant difference only on the state of depression and anxiety among participants of different educational status

(illiterate, primary school, secondary school and diploma and above). with regard to depression and stress the one way ANOVA result only shows as there is difference among the groups (Illiterate, primary school, secondary school and diploma and above) but it does not show where the exact variation among the groups lies. Therefore, Tukey HSD post hoc comparisons were performed to show which group is responsible for the difference. The result is presented in table 9 below.

Table 9: Tukey HSD post hoc depression and anxiety comparison among parents of children with cancer disease (N=199)

	I(educational status)	J(educational status)	Mean difference	Sig.
Depression	Illiterate	primary school	1.521	.052
		Secondary school	1.359	.140
		Diploma and above	9.30	.454
	Primary school	non educated	-1.521	.052
		Secondary school	-.1613	.995
		Diploma and above	-.591	.801
	Secondary school	non educated	-1.359	.140
		Primary school	.163	.995
		Diploma and above	-.429	.925
	Diploma and above	non educated	-.930	.454
		Primary school	.591	.801
		Secondary school	.429	.925
Anxiety	Illiterate	primary school	1.381	.011
		Secondary school	.866	.264
		Diploma and above	.508	.706
	Primary school	non educated	-1.381	.011
		Secondary school	-.516	.719
		Diploma and above	-.873	.285
	Secondary school	non educated	-.866	.264
		Primary school	.516	.75
		Diploma and above	-.357	.901
	Diploma and above	non educated	-.508	.706
		Primary school	.873	.285
		Secondary school	.357	.901

The above table 8 showed a post hoc depression and anxiety comparison among non educated, primary school, secondary school and diploma and above holder parents of children with cancer disease. Hence the result of the post hoc with regard to depression showed a statistically

significant difference (*Mean difference*=1.521, *P*=0.052) only between non educated (*Mean*=6.60, *SD*=3.54) and primary school completed (*Mean*=5.08, *SD*=2.50) parents of children with cancer disease. However, no significant difference was observed among the other groups.

Regarding to anxiety, similarly a statistically significant difference (*Mean difference*=1.381, *p*=0.011) was found between non educated(*Mean*=4.53,*SD*=2.53) and primary school completed(*Mean*=3.15, *SD*=2.00) parents of children with cancer disease. Nevertheless, no statistically significant difference was found among the other groups.

CHAPTER FIVE

DISCUSSION

The major aim of the present study was to examine the psychological problems (depression, anxiety and stress) of parents of children with cancer disease. In this section, the major findings of the present study are discussed in line with the previous findings reviewed in the literature section of this study. The discussions are presented along with the objective of the present study.

5.1. Level of psychological problems of parents of children with cancer disease

The study had examined the level of psychological problems (depression, anxiety and stress) of parents of children with cancer disease. Hence, the result of the study with regard to depression reported that 42.71% parents had normal state of depression; however, the majority(57.29%) had mild(24.12), moderate(21.10), sever(10.55%) and extremely sever(1.51%) state of depression. In line with the result of this study there are some studies which reported as parents of children with cancer diseases exhibits some state of depression although the percentage of their finding is not exactly the same with the present study. For instance,Helina (2017) reported that parents of children diagnosed with cancer disease are at a greater risk of depression and in percent 7.3% of them exhibit borderline depression, 6.2% moderate depression, 6.5% sever depression and 3.3% of them shows sever depression. Likewise, Edwards and Clarke (2004) in their study reported that 20.8% of parents of children diagnosed with cancer disease exhibited a state of depression.

With regard to anxiety, the present finding presented that more than half(51.26%) parents of children diagnosed with cancer disease exhibited mild(27.14%), moderate(17.09%), sever(4.52%) and extremely sever(2.51) state of anxiety. Although its percentage is not described, Azad et al, (2018) stated similar claims in which who reported that parents of children diagnosed from cancer disease exhibited a high level of anxiety. Moreover, the finding of the present study suggested that majority (64.82%) of the study participants reports a normal state of depression. However, a study which supports and contradicts to this finding was not found.

5.2. Gender difference in psychological problems

The present finding had also compared the psychological problems (depression, anxiety and stress) of male and female parents of children with cancer disease. Hence, the result of the study presented that there is no significant difference in depression, anxiety and stress between male and female parents of children with cancer disease. On the contrary to the present findings, Chao-Hsing, (2002) reported that female parents of children with cancer disease had higher level of psychological problems (i.e. depression) than their counter part male parents of children with cancer disease. Similarly, Shukrya et al. (2016) reported a contradict result in which they reported that psychological problems (i.e Depression) is significantly more common and more severe among mothers of children with cancer disease than fathers of children with cancer disease. However, a study which supports to the present finding is not found.

5.3. Age difference in psychological problems

With regard to age, the present study found no significant difference in depression, anxiety and stress among emerged, young and middle adult parents of children with cancer disease. No literature is found which support and contradicts to this finding.

5.4. Educational status difference in psychological problems

Concerning educational status difference in psychological problems (depression, anxiety and stress), the current study found a significant difference both in depression and anxiety between non-educated and primary school completed parents of children with cancer disease. However, no significant difference in depression and anxiety was found among the other groups (i.e. between non educated and high-school completed, non educated and diploma and above holders, primary school and high-school completed, primary school completed and diploma and above holders, high-school completed and diploma and above holders). With regard to stress, the present study; however, found no significant difference among parents of children with cancer disease who had different educational status. Regarding to educational status difference in depression, anxiety and stress similarly no literature is found that support or contradicts to the current findings.

CHAPTER SIX

SUMMARY, CONCLUSION, AND RECOMMENDATIONS

6.1. Summary

The general objective of the present study was examining the psychological problems (depression, anxiety and stress) of parents of children diagnosed with cancer disease in Tikur Anbessa specialized hospital. Consequently, four specific research objectives were addressed. The first objectives was examining the level of psychological problems(depression, anxiety and stress) of parents of children with cancer disease, the second objective was examining wither there is gender difference in psychological problems (depression, anxiety and stress) among parents of children with cancer disease, the third objective was examining wither there is age difference in psychological problems(depression, anxiety and stress) among parents of children with cancer disease and the final specific objective was examining if there is educational status difference in psychological problems (depression, anxiety and stress) among parents of children with cancer disease. The study was employed descriptive survey design with quantitative research method to address the above objective of the study. The participant of the study were 199 parents whose children are diagnosed with cancer disease in Tikur Anbessa specialized hospital. The participants were selected from the target population using simple random sampling technique. Accordingly, the selected participants were made to respond the demographic information items and the standardized DAS (Depression, Anxiety and stress) scale to measure their state of psychological problems and the response were analyzed using SPSS-24 software.

To analyze the collected data both descriptive (frequency count and percentage) and inferential statistics (independent sample t-test and one way- ANOVA) was computed. Through these statistical models the following research findings were found.

The level of depression, anxiety and stress of parents of children diagnosed with cancer disease was determined using frequency count and percentage. Thence, concerning to depression the result of the study showed majority (57.29%) of parents had mild (24.12%), moderate (21.10%), sever (10.55%) and extremely sever (1.51%) state of depression. Nevertheless, 42.71% of

parents had reported a normal state of depression. Likewise, the finding of the study showed more than half of parents of children diagnosed with cancer disease had mild (27.14%), moderate (17.09%), severe (4.52%) and extremely severe (2.51) state of anxiety. With regard to stress; however, the present finding showed that majority (64.82%) of the study participants had a normal state of stress.

An independent sample t-test was also used to examine gender difference in depression, anxiety and stress among parents of children with cancer disease and the finding of the study showed no statistically significant difference in all dimensions between male and female parents of children with cancer disease.

One way ANOVA was also computed to see if there is age and educational status difference in depression, anxiety and stress. With regard to age, the computed one way -ANOVA presents no statistically significant difference in all dimensions (depression, anxiety and stress) among emerged, young, and middle parents of children with cancer disease. Regarding to educational status, the computed one way -ANOVA; however, presents a significant difference in depression and anxiety between non-educated and primary school completed parents, in which non-educated parents had high level of depression and anxiety than primary school completed parents whose children are suffering from cancer disease. The result from one way- ANOVA additionally suggested that there is no statistically significant different in stress among non-educated, primary school completed, high school completed and diploma and above holder parents of children diagnosed with cancer disease.

6.2. Conclusions

The overall objective of the study was examining the psychological problems (Depression, anxiety and stress) of parents of children diagnosed with cancer disease. DASs standardized instrument was used to collect the data from study participants and the data was carefully analyzed, interpreted and discussed in the above sections of the study. Based on the obtained results in this study; It explicitly identified that although its degree varies across the individuals, most of parents of children diagnosed with cancer disease exhibit some state psychological problems. Gender is not a factor for the difference in a state of psychological problems among parents of children with cancer disease. This means that there is no a variation in a state of psychological problems among male and female parents of children with cancer Disease. Correspondingly, there is no a variation in psychological problems among emerging, young, middle adult parents of children with cancer disease. Hence, age is not a factor for the difference in psychological problems among parents of children with cancer disease. Illiterate parents of children with cancer disease exhibits higher level of psychological problems (I.e. depression and anxiety) than primary school completed parents. However, they have a slightly similar state of psychological problems with the other groups (high-school completed and diploma and above holders). No significant difference was found among the other groups except between non-educated and primary school completed parents.

6.3. Recommendations

On the basis of the results obtained in present study, the researcher forwarded the following recommendations.

- As it is observed in the results of this study, more than half of parents of children with cancer diseases are facing with some degree of psychological problems. Therefore, I strongly recommend for Tukur Anbesa specialized hospital to improve its guidance and counseling system in a well manner and to employ a sufficient number of counselors in the institution.
- Clinicians handling non-communicable disease with patients and parents should work closely with high proximity with psychologists or counselors for early screening for the presence of negative emotional states and addressing them promptly, with particular

attention for patients with predictor factors. Early intervention would be inarguably vital in halting the progress of the disease and improving their health-related quality of life.

- Awareness creation is important in the area of childhood cancer and its impact on parents and families through utilization of different means of communication for all stakeholders, psychological support should be available for parents of children diagnosed with cancer. In line with that different organizations and volunteers should be encouraged and strengthened.
- Concerned government agencies like ministry of health should give an attention in enhancing the well-being of parents of children with cancer disease and the patients too.
- There is a limitation of literature's or studies in Ethiopian context that are related with present study. Therefore, I strongly recommend for future researchers to conduct a research related with the current study.

REFERENCES

- Albert, E. B. (2018). *Effects on parents when child has cancer. Macmillan cancer support:* London SE17UQ, VAT no: 668265007 Retrieved from [http://www. Macmillan. Org.UK/ cancer voices/support](http://www.Macmillan.Org.UK/cancer-voices/support). Html
- America Cancer Society. (2018).*Cancer Facts & Figures*
- Amir M., Esfandiar A. and Maryam H. (2015).*International Journal of Medical Reviews, 2.2 America's Children and the Environment* (2017), Third Edition
- Annie T. (2016). *Public Interest Government Relations Office;* American Psychological Association
- Antony, M. M., Bieling, P. J., Cox, B. J., Enns, M. W., & Swinson, R. P. (1998). *Psychometric Properties of the 42-item and 21-item versions of the Depression Anxiety Stress Scales in Clinical groups and a community sample.* Psychological Assessment, 10(2), 176-181
- Atsednesh Getachew (2014). *Psychosocial impact of childhood cancer on parents: The Case of Parents Receiving Service at Tikur Anbessa Specialized Hospital*
- Aziza, O. (2011). *Psychological distress and associated factors in parents of children with Cancer:* International journal of social science and Humanity, 1, 1, 56-68
- Brody, A. C., & Simmons, L. A. (2007). *Family resiliency during childhood cancer: The father's Perspective.* Journal of Pediatric Oncology Nursing, 24(3), 152-165
- Chao-Hsing yeh phd (June 2002). *Gender difference of parental distress in children with cancer,* Journal of Advanced nursing /volume 38, issue 6
- Charles Patrick Davis, MD, PhD(2016),*Understanding Cancer:Metastasis, Stages of Cancer*
- Crawford, J. R. & Henry, J. D. (2003). The Depression Anxiety Stress Scales (DASS): *Normative data and latent structure in a large non-clinical sample.* Br J Clin Psychol.; 42: 111-131. Retrieved from ('<https://bmcp psychiatry.biomedcentral.com/articles/10.1186/1471-244X13-24>') on Nov, 17/2018

- Edwards, Ben & Clarke, Valerie (2004). *The psychological impact of a cancer diagnosis on families: the influence of family functioning and patients' illness characteristics on depression and anxiety*. *Psycho-oncology*, 13(8), 562-576. Retrieved from <http://onlinelibrary.wiley.com/doi/10.1002/pon.773>
- Federal Ministry OF Health Ethiopia Disease Prevention and Control directorate, national cancer Control plan 2016-2020, October 2015
- Gabriel, O. I. (2010). *Mental health and chronic physical illnesses: The need for continued and Intergraded care*. Vancouver: World Federation for Mental Health. Retrieved from ('<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4826577/>'
- Ghauri, P. & Gronhaug, K. (2005). *Research Methods in Business Studies*, Harlow, FT/Prentice Hall
- Globocan. *Cancer Incidence and Mortality Worldwide*. 2012(11). International Agencyfor Research on Cancer, Lyon, France
- Helina Mekonnen (2017). *Depression and Associated factors among parents whose children Diagnosed with cancer: In case of Tikur Anbessa Specialized Hospital*. Addis Ababa, Ethiopia. Review literature
- Hilary Marusak, *Understanding the Psychological Effects of Childhood Cancer* On July 24, 2018
- Jeanne Segal, Ph.D., Melinda Smith, M.A., Robert Segal, M.A., and Lawrence Robinson. *Stress Symptoms, Signs, and Causes*, Last updated: October 2019
- J. Ferlay, H. R. Shin, F. Bray, D. Forman, C.Mathers, and D.M.Parkin , *Cancer Incidence and Mortality Worldwide: IARC Cancer Base No. 10, GLOBOCAN 2008 v1.2*, International Agency for Research on Cancer, Lyon, France, 2010
- Kalnins, I. V., Churchill, M. P., & Terry, G. E. (1980). *Concurrent stresses in families with a Leukemic child*. *Journal of Pediatric Psychology*, 5, 81–9

- Kazak AE, & Barakat, L. P., Brief report: *Parental depression and quality of life during Treatment for childhood cancer predicts child and parent adjustment after treatment ends*. Journal of Pediatric Psychology. 1997;22:749-5
- Kreuger, L. W. & Neuman, W. L. (2006). Social work research methods: *qualitative and Quantitative applications*. New York: Pearson Education.
- Lovibond, P. F., & Lovibond, S. H. (1995). The structure of negative emotional states: Comparison of the Depression Anxiety Stress Scales (DASS) with the Beck Depression and Anxiety Inventories. Behaviour Research and Therapy, 33, 335- 343
- Max Roser and Hannah Ritchiev (2018). *Cancer*, first published in July 2015; updated in April 2018 with latest cancer data for the year 2017 – and revised substantially in November 2019.
- Mental Health Foundation (May 2018). Stress: Are we coping? London: Mental Health Geneva: World Health Organization; 2017. Licence: CC BY-NC-SA 3.0 IGO
- National Center for Chronic Disease Prevention and Health Promotion (2020)
- Oxford Dictionary. London: Oxford University Press; 2015. Retrieved from: <http://www.oxforddictionaries.com/> Accessed Dec 1, 2018
- Panganiban-Corales AT, Medina MF (2011). Family resources study: part 1: *family resources, Family function and caregiver strain in childhood cancer*. Asia Pac Fam Med, 10, 14-25
- Pollock, A. Elizabeth, Litzelman, Kristin, Wisk, E. Lauren, & Witt, P. Whitney (2013) *Correlates of physiological and psychological stress among parents of childhood cancer And brain tumor survivors*. Academic Pediatric, 13(2), 105-112. Retrieved from [http://www.academicpedsjnl.net/article/S1876-2859\(12\)00299-9](http://www.academicpedsjnl.net/article/S1876-2859(12)00299-9)
- Paul D. et al. (n.d).journal of the multinational association of supportive care in cancer, *Parental Depressive symptoms and childhood cancer: the importance of financial difficulties*
- Racel N. (November 12, 2018). Medically review by Yamini Ranchod, ph.d., M.s.

Shields L, Kristensson-Hallström I, O'callaghan M (2003). *An examination of the needs of Parents of hospitalized children: comparing parents' and staff's perceptions*. Scand J Caring Sci, 17, 176-84

Rahman A, Patel V, Maselko J, Kirkwood B. *The neglected 'm' in MCH programmes—why Mental health of mothers is important for child nutrition*. Trop Med Int Health 2008; 13: 579-83

Raylu, N., & Oei, T. P. S. (2004). *The Gambling Related Cognitions Scale (GRCS): Development, confirmatory factor validation and psychometric properties*. Addiction, 99(6), 757-769

Shona McCombes (2019). *Understanding different sampling methods*, date published Canadian

Cancer society (2018). Your child has cancer. Canadian All right served Registered:

118829803RR0001 Retrieved from [http://users/psychological %20 problems/child %20 has Cancer %-%20 Canadian society](http://users/psychological%20problems/child%20has%20Cancer%20Canadian%20society)

Shukrya Al Maliki Akeel Al-Waely and Jasim N Al-Asadi (2016). *Americ Sultan qaboos University medical journal, Prevalence and levels of depression among parents of children With cancer in Basrah, Iraq*, Third Edition, Updated August 2017

Stuber ML, Gonzalez, S., Meeske, K et al.,. *Post-traumatic stress after childhood cancer II: A Family model*. Psycho-Oncology,. 1994; 3:313-9

Tigeneh W. (2015), *International Journal of Cancer Research and Molecular Mechanisms*, (Volume: 1.1Research Article Pattern of Cancer in Tikur Anbessa Specialized Hospital Oncology Center in Ethiopia from 1998 to 2010)

Tikur Anbesa Hospital pediatric oncology ward (Data clerk, 2011e.c)

Tommy Carlsson T, Kukkola L, LjungmanL, Hove ´n E, von Essen L (2019) *Psychological Distress in parents of children treated for cancer: An explorative study*. PLoS ONE 14(6): 0218860

Toro, Annie (“n.d”). *Psychological Impact of Childhood Cancer*. Public Interest Government Relations Office: American Psychological Association. Accessed on April 8, 2014 Retrieved from <https://www.apa.org/pi/families/resources/childhood-cancer-fact-sheet.pdf>

World Health Organization (2005), *chronic diseases and their common risk factors*

World Health Organization (2008), *The Global Burden of Disease 2004 update* http://www.who.int/healthinfo/global_burden_disease/GBD_report_2004update_full.pdf Accessed 16.6.2012

World Health Organization (2012), *World suicide prevention day*. http://www.who.int/mediacentre/events/annual/world_suicide_prevention_day/en/ Accessed 16.6.2012

World Health Organization (2017). *Depression and Other Common Mental Disorders*

World Health Organization (2018) *.Latest global cancer data: Cancer burden rises to 18.1 million new b Cases and 9.6 million cancer deaths in 2018*

Yohannes wubshet wolde amanuale, Alula m teklu and Belaineh girma (2013) *The Lancet Oncology*

Zikmund (2002) *Business research methods*, Dryden, Thomson Learning

APPENDIX

Addis Ababa University
College of Education and Behavioral Studies
School of Psychology

Dear participants or attendants, the following questionnaire is part of a thesis work undertaken by a graduate student of Counseling Psychology and the primary aim of this thesis to assess if there is psychological problems on parents whose children's suffer from cancer in Tikur Anbesa specialized Referral Hospital . I would like thank you for your collaboration to take part in the study and giving me your full time. Also I like to assure you the confidentiality of your responses. Thank you in advance for your genuine responses.

DIRECTION: For the following questions please give your answers either by a word/phrase of your opinion or by Putting a check mark”” on the option of your choice.

PART ONE: BACK GROUND INFORMATION

1. What is your age in years? _____

2. Sex: Male Female

3. Educational status:

1-8 completed 9-12 completed College graduate and above Illiterate

PART TWO: PSYCHOLOGICAL ASPECT OF THE ILLNES

DIRECTION: Please read each statement and circle on the option of your choice in the table which indicates how much the statement applied to you over the past week. There is no right or wrong answers. The rating scale is as follows:

0 Did not apply to me at all - NEVER

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

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

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

No	Questions	Circle the No. your choose			
		0	1	2	3
1.	I found it hard to wind down	0	1	2	3
2.	I was aware of dryness of my mouth	0	1	2	3
3.	I couldn't seem to experience any positive feeling at all	0	1	2	3
4.	I experienced breathing difficulty (eg, excessively rapid breathing, breath les in the absence of physical exertion)	0	1	2	3
5.	I found it difficult to work up the initiative to do things	0	1	2	3
6.	I tended to over-react to situations	0	1	2	3
7.	I experienced trembling (eg, in the hands)	0	1	2	3
8.	I felt that I was using a lot of nervous energy	0	1	2	3
9.	I was worried about situations in which I might panic and make a fool of myself	0	1	2	3
10.	I felt that I had nothing to look forward to	0	1	2	3

11.	I found myself getting agitated	0	1	2	3
12.	I found it difficult to relax	0	1	2	3
13.	I felt down-hearted and blue	0	1	2	3
14.	I was intolerant of anything that kept me from getting on with was doing	0	1	2	3
15.	I felt I was close to panic	0	1	2	3
16.	I was unable to become enthusiastic about anything	0	1	2	3
17.	I felt I wasn't worth much as a person	0	1	2	3
18.	I felt that I was rather touchy	0	1	2	3
19.	I was aware of the action of my heart in the absence of physical exertion (eg, sense of heart rate increase, heart missing a	0	1	2	3
20.	I felt scared without any good reason	0	1	2	3
21	I felt that life was meaningless	0	1	2	3

በአዲስ አበባ ዩኒቨርሲቲ

የትምህርትና ባህሪ ጥናት ኮሌጅ

የሳይኮሎጂ ትምህርት ክፍል

መግቢያ:- ወድ የዚህ ጥናት ተሳታፊዎችና አስታማሚዎች የዚህ ጥናት ዋናው ዓላማ በካንሰር የተያዙ የህፃናት ወላጆች ላይ ሊከሰቱ የሚችሉ የሥነ ልቦና ችግሮች ካሉ መፈተሽ ነው። በዚህ ጥናት ለመሳተፍ ፍቃደኛ ሆነውና ሙሉ ጊዜዎችን ስለሰጡኝ ክልብ አመሰግናለሁ። እርስዎ በዚህ ጥናት ላይ የሚሰጡኝ መልስ ለጥናቱ ዓላማ ብቻ የሚውል መሆኑና ሚስጢራዊነቱ የተጠበቀ ሲሆን በቻሉት መጠን እርስዎን የሚገልጹ ምላሽ በጥንቃቄ በመስጠት ለጥናቱ መልካም አስተዋጽኦ በማድረግ እንዲተባበሩኝ እየጠየቅኩኝ ከዚህ ጥናት የሚገኘው መረጃ የችግሩን ምክንያት በመረዳትና ችግሩን ለመቀነስ በሚደረገው ጥረት ላይ የእርስዎ ትክክለኛ መረጃ ወሳኝ ነውና አመሰግናለሁ።

መመሪያ 1 በዚህ መጠየቅ የተካተቱን ሀሳቦች በጥምር በማንበብ እንዲሁም በማዳመጥ ከታች የተቀመጡትን የመልስ መስጫ ሳጥን ውስጥ "☑" መልስ ይስጡ በተጨማሪም በባዶ ቦታው ላይ መሞላት በሚያስፈልገው መልስ ላይ ተገቢውን መልስ ይስጡኝ።

ክፍል አንድ: አጠቃላይ

1. እድሜ ስንት ነው _____
2. ወንድ ሴት
3. የትምህርት ደረጃ
 - ከ1-8 ክፍል የተማረ/ች
 - 9-12 ክፍል የተማረ/ች
 - ዲፕሎማና ከዚያ በላይ ያጠናቀቀ/ች
 - ያልተማረ/ች

ክፍል ሁለት

ከታች የቀረቡ መጠየቆችን ካነበቡ በኋላ ተገቢ መልስ እንዲሰጡኝ እየጠየኩ የሚመርጡትን የመጠየቆች ዝርዝር አማራጮች ውስጥ ባለፉት አንድ ሳምንት ውስጥ እርስዎን የሚገልጹትን በማክበብ መልስዎን ይስጡ።

0. ፈጽሞ የእኔን ሁኔታ አይገልጽኝም (አልቀበለውም)

1. አንዳንድ ጊዜ (አልፎ አልፎ)

2. ብዙ ጊዜ (በተደጋጋሚ)

3. እጅግ በጣም ብዙ ጊዜ (ሁልጊዜ)

1.	መጨነቅ በማቆምና ዘና ለማለት ይከብደኝ ነበር	0	1	2	3
2.	አፌ ሲደርቅ ይታወቀኝ ነበር	0	1	2	3
3.	ምንም አይነት ጥሩ ስሜት እየተሰማኝ አልነበረም	0	1	2	3
4.	ለመተንፈስ እቸገር ነበር(ለምሳሌ-ከልክ ያለፈ ቶሎ ቶሎ መተንፈስ፣ ያለ ምንም አካላዊ እንቅስቃሴ ትንፋሽ ማጣት)	0	1	2	3
5.	ማንኛውንም ነገር ለማከናወን ተነሳሽነትን አጣለሁ	0	1	2	3
6.	አንዳንድ ነገሮችን ከተገቢው በላይ አጋንናለሁ	0	1	2	3
7.	መንቀጥቀጥ አጋጥሞኛል (ለምሳሌ እጄ ላይ)	0	1	2	3
8.	ብዙ የነርቨስ (ስሜታዊ) ጉልበት እንደተጠቀምኩ ይሰማኛል	0	1	2	3
9.	አንዳንድ አጋጣሚዎች ላይ ተጨንቄ እራሴን እንዳላዋርድ እሰጋ ነበር	0	1	2	3
10.	ምንም ወደፊት የሚያጓጓ ነገር እንደሌለኝ ይሰማኛል	0	1	2	3
11.	የመንፈስ መረበሽ ውስጥ እራሴን አገኘዋለሁ	0	1	2	3
12.	የመዝናናት መንፈስ ውስጥ መግባት ይከብደኛል	0	1	2	3
13.	የሀዘን ስሜት ይሰማኝ ነበር	0	1	2	3
14.	ከማንኛውም እያደረኩት ከነበረው ነገር የሚያስቆመኝን ነገር መታገስ አልችልም	0	1	2	3
15.	ልረበሽ ትንሽ የቀረኝ እንደሆነ ይሰማኛል	0	1	2	3
16.	ለማንኛውም ነገር በጥሩ ስሜት ማየት አቅቶኝ ነበር	0	1	2	3

17.	እንደሰውምንምየማልረባመስሎይሰማኝነበር	0	1	2	3
18.	ትንሽ የሚባቃው መስሎ ይታዩኝ ነበር	0	1	2	3
19.	የአካል እንቅስቃሴ በሌለበት የልቤን ድርጊት አስተውል ነበር (ለምሳሌ-የልብምት መጠን መጨመር ፣ የልብምት መዝለል)	0	1	2	3
20.	ያለ ምንም ምክንያት ፍርሃት ይሰማኛል	0	1	2	3
21.	ህይወት ትርጉም እንደሌለው ይሰማኛል	0	1	2	3