ADDIS ABABA UNIVERSITY

COLLEGE OF HEALTH SCIENCE

SCHOOL OF ALLIED HEALTH SCIENCES,

DEPARTMENT OF NURSING AND MIDWIFERY

DEPRESSION AND ASSOCIATED FACTORS AMONGPARENTS WHO HAVE CHILDREN DIAGNOSED WITH CANCER AT TIKUR ANBESSA SPECIALIZED HOSPITAL, ADDIS ABABA, ETHIOPIA 2017

By Helina Mekonnen

A Thesis Submitted to Addis Ababa University, College of Health Science, School of Allied Health Sciences, Department of Nursing and Midwifery for Partial Fulfillment of the Requirement for the Degree of Masters of Science in Oncology Nursing

June, 2017
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Abstract

Background: Cancer affects all human kind involving all age groups and gender. When the disease occurs in children, parents are negatively influenced socially and psychologically leading them to the development of depression representing a group prone to high levels of depression. The period following their child's diagnosis and the initiation of treatment may be stressful and disturbing leading them to depression.

***Objective*:** the aim of the study was to assess the prevalence of depression and its associated factors among parents of children diagnosed with cancer at Tikur Anbessa specialized Hospital.

***Methods*:** A mixed approach quantitative and qualitative cross-sectional study design was employed from April 1st to May 15th 2017. Systematic random sampling technique was used evolving 275 study participants for the quantitative part and participants for the qualitative part were included conveniently. Study subjects for the qualitative study were subjects who are not involved in the quantitative study. Structured interviewer guided instrument was used to gather information from study subjects for the quantitative part and an in-depth interview guide was used for the qualitative section. Descriptive statistics including, frequencies and proportions was employed to describe the sociodemographic characteristics Bivariate and multivariate analysis using Odds ratio was utilized to evaluate association between dependent and independent variables. P-value less than 0.05 was considered as level of significance for associations.

Result: 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%. Four variables showed statically significant association with parental depression which include, single parents {AOR=6.2; 95% CI (2.66-14.52) } , income greater than 4500 birr {AOR=0.34; 95% CI (0.02-0.87) }, no previous history of depression {AOR=0.18; 95% CI (0.07-0.43) } } and support source from insurance company {AOR=12.89; 95% CI (3.12-53.18) } are respectively.

Conclusion and recommendation: 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. Factors associated to the development of parental depression involves being single parenting, income, presence of history of depression and other support sources. Therefore, linking the parents to the

support groups, psychosocial support from health care providers, governmental and non-governmental organizations collaboration help to alleviate the condition.

Key words, Parental depression, cancer, parents.

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Finally my appreciation goes to Addis Ababa University, College of Health Science, Department of nursing and midwifery for their assistance in developing further knowledge.

Assurance of Principal Investigator

All data gathered was collected appropriately. All ethical considerations were obeyed in the process and all necessary advices and guidance was asked and gained from my advisors. In addition the final thesis and research findings were submitted in time maintaining accuracy as much as possible.

Name of student: ----------

Signature: ----------date----------

Name of advisor: ----------

Signature: ---------- date: ----------

Name of secondary ----------

Signature ---------- date ----------

Name of reviewer ----------

Signature ---------- date ----------

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Acronyms

AAU	Addis Ababa University
SPSS	Statistical package for social sciences
TASH	Tikur Anbessa Specialized Hospital
USA	United States of America
USD	United states dollar
WHO	World Health Organization
PTSD	Post-traumatic stress disorder

Introduction

1.1. Background

The world health organization states that cancer is among the leading causes of morbidity and mortality worldwide, with an approximately 14 million new cases and 8.2 million cancer related deaths in 2012(1). The number of new cases is expected to rise by about 70% over the next 2 decades(1).Cancer is an emerging public health issue, in Africa too, with an estimate of 715 000 new cases and 542 000 cancer deaths in the continent in 2016 (2). 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(3). The same source project that cancer incidence and mortality will double to 1.28 million new cases and 970 000 deaths per year by 2030.Comprehensive cancer registration and population-based measurement of cancer burden are yet to be done in Ethiopia. According to the ministry of health of Ethiopia cancer is responsible for about 5.8% of nationwide mortality (4, 5). Cancer affects all kinds of human kind involving all age groups and gender. When the disease occurs in children, parents are negatively influenced socially and psychologically leading them to the development of depression.

Although the prevalence of depression varies globally, the most common symptoms of depression are depressed mood, insomnia, and fatigue, and depressed women outnumber depressed men 2 to 1. There have been many studies on the relationship between cancer and depression. Depression is among the leading causes of disability affecting 121 million people worldwide. Untreated depression leads to personal suffering and increased mortality. (5)

On top of these in many studies it is indicated that cancer related depression affects not only the patient but also people around them. The focus of the present study will be the depression of parents when their child is diagnosed with cancer. The study done by Atsednesh Getachew shows that when a child is diagnosed with cancer it affects the parents psychologically in a real way (6). The present study tries to show the prevalence of that reality parents' depression as a result of a child being diagnosed with cancer.

1.1. Problem statement

Parents of children may suffer from a stressful situations related to the diagnosis of cancer in their loved ones. The condition may in turn result in depression in the parents. The cause of such depression may be multi factorial like, socio-demographic, environmental and treatment factors and this factor may impact parents to develop the condition (7).

According to the report of the Federal Ministry of Health in Ethiopia there is only one oncology center in the country (Tikur Anbessa Specialized Hospital). Based on the registries in the center, about 80% of reported cases of cancer are diagnosed at advanced stages, when very little can be done to treat the disease. Of those cancer cases diagnosed, children accounts for 20%.; Annually 12,192 children are reported as all forms of cancer patients in the country and eight thousand eight hundred children die of cancer every year in Ethiopia(4).

Depressed patients are frequently encountered in nearly all specialty clinics. However, depression in caregivers accompanying patients is usually overlooked and hence missed, as doctors are mostly focused on the patient's evaluation, condition, and treatment. When the patient is a child and the diagnosis is cancer, this difficult circumstance has a sudden and long term impact on both the child and the family. Many parents of a child with cancer will have very strong feelings of guilt. As such, parents of cancer survivors may be at risk for impaired physical and mental health, increasing body of literature supports the conclusion that various levels of parental distress are ongoing, long after treatment is completed(6).

According to the Federal Ministry of Health in Ethiopia, the number of cancer specialists for the entire population is very few(4). Due to these reasons, the major responsibility of taking care of the child with cancer falls on parents or family members.

This may result in depression in parents related to the outcome of their cancer diagnosed child affecting the proper provision of care he/she needs.

The length 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 her/him to depression much more than the other family members. Available data supports that mothers and fathers of children with cancer represent a group prone to high levels of depression, and that the period following their child's diagnosis and the initiation

of treatment may be predominantly stressful and disturbing leading them to depression. Such mothers and fathers have difficulty in taking care of themselves, their household and especially their sick children (8).

Many studies have shown that chronic depression and distress may lead to decrease in immune functioning and an increased risk of infectious disease in healthy individuals. Mothers and fathers are generally with the child mainly and hence are most affected from their child's disease. In this study, the investigator intends to estimate the prevalence and associated factors of depression in mothers and fathers having children diagnosed with cancer. Since cancer diagnosis in one's child causes not only social but also psychological devastation for the whole family, especially mothers and fathers are to be depressed. In that case, mothers and fathers are less able to help their sick child cope with intensive treatments given for the cancer (8).

1.2. Research questions:

On its finalization the present research aims at answering three basic questions.

1) What is the current prevalence of depression among parents whose child is diagnosed with cancer?
2) What are the associated factors that are contributing to this reality?
3) What is the experience of parents of children diagnosed with cancer?

1.3. Significance of the study

The present studies provide a clear picture to policy makers about the situation. It also enable nurses to intervene on the prevention of the preventable parental depression related to child diagnosis of cancer. The finding of this study can provide an important data for further study on parental depression and contributes for the development of the nursing profession and nursing education. The present study also help parents cope with depression and give the best care as they can for their sick children.

2. Lliterature review

Depression is highly associated with oropharyngeal (22%–57%), pancreatic (33%–50%), breast (1.5%–46%), and lung (11%–44%) cancers. A less high prevalence of depression is reported in patients with other cancers, such as colon (13%–25%), gynecological (12%–23%), and lymphoma (8%–19%).

A study at Oxford University shows that high levels of depression is found among parents whose child has been diagnosed, the study rates 51% of mothers and around 40% of fathers will go through clinical depression as a result of a child's diagnosis of cancer in England(6).

2.1. Child cancer and parents depression

The life-threatening nature of childhood cancer and its invasive treatment present both practical and emotional stresses for family members. High levels of parental distress have been found in many studies both at the time of the diagnosis and early stage of treatment(5) and also persist over one or more years(7). The sources of such distress are varied and a number of potential stressors have been suggested.

The course and treatment of the illness varies between different cancers and between different children. It may be expected that more lengthy treatment, more frequent and longer hospitalization, and relapse would all increase the risk of parental distress. The burden of care during the treatment phase can result in detrimental effects on employment and financial difficulties(9). These effects may add to the strain on families. It has also been demonstrated that families of children with cancer have to deal with a number of other concurrent stressors, some linked to the illness and others independent of it(9). All these sources of stress are likely to act as risk factors, increasing the likelihood of high levels of parental distress during treatment. Even when treatment is completed, parents have to face the difficulties of living with uncertainty and the possibility of recurrence over the longer term(10). Recent studies have suggested that some parents and children show symptoms of PTSD continuing a number of years after cessation of treatment , but others find little evidence of distress after treatment(11).

However, not all parents of children with cancer show high levels of distress. Considerable variation within and between studies is apparent, and the relationship between potential sources of stress and outcome is by no means clear. Few prospective studies of the relationship between earlier sources of

stress and problems continuing after treatment have often been based on small samples and a limited range of measures(9).

Nevertheless, some interesting findings emerge. Kazak and Barakat found significant associations between parenting stress during treatment and anxiety after treatment was completed in mothers and fathers of children with leukemia(12). Stuber found correlations between mothers' post traumatic stress symptoms at an average of 5 years after cessation of treatment and children's appraisal of treatment intensity, duration of treatment, and mothers' trait anxiety. For fathers, only trait anxiety was a significant variable. It appears that both stresses associated with treatment and influences within the family system are important for longer term adjustment(11).

In many cases, existing literature on adjustment in parents of pediatric cancer patients lacks a theoretical underpinning driving the investigation. A conceptual model that can encompass the varied factors affecting parents can enhance our understanding of the processes influencing the heterogeneity of response.

2.2. Associated factors of parental depression

Cancer by itself is the big issue; it plays the major role in the depression of parents with a child diagnosed with cancer. Yet, it is not the only element leading to depression there are associated factors that contribute for the depression. The resent part of the literature review looks at that.

2.2.1. Treatment procedures

Studies done in America, England and Canada shows parents whose children had completed treatment were not significantly less distressed than those whose children were still receiving treatment or those whose children had relapsed. On the face of it, this result is surprising(13). However, other studies also found that parents of children still in treatment did not differ from parents of children who were off treatment at 20 months post-diagnosis(14). The treatment procedure itself weather chemotherapy, surgery or radiation therapy depresses some parents. The side effect of the drugs leads them to despairs.

As Eiser notes, the fear of recurrence can remain high, and this fear was apparent in their interviews with parents 18 months after diagnosis. Parents' accounts in those interviews also showed that the transition from the active phase of treatment and attempts to return to normal routines were often

problematic; parents felt that they had received little preparation for the problems encountered and little support in the post-treatment phase(15). Some parents described feeling that they had had to cope during the active phase of treatment and their own feelings had been set aside. Once they returned home after that phase, those feelings may erupt. These descriptions, and the levels of distress found, support recent suggestions of posttraumatic stress disorder in some parents of children with cancer after the end of treatment. Further investigation of this issue on a longitudinal basis would be helpful to our understanding of parental reactions (7).

2.2.2. Family unity

Studies on psycho-oncology showed that family unity was an important resource for mothers and fathers. High levels of family unity have been found to relate to adjustment of parents and children in other studies and interviews with parents in the psycho oncology study suggests that families with strong relationships were more likely to become closer as a result of the illness, in contrast to those who felt that the illness had caused problems in relationships(8,16). Dolgin and Phipps suggest that the construct of family unity is related to the idea of centripetal and centrifugal forces, which operate around events in the normal family life cycle to draw families together or pull them apart. Serious illness is generally seen as producing centripetal forces, but if this occurs in families who are already undergoing centrifugal forces, greater family disengagement may result. But in general terms what different researches indicate is that families that are disintegrated are more likely to get clinical depression as a result of a child being diagnosed with cancer (17).

2.2.3. Life in the hospital

Different studies indicated that in the majority of families, mothers stayed in the hospital with their children, and hospital admissions are disruptive of family life. In the longer term, this may have a cumulative effect on family's well-being. When the mother is in the hospital with her child two realities may hits her hard, one she is not with her other children, two hospitals like Tikur Anbessa have overflow of patients and they are ideally uncomfortable for parents. The mother can easily sense the fact she and her child are not in an ideal situation. This fact has been suggested to lead parents into depression. Interviews with mothers indicated that they often obtained support from other parents and staff while staying at the hospital. This may have helped to reduce the effects of such disruption on mothers' well-

being. However, such support was not generally available outside the hospital; thus, fathers may lack the means to obtain support, a situation compounded by the frequent absence of their wives.

2.2.4. Economic factor

Caring for a child with a cancer can result in significant financial strain on families, which in turn can affect parental emotional, physical, and social health(18)

The economy of the parents is also seen by researchers as a contributing factor for family depression. Because, the parents at times feel their economy is not strong enough to carry them through the new reality of child cancer. Families with those have low income were more likely to develop depression ($p< 0.001$) related to the diagnosis of child with cancer. They might not be able to buy the necessary drug, they might not be able to provide for the child with cancer other new needs and cares he/she needs due to their new medical condition, they might not be able to pay for all the transportation cost they bring the child to the hospitals every time needed. This reality will mostly led them despair and finally depression (18).

The prevalence of depression in poor mothers and father of a cancer diagnosed child in Pakistan is said to be as high as 78%. Mild depression was seen in 69% of mothers, moderate in 25%, severe in 5% while 1% had very severe depression. This high prevalence of depression in such mothers and fathers has not been reported from Pakistan before. The soaring levels of depression however have been consistent with the study conducted in Turkey in 2009 in poor mothers and fathers of children with leukemia where 88% mothers and fathers were depressed. Mild depression was reported in 22.7 % and major depression in 61.5%. Similar results were reported from a study conducted on both parents of children with leukemia in 2002 in Pakistan where 65% of mothers were found to be depressed (19). Nevertheless, severity of depression in this study was not noted.

2.2.5. Knowing the outcome of cancer

In England 82% children who are diagnosed with cancer dies in five years' time. In America the mortality rate of children with cancer is around 85% (11, 15). These countries have developed medical system; their hospitals are filled with specialists. Yet the mortality rate of child cancer is very high. If the parents know this facts about cancer and its outcomes they know things are not on their side. So they feel hopeless, despaired, powerless and weak. They know they are going to lose their child sooner, that reality by itself is depressing.

The present study is to be conducted in Ethiopia, since Ethiopia is among the developing country of the world the low economic factor is expected to play a vital role in the depression of parents with children diagnosed with cancer.

2.3 **Conceptual framework**

The following conceptual framework is designed to show the link between the outcome variable and the factors associated to it.

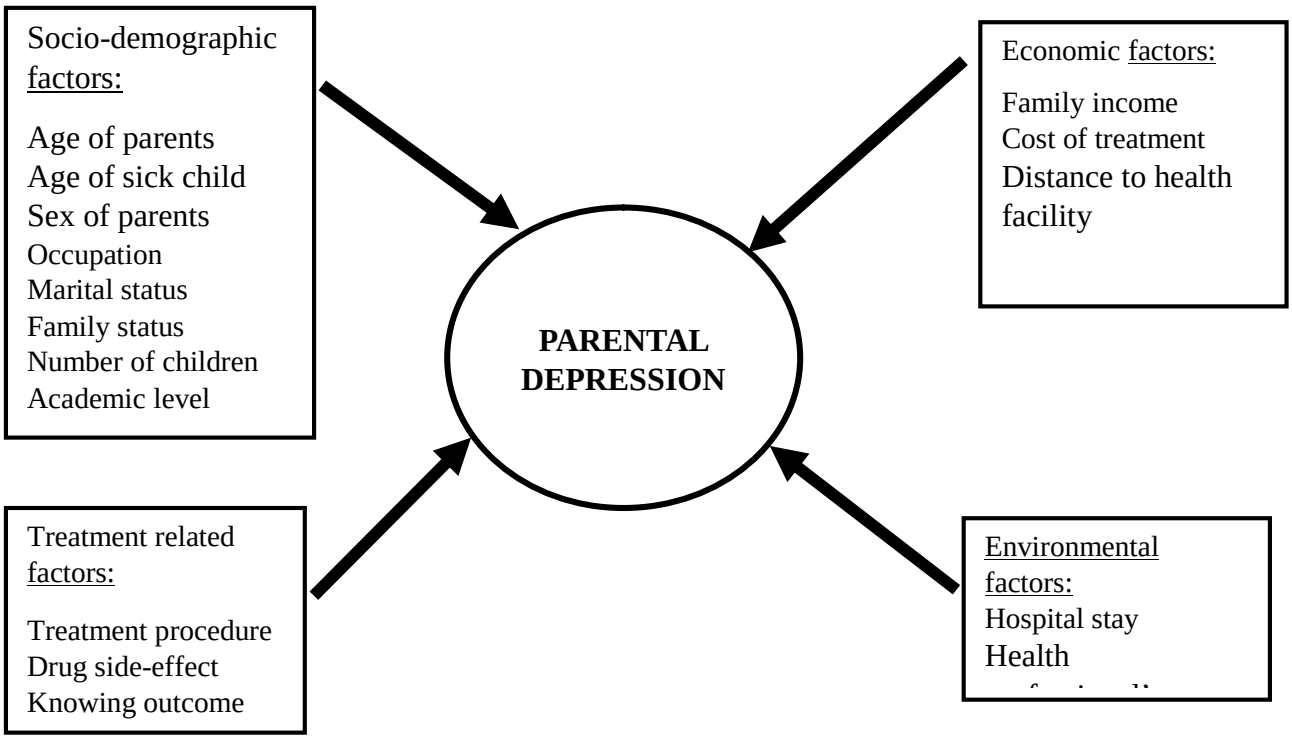

Figure 1: Conceptual framework developed from different Literatures.

3. Objective of the study

3.1. General Objective:

To assess the prevalence of depression and associated factors among parents who have children diagnosed with cancer at Tikur Anbessa Hospital, Addis Ababa Ethiopia 2017.

3.2. Specific objectives:

- To determine the prevalence of depression among parents who had a child diagnosed with cancer at Tikur Anbessa Specialized Hospital.
- To identify the associated factors of depression among parents who had a child diagnosed with cancer at Tikur Anbessa Specialized Hospital.
- To describe the experience of parents of children diagnosed with cancer at Tikur Anbessa Specialized Hospital.

4. Methodology:

4.1. Study area and period

The study was conducted at Tikur Anbessa Specialized Hospital in Addis Ababa Ethiopia between April 1st to May 15th 2017. Addis Ababa is the capital city of Ethiopia; with an estimated population of 3,048,631 occupying a total of 540 sq.km according to the 2012 census. The city is divided into ten sub-cities and 116 Woredas, the smallest administrative units. In the city there are 12 public hospitals. Black Lion Hospital is the largest referral hospital located in the center of city. It is the only center for diagnoses, treatment and care of patients with cancer in the country. The Hospital has a total of 600 beds according to the report from the statistics office of the hospital; of which 18 beds are devoted to adult cancer patients' and 26 beds are devoted to pediatric oncology and hematology. There are only two hematologists, four adult oncologists and two pediatric oncologists. (Source: Hospital human resource personnel office).

4.2. Study design

A mixed approach qualitative and quantitative cross-sectional study design was employed

Source population

Parents taking care of their child who were diagnosed with cancer and attending medical treatment at Tikur Anbessa Hospital.

4.3. Study population

All biological parents who had a child diagnosed with cancer and undertaking cancer treatment in the inpatient and outpatient departments.

4.4. Eligibility criteria

4.4.1. Inclusion criteria:

- mentally competent consenting biological Fathers and mothers who were taking care of their child for at least two weeks or more at the cancer center.

4.4.2. Exclusion criteria:

- Critically sick and mentally incompetent biological parents were excluded.

4.5. Sample size determination

The assumption to calculate the actual sample size is 95% level of confidence with 0.05 marginal errors. Since there was no similar published study found during literature search in the country, the principal investigator decided to use prevalence of 50% using a single population proportion formula.

$$n = \frac{\left(Z \frac{\sim}{2}\right)^2 p(1-p)}{d^2}$$

Where,

n = is the required sample size

z = the value of the standard normal curve score corresponding to the given Confidence interval = 1.96

p = estimated proportion parental depression as a result of child cancer diagnosis (50%).

d = the permissible margin of error (the required precision) = 5%

$$n = \frac{(1.96^2)(0.5(1-0.5))}{0.05^2} = 384$$

Since the population was less than 10,000 a correction formula was used. Therefore using the correction formula:

$n = {no}/{1 + \frac{no}{N}}$ Where n_o the initial sample size and N the total population

$$n = {384}/{1 + \frac{384}{720}}$$

$$n = 250$$

After adding 10% for non-response rate the final sample size will be 275

4.6. Sampling procedure

Systematic random sampling technique was used to gather information from parents of children attending cancer treatment at Tikur Anbessa Hospital. Based on the registry from the oncology outpatient flow there were about 120 children visiting the hospital for cancer follow up and treatment every week. The total study period was six weeks. Two hundred seventy five parents were enrolled. Every second and third alternate participant was selected and interviewed during the data collection period. Twenty parents who were not included in the quantitative section were involved in the qualitative study and data collection was over when data saturation maintained.

4.7. Study variables

4.7.1. Dependent variable:

- Parental Depression

4.7.2. Independent variable:

- Socio demographic characters,
  - Age of the sick child
  - Sex
  - Age
  - Occupation
  - Marital status,
  - Number of children
  - Academic level
  - Family status
- **Economic factors**: Family income, cost of treatment, distance to health facility
- **Treatment related factors**: Treatment procedure, Drug side-effect, Knowing outcome
- **Environmental factors**: Hospital stay, health professionals behavior

4.8. Operational definition

- **Parental depression**: Parents with mood disorders were scored according to beck's depression inventory scale .
- **Parents:** are the biological parents of a child diagnosed as cancer patient involving the father and /or the mother.
- **Both parent:** biological father and mother of the sick child

INTERPRETING THE BECK DEPRESSION INVENTORY

- After having completed the questionnaire, add up the score for each of the twenty-one questions by counting the number to the right of each question you marked. The highest possible total for the whole test would be sixty-three. This would mean you circled number three on all twenty-one questions. Since the lowest possible score for each question is zero, the lowest possible score for the test would be zero. This would mean you circles zero on each question. You can evaluate your depression according to the Table below.

Total Score_____Levels of Depression

1-10_____These ups and downs are considered normal

11-16_____ Mild mood disturbance

17-20_____Borderline clinical depression

21-30_____Moderate depression

31-40_____Severe depression

Over 40_____Extreme depression

4.9. Data collection instrument and process

A structured interviewer administered data collection instrument was used to gather the information for the quantitative section and an interview guide was used for the qualitative part. A standardized questioner from beck's depression inventory scale was adapted for the quantitative part and the interview guide for the qualitative part which was designed by the principal investigator as it appears in the literature. Data collection was conducted by two data collectors and the principal investigator supervised the whole process for the sake of consistency and completeness. Data collectors were trained for two day on the administration of the questions in a consistent manner, when to start and end the data collection process and whom to enroll and exclude in the study. The data collection instruments was translated from English to the local language, Amharic for ease administration by skilled person in both languages, and back translated to English for consistency. The instrument was pretested for its clarity and relevance to answer the question in study in 5% of participants before the data collection period and pretest subjects were excluded during the actual data collection. Problems with clarity and relevance in the instrument during the pretest were addressed immediately.

4.10. Data quality assurance

Face validity of the questionnaire was assessed and meanings of all items was checked accordingly. Items interpretability and understandability by the study participants was evaluated by pre-testing the questionnaire on 5% of the individuals from the total sample size living in the study area but not included in the main study and necessary measures was taken accordingly. The questionnaire was translated by a skilled personnel in both foreign and local languages for ease of administration to the study subjects and back translated to the original language of English, The in-depth interview was conducted in the local language, (Amharic). On daily basis collected information was reviewed for possible errors.

4.11. Data processing and analysis

The collected data were checked for completeness before the analysis process. Incomplete data was cleaned and removed. The data was checked, coded and entered into Epi-info version 7 and then exported to statistical package for social sciences (SPSS) version 20 for analysis. Descriptive and analytical statistics including univariate, bivariate and multivariate analysis was employed. Frequency proportion, percentage, was used to describe the characteristics of study participants. Bivariate and multivariate regression analysis was used to examine association between dependent and independent variables. Odds ratio and significance of statistical association was tested using 95% confidence interval and p- value less than 0.05 was considered as statistical significance for associations. Results of the study was narrated and summarized in texts and presented using tables.

A portion of participants who were not involved in the quantitative part were enrolled conveniently to the qualitative study until data saturation was maintained. The qualitative data was gathered through an in-depth interview and recorded using a voice recorder. The voice recorded was transcribed and translated to English. Coded data was affixed; these codes was then sorted and matched to identify similarities and differences. The coded data was then grouped under selected themes, summarized manually and narrated.

4.12. Ethical consideration:

Ethical clearance was obtained from AAU, college of Health Sciences, Department of Nursing and Midwifery institutional review board. Permission to gather data was sought from hospital authorities after they are informed about the study objectives through letter written from AAU. Written informed consent was obtained from each participant to confirm willingness. Involvement to the study was based on voluntary basis, participants were not asked to write their names and explanation on the purpose of the study, was given to the respondents. Ideas extracted from the literatures during literature review were acknowledged.

Dissemination and utilization of results:

The result of the study will be submitted to the Addis Ababa University College of Health sciences department of Nursing and Midwifery. It will be presented to the population in the study setting, It is also presented in National and international conferences and sent for publication in Scientific journals.

5. Result

5.1 Socio-demographic characteristics

Two hundred seventy five eligible study participants (parents) were participated in the study, making 100% response rate .from those 96 (34.2%) are between the age of 31 and 35 years followed by 25-30 and 36 -40 years 70 (25.5%) and 65 (23.6%) respectively. Concerning Sex, the distribution of females were found to be higher than men. Women were 145 (52.7%) with the remaining proportion men, with most sick children were supported by both parents 232 (84.4%) and the remaining 43 (15.6%) were single parents. Regarding their occupation 121 (44%) of fathers were farmers followed by 60 (21.8%) merchant, most of the mother were house wife's 125 (45.5%) unlike to the fathers occupation merchant mothers took the least proportion 17 (6.2%). Concerning marital status, 248 (90.2%) were married couples followed by divorced 12 (4.4%), single13 (4.7%) widowed 1 (0.4%) and others 1 (0.4%) respectively. Of the 275 parents, 173 (62.9%) of the parents have 0-3 children, 85 (30.9%) have 4-6 children the rest of the parents have more than 6 children that is 17 (6.2%).

Most 136 (49.5%) of children diagnosed with cancer were aged between two and five years and 86 (31.3%) were aged between 6-10 years. Of the 275 parents, 119 (43.3%) of mothers and 84 (30.5%) of fathers were illiterate. One hundred eighty nine (68.7%) of parents have income ranging between 500-1500birr. About 99 (36%) study participants reported they have other sources of support from relatives and insignificant proportions have got support from companies, insurance employing institutions while the remaining 149 (54.2%) of parents do not have any other support sources. Refer table 1 for further details.

Table 1: Socio-demographic characteristics of parents of children diagnosed with cancer at Tikur Anbessa hospital April 1st to May 15 2017

S/No	Variable	Category	Frequency (n=275)	Percentage %
1.	Age	18-24years	11	4.0
		25-30years	70	25.5
		31-35years	94	34.2
		36-40years	65	23.6
		41-45years	19	6.9
		>=46years	16	5.8
2	Sex	Male	130	47.3
		Female	145	52.7
3	Parental status	both parent	232	84.4
		single parent	43	15.6
4	Occupation of father	Merchant	60	21.8
		government employee	34	12.4
		Farmer	121	44.0
		daily laborer	55	20.0
		Other*	5	1.8
5	Occupation of mother	house wife	125	45.5
		government employ	23	8.4
		Merchant	17	6.2
		daily laborer	34	12.4
		Farmer	73	26.5
		Other**	3	1.1
6	Marital status	Single	13	4.7
		Married	248	90.2
		Other***	14	5.2
7	Number of child	1-3 children	173	62.9
		4-6 children	85	30.9
		>=7 children	17	6.2
8	Age of the sick child	1day-23 months	27	9.8

		2-5 years	136	49.5
		6-10 years	86	31.3
		11-15 years	25	9.1
		16-18 years	1	.4
9	Maternal level of education	Illiterate	119	43.3
		read and write	72	26.2
		completed elementary school	36	13.1
		completed secondary school	23	8.4
		diploma and above	25	9.1
10	Academic level of the father	Illiterate	84s	30.5
		read and write	74	26.9
		completed elementary school	36	13.1
		completed secondary school	44	16.0
		diploma and above	37	13.5
11	**Family income**	500-1500birr	189	68.7
		1500-2500birr	20	7.3
		2500-3500birr	26	9.5
		>=3500	40	14.6
12	Other support source	Relatives	99	36.0
		Employer	19	6.9
		insurance company	8	2.9
		No other support	149	54.2

(*= self- employed, priest)

(**=prostitute, self- employed)

(***=engaged)

5.2 Environmental factors

Regarding there environmental factors, the highest percentage of parents 203(73.8%) reside out of Addis Ababa and the other 72 (26.2%) were Addis Ababa residents. One hundred forty eight (53.8%) parents stated that they spent 4-6 weeks in the hospital while 64 (23.3%) parents spent 7-9 weeks other 49 (17.8%) parents spent more than 9 weeks whereas only 14 (5.1%) parents spend 1-3 weeks in the hospital. Most 265 (96.4%) parents reported health professional behavior were inviting while few 10 (3.6%) parents stated that health professionals behavior were discouraging.

Table 2: Environmental factors for parental depression at Tikur Anbessa Hospital April 1st to May 15th 2017

S/No	Variable	Category	Frequency (n=275)	Percentage %
1	Place of residence	Addis Ababa	72	26.2
		Out of Addis Ababa	203	73.8
		Total	275	100.0
2	Hospital stay	1-3 weeks	14	5.1
		4-6 weeks	148	53.8
		7-9 weeks	64	23.3
		>=10 weeks	49	17.8
		Total	275	100.0
3	Health personnel behavior	Inviting	265	96.4
		Discouraging	10	3.6
		Total	275	100.0

5.3 Parental past depression status and disease outcome

In this study majority of the parents 235 (85.5%) reported that they were not experienced signs of depression in the past while, 40 (14.5%) parents stated that they experience depressive signs even if it not medically confirmed. Majority 200 (72.7%) of parents stated that knowing disease outcome of their child led them to depression while the remaining parents stated that knowing disease outcome not linked to parental depression

Table 3: Parental depression status in the past and awareness about disease outcome factor at Tikur Anbessa hospital April 1st –May 15th 2017

S/No	Variable	Category	Frequency (n=275)	Percentage %
1	History of depression in the past	Yes	40	14.5
		No	235	85.5
		Total	275	100.0
2	Knowing the out come	Yes	200	72.7
		No	75	27.3
		Total	275	100.0

5.4 Treatment factors

As it is represented in the above table, 218 (79.3%) children receive chemotherapy and surgery with chemotherapy as the second course of treatment. Of all children undertaking anticancer treatment, 157 (57.1%) develop side effects of nausea and vomiting and another 136 (49.5%) loss of appetite, 125 (45.5%) hair loss, respectively. For further details refer table 4

Table 4 Treatment factors

S/No	Variable	Category	Frequency (n=275)	Percentage %
1	Type of treatment given to the sick child	Chemotherapy	218	79.3
		Radiotherapy	10	3.6
		Surgery	3	1.1
		Radiotherapy and surgery	12	4.4
		Chemotherapy and surgery	26	9.5
		Radiotherapy and chemotherapy	5	1.8
		Radiotherapy chemotherapy and surgery	1	.4
2	Effect of pain on child	Yes	52	18.9
		No	223	81.1
3	Effect of child sore throat	Yes	88	32.0
		No	187	68.0
4	Effect of nausea & vomiting	Yes	157	57.1
		No	118	42.9
5	Effect of diarrhea	Yes	63	22.9
		No	212	77.1

6	Effect of hair loss	Yes	125	45.5
		No	150	54.5
7	Effect of poor appetite	Yes	136	49.5
		No	139	50.5
8	Effect of weakness	Yes	78	28.4
		No	197	71.6

5.5 Distribution of depression

Regarding on the overall assessment of depression level status of the respondents, nearly half of the respondents have a higher proportion 135 (49.1%) of participants were mild mood disturbance followed by normal 76 (27.6%), borderline depression 20 (7.3%), severe depression 18 (6.5%), moderate depression 17 (6.2%) and 9 (3.3%) extreme depression.

Table 5 Distribution of depression of parents of children diagnosed with cancer at Tikur Anbessa Hospital April 1st to May 15th 2017.

Variable	Frequency (n=275)	Percent %
Normal	76	27.6
Mild mood disturbance	135	49.1
Borderline clinical depression	20	7.3
Moderate depression	17	6.2
Severe depression	18	6.5
Extreme depression	9	3.3

5.6 Logistic regression association

Bivariate and multivariate logistic regression analysis was performed between parental depression (dependent variable) and socio demographic status of parents having child with cancer (independent variable). In the bivariate analysis factors that showed a p-value of 0.2 and less were added to multivariate regression model. The model contained six independent variables. The result revealed that parental status of the respondent was associated with depression. Single parents taking care of their child were 6.2 times **{AOR=6.2; 95% CI (2.66-14.52) }** more likely to develop depression compared to those both parents of children.

The other variable that was found to have association was the participants' family income. Parents of child with cancer those have family income 3500-4500 and ≥ 4500 were 0.17 times and 0.34 times less likely to develop depression compared to those have family income 500-1500 **{AOR=0.17; 95% CI (0.04-0.72) }**, **{AOR=0.34; 95% CI (0.02-0.87) }** respectively .

Concerning to parental status, Parents of child with cancer those have no previous history of depression were 0.18 times **{AOR=0.18; 95% CI (0.07-0.43) } }** less likely to develop depression compared to those have previous history of depression.

Source of the support was also found to be among the factors affecting parents' depression. Insurance company and employers source of support for parents of child with cancer was found to be almost13 and 9 times more likely to develop depression **{AOR=12.89; 95% CI (3.12-53.18) }, {AOR=9.19; 95% CI (2.29-36.78) }** respectively.

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Table 6: Logistic regression for factors associated with depressions among parents having children diagnosed with cancer at Tikur Anbessa specialized hospital, April 1 to May 15, 2017

Category	Parental depression			
	No	**Yes**		
	231 (84.0)	**44(16.0)**	**COR(95%CI)**	**AOR(95%CI)**
Parental status				
Both parent	191(82.3%)	41(17.7%)	1	1
Single parent	19(44.2%)	24(55.8%)	5.88(2.95,11.73)*	**6.21(2.66,14.52)****
Family income in Eth				
500-1500birr	146(78.9%)	39(21.1%)	1	1
1500-2500birr	13(68.4%)	6(31.6%)	1.72(0.61,4.83)	1.08(0.3,3.87)
2500-3500birr	20(80%)	5(20%)	0.93(0.33,2.65)	0.49(0.14,1.73)
3500-4500birr	21(75%)	7(25%)	1.24(0.49,3.14)*	**0.17(0.04,0.72)****
≥4500birr	10(55.6%)	8(44.4%)	2.99(1.1,8.09)*	**0.34(0.02,0.87)****
Previous history of depression				
Yes	18(45%)	22(55%)	1	1
No	192(81.7%)	43(18.3%)	0.18(0.09,0.37)*	**0.18(0.07,0.43)****
Other support source				
Relatives	81(81.8%)	18(18.2%)	1	1
Employer	9(47.4%)	10(52.6%)	5(1.77,14.08)*	**12.89(3.12,53.18)****
Insurance company	6(40%)	9(60%)	6.75(2.13,21.36)*	**9.19(2.29,36.78)****
No other support	114(80.3%)	28(19.7%)	1.1(0.57,2.13)	1.18(0.55,2.53)

Adjusted for family or parental status, monthly income, previous history of depression, other support source
P-value<0.05**, P-value<0.001***,

Qualitative analysis

As stated on the sampling procedure mixed methods, qualitative and quantitative data collection was used. Twenty participants were interviewed in the qualitative section which were not enrolled in the quantitative part.

Interview findings

Participants were referred to as P1 - P20 and each interview were held using a semi-structured interview guide with probing questions linked to feelings and experience of parents undertaking care of the cancer sick child.

Respondents' feelings during the first diagnosis of child cancer:

Respondents were asked to respond about their feelings when they were told about the diagnosis of their child for the first time. Most of the study participants reported that they were horrified, shocked, knocked-over and frustrated to death. Furthermore, interviewees also reported that they experience grief, and panic attack due to fear of death of their beloved one. One of the respondents stated that:

> ***P2"I panicked to death and I feel like I was suffocated and short of breath I stop thinking for several minutes and cried out loud".***

Another respondent supported the opinion of P2 stating that:

> ***P7" I never thought it would be cancer I was so anxious and terrified I felt like I have been hit over the head it was all grief and frustrating."***

Respondents' feelings after knowing late diagnosis of their child with:

Respondents were asked about their feelings after knowing the diagnosis of their child. Participants responded that they feel they were losing their child due to the serious nature of the disease and financial problems. One of the respondents stated that:

> ***P1 "Well, eeeemmm…pause for a few seconds and continue…I feel like I might lose her any time soon and I don't even trust her when she fall asleep am afraid she might not wake up again and see her."***

Another respondent also stated that:

P3"This is a difficult disease and it needs a long term treatment but I don't have the ability to pay for all those treatments sometimes this all came in to my mind and I fell so hopeless about the future that I can't do nothing for my child".

Feeling of respondents being having a child with cancer:

Respondents were asked about their feelings on them after knowing the diagnosis of their child. The participants replied that it was so sad, horrifying and distressing. They felt that as if this was a sin from God and they are not lucky enough to see their child's future. One of the respondents said:

P8"I simply said to myself that I am not lucky enough to see my child growing and his future."

Length in time for feelings to occur in the parents:

Respondents were asked about the length of time taken to experience their feelings and their responses varied ranging from soon after the diagnosis of cancer to about four months. Here are some of the responses:

P6"I don't exactly remember but it all started since she start developing the symptoms"

P12"it all started after I heard my child's diagnosis."

P20"it's around 3-4 months."

Meaning of having a child with cancer to parents:

Respondents were asked about the meaning of having a child with cancer to them, and they find it even difficult to express their feelings but trying to cope up with it, since there were nothing to do about it. Here are some of their expressions:

P11"First it was very difficult for me to believe but now am trying to calm myself down and try to look forward as if its normal."

P8"It is difficult to express the feeling its heart breaking."

P13"it means nothing to me .because there is nothing I can do about it."

Reaction of the sick child about his diagnosis if aware of it:

For the question about the reaction of the sick child when they were told about the disease for the first time, most of the respondents said children was unaware of their diagnosis since they are still un matured and some said afraid of death and keeps asking if they are going to survive.

P1"since he's a baby I didn't tell him anything about his disease"

P7"I don't think he deserve to know I want him to be happy."

P19"He doesn't know much about the disease but every time he feels sick he keeps asking if he's going to die."

Current situation of the child if he or she is aware of the disease:

Respondents were asked about the current feelings and situation of their child. Most of them said the child doesn't know about the disease and its outcome and yet they feel that they will recover from the illness and some considered it normal, but others feel hopelessness.

P11"She feels like she has an acute disease and she thinks she will feel better soon"

P8"He doesn't know much about the disease but every time he is sick he keeps asking if he's going to die.

P3"He feels hopeless and he wish that he could have died."

P13"She feels nothing because she doesn't know about her disease."

Factors impacting parents of children with cancer:

Parents were asked about what factors bothered them most while they are taking care of their sick child. The respondents reported they worry about the nutritional support, doubts about full recovery of their child from the illness, concerned about acquiring new infections Some of the respondents stated that:

P5"My most concern is that since his immunity is low am afraid he may acquire other cancer causing infections and communicable diseases."

P9"my most worry is that when he refuse to take foods and fluids."

Parents were questioned about how the diagnosis of cancer in their child impacted their life. The respondents replied, they were concerned about financial issues due to the fact that their time was taken

to care the sick child others were worried about the drug side effects, and doubts about if their child is taking the correct drug and dosage or not .Some of the respondents stated that:

P17"I hate the fact that it took all my time and attention that I can't support the rest of my families

P9"I am afraid that someday I might run out of money and I can't pay for my Childs treatment."

P4"It hurts me the most seeing my child suffering from the side effects of the drugs."

Coping mechanisms used by parents of children with cancer:

Study subjects were asked about the coping mechanism they used during the circumstances and most of them responded they use to pray and engage them-selves in other tasks. However some responded they tried to convince them -elves to deal with the circumstances. One of the respondents said:

P7"***Basically I do prayers I believe there is nothing I can do so I pass it all to god second I spent much of my time in the internet so that I can update myself about the disease and its treatments I actually get a good information from the internet but it's not basic. What is important is a help from god and hospital stuffs"***

P13"I am trying to convince myself that better days are yet to come and concentrate on my child's treatment

6. Discussion:

This facility based cross sectional study has attempted to assess the prevalence of depression and its associated factors among parents of children diagnosed with cancer in Black Lion Hospital, Addis Ababa, Ethiopia.

The study revealed that the prevalence of depression among parents of children with cancer diagnosis. Among the participants 7.3% were with borderline depression, 6.2% were with moderate depression, 6.5% severe depression and 3.3% were extreme depression. Relatively higher levels of depression were found in the study conducted in Pakistan to evaluate the prevalence of depression among Mothers of children diagnosed with cancer which showed 69% with mild depression, 25% moderate depression, 5% severe depression and 1% very severe depression was (20). This discrepancy might be due to difference in the study setting, socio demographic factors, and sample size. The previous study conducted on smaller sample, whereas the current sample was relatively high.

Regarding to parental status factor, being single parenting showed significant association with parental depression {AOR=6.2; 95% CI (2.66-14.52)}. The present finding was in support with a study conducted in Vanderbilt which explained that factors that influences development of depression among parents was single parents. It was reported that single parents were more depressed and anxious than parents of both children (21). That might be explained when parents are only one, they became hopeless and feeling of a lone thereby develop depression during child diagnosed with cancer.

The result of this study also found that monthly income of parents of children diagnosed with cancer was associated with the development of depression {AOR=0.34; 95% CI (0.02-0.87)}. Parents of children with a monthly income of >4500 Eth. Birr are less likely to have depression as a result of cancer diagnosis of their child compared to those parents earning less than 1500 Eth. Birr. This finding was consistent with the study conducted in LA, California where people with low in come are two times depressed than that of the parents with high income (22). This could be justified as those who have high income relatively can provide care for their family including during the sickness of the child that can reduce their stress.

In the present study there was association between parental depression and previous experience of depression in parents of child with cancer {AOR=0.18; 95% CI (0.07-0.43)}]. Those have no previous history of depression were less likely to develop depression. Study conducted in USA 2016 to determine Associations between experiences of Depression in parents has been consistently associated with a higher likelihood of recurrence of depression or early development of depression and a number of behavior problems (23). This might be due to the reason of scar related to previous burden they had experienced.

Concerning the source of support, insurance company has association with depression of parental of child with cancer {AOR=9.19; 95% CI (2.29-36.78)}]. This finding was consistent with the finding in Canada where many people whose child is diagnosed with cancer had many support sources such as; relatives, family, friends, community (e.g. teachers , religious organizations) and cancer organizations. But they still face depression and they reported a number of unmet needs (24). This might be due to limitation of money provided by insurance company and it may require extra money to afford by the parents.

The findings from in-depth interview in this study showed that majority of the participants mentioned anxiety and frustration related to diagnosis of their child with cancer when they reported their coping mechanisms and their feelings. A number of participants mentioned horrified, anxious, shocked, knocked-over and frustrated to death when they were told about the diagnosis of cancer in their child for the first time. Furthermore, interviewees also reported that they experienced grief, and panic due to fear of death of their beloved one. This study also supported by Several relatively consistent studies done in different countries like a study conducted in Boston, Massachusetts stated that parents reported that they had a number of strategies that they used when they felt stressed out with their child's sickness, most often they try to remove themselves from the situation to keep from reacting anxious(25,26). The other study stated that Anxiety refers to a complex combination of emotions that include fear, apprehension, and worry. Since anxiety entails an expectation of diffuse and uncertain threat, it plays an obvious role in the experience of depression on parents when confronted with the life-threatening diagnosis of cancer in their child (27). Some of the respondents stated that

P2"I panicked to death and I feel like I was suffocated and short of breath I stop thinking for several minutes and cried".

P7" I never thought it would be cancer I was so anxious and terrified I felt like I have been hit over the head it was all grief and frustrating."

The study participants also expresses their feelings that the event was so sad, horrifying and distressing late after they knew the diagnosis saying:

P8"I simply said to myself that I am not lucky enough to see my child growing and his future."

P1 "Well, eeeemmm…pause for a few seconds and continue…I feel like I might lose her any time soon and I don't even trust her when she fall asleep am afraid she might not wake up again and see her."

Respondents believed their child doesn't need to know about their diagnosis and its outcome since they are still unmatured, but keeps asking if they are going to survive. The respondents sympathizes fear of their children stating:

P19"He doesn't know much about the disease but every time he feels sick he keeps asking if he's going to die."

Financial issues, job interruption, supporting self and other family members, drug side effects and doubts about right drug and dosage were also raised among the concerns that impacted parents life when taking care of their sick child.

P17"I hate the fact that it took all my time and attention that I can't look after the rest of my families."

P9"I am afraid that someday I might run out of money and I can't pay for my child treatment."

P4"It hurts me the most seeing my child suffering from the side effects of the drugs."

Participants used going to spiritual places and engaging them-selves in other tasks as coping mechanism. One of the respondents said:

P7"***Basically I do prayers I believe there is nothing I can do so I pass it all to god second I spent much of my time in the internet so that I can update myself about the disease and its treatments I actually get a good information from the internet but it's not basic. What is important is a help from god and hospital stuffs"***

7. Strength and limitation of the study

Strength of the study

- The study targeted important risk populations which are parents of children diagnosed with cancer.
- There are very limited researches were found related to parental depression and associated factors, so the finding of this research will be very useful resource for future research regarding the topic.
- The research question was based on clinical experience so that the finding can be applied easily to the real situation.
- The research meets all its objectives
- A mixed approach with triangulation of qualitative and quantitative study variables which are not investigated through quantitative study, they were cover

Limitation of the study:

- Since the study was cross-sectional study, it was not possible to determine cause effect relationship
- Sample size was limited and some relation between the dependent and independent variables were only found on limited participant's inference of the result to the general population is difficult.

8. Conclusion

The aim of this study was to access the prevalence of depression and associated factors among parents who have children diagnosed with cancer.

The result shows that the prevalence of parental depression among parents who have children diagnosed with cancer was borderline depression, 7.3 %, moderate depression 6.2%, severe depression, 6.5 % and extreme severe depression 3.3% . But we found this prevalence lower than the expected prevalence of our observation on clinical experience.

According to the findings of this study the key determinant factors associated with parental depression were family income >4500 shows less parental depression, whereas parental or family status with single parents , previous experience of depression and other support source group with insurance company and employer shows high parental depression. So that to reduce parental depression among parents the social, psychological treatment should also include parents and enhance emotional support like family support group, cancer society organizations. And for parents with previous experience of depression, they should get better attention in order to not recur and continues follow up before it reaches in to serious stages of depression.

9. Recommendation

For health professionals

- Health professionals should be aware of the current prevalence of parental depression which is high according to the study population; they should work together with the parents on key modifiable determinant factors.
- While providing care for the pediatrics cancer patients they should also consider the parents. Parents should not be neglected.

For policy makers

- Policy makers should be aware of the current parental depression and associated factors so that it should be given better attention.
- While making protocols and guidelines, related to children's with cancer the follow up and treatment should also consider parents with such problems.
- Facilitate social support groups, family support groups for parents with such problems in order to reduce the risk of depression among parents.

For other interested researchers

- Parental depression is relatively is a very important issues. Since there is no similar topic found in the country it left a stepping stone for other researchers.

- The topic was as such addressed but future studies in different set up with larger sample size will give additional information.

- If the researchers conducted the study with follow up type study design like cohort study will help to determine the exact determinants of depression among parents.

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ANNEXES

ANNEX 1: INFORMATION SHEET

Good morning/good afternoon!

My name is _____. I am here today to collect data on depression and associated factors among parents of children diagnosed with cancer at Tikur Anbessa specialized Hospital.

The study is being conducted by ***S/r Helina Mekonnen,*** postgraduate program student at Addis Ababa University College of health sciences school of Allied health, Department of Nursing and Midwifery. The objective of this study is to assess the prevalence and associated factor of depression among parents of children diagnosed with cancer.

You are being asked to take part in this study and to respond genuinely. Your name will not be written in this form and will never be used in connection with any information you tell us.

There is no possible risk associated with participating in this study except the time spent for completing the questionnaire. All information given by you will be kept strictly confidential. Your participation is voluntary and you are not obligated to answer any question you do not wish to answer. If you feel discomfort with the question, it is your right to withdraw at any time you wish. If you have questions regarding this study or would like to be informed of the results after its completion, please feel free to contact the principal investigator.

Address of the principal investigator:

Cell phone: +251911635636

Email- helinamekonnen23@gmail.com

Address of Addis Ababa University, Faculty of Medicine, Institutional Review Board:

Telephone number: 0115538734,

E-mail: aaumfirb@yahoo.com

Data collector's name_____ Signature _____Date_____

ANNEX 2:CONSENT FORM

CONSENT TO PARTICIPATE IN A STUDY ENTITLED "DEPRESSION AND ASSOCIATED FACTORS AMONG PARENTS OF CHILDREN DIAGNOSED WITH CANCER AT TIKUR ANBESSA HOSPITAL"

Greetings! My name is Sr. Helina Mekonnen, 2nd year MSc student, at Addis Ababa university College of Health Sciences Department of nursing and Midwifery. I am working on this research project with the objective of assessment of depression and associated factors among parents of children diagnosed with cancer at Tikur Anbessa Hospital.

Purpose of the study:

The study will involve parents taking care of their children at out-patients and in-patients at Tikur Anbessa Oncology unit. Conducting the study will enable to determine the prevalence of depression and identify the associated factors of depression in parents of children with cancer.

Participation in this study:

The study will involve one group of participants, biological parents of children diagnosed as cancer cases. If you agree to participate in the study you will be required to answer interview questions, attended by research assistant.

Confidentiality:

All information collected during this study will be kept strictly confidential and will not be revealed to anybody outside the research team.

Risks:

We do not expect that any harm will happen to you because of joining this study. If you feel tired/exhausted, you will be able to stop the interview temporarily or decline at any time if you feel too uncomfortable.

Rights to withdraw and alternatives

Taking part in this study is completely your choice. If you choose not to participate in the study, or if you decide to stop participating in the study you will continue to receive all services that you would normally get from the oncology unit. You can stop participating in this study at any time even if you have already given your consent.

Benefits:

There will be no direct benefit to you from participating in this study. However, the information that you provide may help health professionals to better understand how the problem can be prevented.

In case of injury

We do not anticipate that any harm will occur to you as a result of participation in this study. However if any physical injury resulting from participation in this study should occur, we will provide you with medical treatment according to the current standards of care in Ethiopia. There will be no additional compensations to you.

Who to contact:

If you ever have questions about this study, you should contact the study coordinator or principal investigator **Sr. HelinaMekonnen**, Tel- +251911635636Addis Ababa University College of Health Sciences, School of Allied Sciences, Department of Nursing and Midwifery P.O. Box 4412, Tel +251115530054.

Signature:

Participant agrees…….. Participant does NOT agree ……

I _____ have read the contents in this form. My questions have been answered. I agree to participate in this study.

Signature of participant _____

Signature of witness (if mother/ caretaker cannot read) _____

Signature of research assistant _____

Date of signature _____

ANNEX 3: AMHARIC VERSION OF INFORMATION SHEET AND CONSENT FORM

የመረጃ ገለጻ ማብራሪያና ስምምነት ፎርም

ጤናይስጥልኝ፡፡

እኔ----------እባላለሁ፡፡ በአዲስ አበባ ዩንቨርስቲ የጤና ሳይንስ ኮሌጅ በአላይድ የጤና ት/ቤት በነርስና ሚድዋይፍ የትምህርት ክፍል በአንኮሎጂ ነርስ የትምህርት ዘርፍ የሁለተኛ አመት የማስተርስ ዲግሪ ተማሪ ስሆን በዚህ ሆስፒታል ታማሚ ልጆቻቸውን በመንከባከብ ላይ ያሉ ወላጆች የሚያጋጥማቸውን የድብርት በሽታና መንስኤዎቹን በተመለከተ ጥናት እያደረኩ እገኛለሁ፡፡ ከዚህ ጥናት የሚገኙት መረጃዎች ለመንግስት እና ለዚህ ከተማ የጤና ቢሮ በሽታውን ለመግታት አስፈላጊ የሆኑ እቅዶችንና ስልቶችን ለመንደፍ ጥቅም ላይ ይውላል፡፡ ስለሆነም በዚህ ጥናት ውስጥ የሚሳተፉና መላው ማህበረሰብ ከድብርት ህመም ጋር ተያይዞ በሚመጡ ችግሮች ወላጆች እንዳይጠቁ ያደርጋል፡፡ ጥናት ውስጥ በመሳተፍ ቀጥተኛ የሆነ ጥቅማጥቅም የሌለው ሲሆን ጥናት ውስጥ በመሳተፍ የሚመጣ ምንም አይነት ችግር ወይም ጉዳት ግን የለውም፡፡ የጥናቱ መጠይቅ ቢበዛ 20 ደቂቃ ይወስዳል፡፡ ጥናቱ ውስጥ ሊሳተፍ የሚችሉት በአጥኚው አማካኝነት ከጠቅላላው ሆስፒታሉ ወስጥ በህጻናት አንኮሎጂ ክፍል በመገልገል ላይ ከሚገኙ ወላጆች በዕጣየ ተለዩናቸው፡፡ ጥናቱ ውስጥ መሳተፍ የሚፈልጉ አባቶችና እናቶች በፈቃደኝነት ላይ ብቻ የተመሰረተ ተሳትፎ መሆኑን መገንዘብ አለባቸው፡፡ ባለመሳተፍዎ ምክንያት የሚመጣ ምንም አይነት ተጽኖ የለውም፤ ነገር ግን ከእርሶዎ የምናገኘውን መረጃ አስፈላጊ ስለሆነ ጥናት ውስጥ በፈቃደኝነት እንደሚሳተፉ ተስፋ አደርጋለሁ፡፡ ከእርስዎ የምናገኘው ማንኛውም አይነት መረጃ ከእኛ ጥናት ውስጥ ከምንሳተፈው ሰዎች ውጪ ለማንኛውም ሶስተኛ ወገን እንደማይደርስ እና ምስጢራዊነቱ የተጠበቀ እንደሚሆን ላረጋግጥላችሁ እወዳለሁ፡፡ መጠየቅ ለሚፈልጉት ማንኛውም አይነት ጥያቄ የሚከተለውን አድራሻ መጠቀም ይችላሉ፡፡ አሁንቃለ-መጠይቁን መጀመር እችላለሁኝ?

አዎ ካሉ ቃለ-መጠይቁን ይቀጥሉ

አይሆንም ካሉ ደግሞ ያመስግኑና መጠይቁን ያቁሙ

ቃለ-መጠይቁን የሚያደርገው ሰው

ስም----------

ፊርማ ----------

መጠይቁ የተደረገበት ቀን----------

የተቆጣጣሪው ስም ----------

ፊርማ----------

ቀን----------

አድራሻ፡ ስልክ 09 11 63 5636

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11.5.2 የፈቃደኝነት መጠየቂያ ፎርም

እኔ (ቃለ መጠይቁ የሚደረግልኝ) በዚህ ሆስፒታል ውስጥ በካንሰር ህምና ክትትል ላይ ያለ/ች ልጄን በመንከባከብ ላይ የምገኝ ሲሆን ከዚሁ ጋር በተያያዘ በወላጆች ላይ የሚከሰተውን የድብርት በሽታንና መንስኤዎቹን በተመለከተ ለጥናት የሚካሄደውን ጥናት ዋና አላማ እና የሚያስከትለውን ጉዳት ፣ ከእኔ የሚወጣውን መረጃ ከጥናቱ ባለቤቶች ውጪ ለማንም እንደማይተላለፍ፣ ጥናት ውስጥ በመሳተፍ ቀጥተኛ የሆነ ጥቅማጥቅም የሌለው መሆኑን ፣ እኔ የምሰጠው መረጃ ለመንግስት እና ለከተማው ጤና ቢሮ አስፈላጊ መሆኑን ፣ እኔ የተመረጥኩት በዕጣ አማካኝነት መሆኑን ፣ ጥናት ውስጥ መሳተፍ ያለብኝ በእኔ ፈቃደኝነት ላይ ብቻ የተመሰረተ እንደሆነ ፣ ጥናት ውስጥ መግባት ባለመቻሌ ምንም አይነት ተጽእኖ እንደሌለው፣ ከጥናቱ በማንኛውም ሰአት ማቋረጥ እንደምችል፣ መጠይቁን ለማጠናቀቅ ቢበዛ 20ደቂቃ እንደሚወስድ እና ማንኛውን አይነት ጥያቄ መጠየቅ እንደምችል በሚገባ ከተነገረኝ በኋላ በዚህ ጥናት ውስጥ በፈቃደኝነት መሳተፌን በፊርማዬ አረጋግጣለሁ

ፊርማ ----------

ANNEX 4: ENGLISH VERSION QUESTIONNAIRE

Indicate your choice by (X) mark on the options putted on the right

Section I: Socio-Demographic Characteristics of Parents……

	VARIABLE	Category	
1.1	Age in years	1. 18- 24 years ☐	2. 25-30 years ☐
		3. 31-35 years ☐	4. 36 -40 years ☐
		5. 41 - 45 years ☐	6. ≥ 46 years ☐
1.2	Sex	1. Male ☐	2. Female ☐
1.3	Family status	1. Both parent ☐	2. Single parent ☐
1.4	Occupation of father	1. Merchant ☐	2. Gov. employ ☐
		3. farmer ☐	4. Daily laborer ☐
		5. Other specify_____	
1.5	Maternal occupation	1. house wife ☐	2. Gov. employ ☐
		3. Merchant ☐	4. Daily laborer ☐
		5. Farmer ☐	6.Other,Specify _____
1.6	Marital status	1. Single ☐	2. Maried ☐
		3. widowed ☐	4. Divorced ☐
		5. Other specify _____	
1.7	Number of children	1. 0-3 children ☐	2. 4- 6 Children ☐
		3. ≥ 7 children ☐	
1.8	Age of the sick child	1. 0- 23 Months	2. 2 - 5 years
		3. 6-10 years ☐	4. 11-15 years ☐

		5. 16-18 years ☐	
1.9	Maternal academic level	1. Illitrate ☐	2. Read & write ☐
		3. completed ☐ Elementary school	4.completed ☐ Secondary school
		5. Diploma & above ☐	
1.10	Father's academic level	1. Illitrate ☐	2. Read & write ☐
		3. completed ☐ Elementary school	4.completed ☐ Secondary school
		5. Diploma & above ☐	
1.11	Have you ever had experience of depression in the past/earlier than the child diagnosis of cancer?	1.Yes ☐	2. No ☐

Indicate your choice by (X) mark on the options putted on the right

Section II: Economic Characteristics of Parents of children diagnosed with cancer.

2	Variable	Category	
2.1	Family income in Eth. Birr	1. 500-1500 ☐	2. 1501-2500 ☐
		3. 2501-3500 ☐	4. 3501 -4500 ☐
		5. ≥4501 ☐	
2.2	Other support sources	1. relatives ☐	2. employer ☐
		3. Insurance ☐ Company	4.Other, specify _____
2.3	Place of residence	1. Addis Ababa ☐	2. Out of Addis Ababa ☐

Indicate your choice by (X) mark on the options putted on the right

Section III: Treatment Related factors

3	Variable	Category	
3.1	Side effects	1.Pain ☐	2. Sore throat ☐
		3. Nausia & vomiting ☐	4. Diarrhea ☐
		5. Hair loss ☐	6. poor apetite ☐
		7. weakness ☐	8. Other_____
3.2	Type of treatment	1.Chemotherapy (CT) ☐	2. Radiotherapy (RT) ☐
		3.Surgery ☐	4. RT & Surgery ☐
		5. CT & Surgery ☐	6. RT & CT ☐
		7.RT, CT & Surgery ☐	
3.3	Do you think knowing the outcome of the disease led you to a stressful situation?	1. Yes ☐	2. No ☐

Indicate your choice by (X) mark on the options putted on the right

Section IV: Environmental factors

4.	Variable	Category	
4.1	Length of stay in the hospital	1. 1-3 Weeks ☐	2. 4-6 weeks ☐
		3. 7 - 9 Weeks ☐	4. ≥10 weeks ☐
4.2	Health professional behavior	1. Inviting ☐	2. Discouraging ☐

Indicate your choice by circling your response from the options on the left.

1

0	I do not feel sad.
1	I feel sad
2	I am sad all the time and I can’t snap out of it.
3	I am so sad and unhappy that I can’t stand it.

2

0	I am not particularly discouraged about the future
1	I feel discouraged about the future.
2	I feel I have nothing to look forward to.
3	I feel the future is hopeless and that things cannot improve.

3

0	I do not feel like a failure.
1	I feel I have failed more than the average person.
2	As I look back on my life, all I can see is a lot of failures.
3	I feel I am a complete failure as a person.

4

0	I get as much satisfaction out of things as I used to.
1	I don’t enjoy things the way I used to.
2	I don’t get real satisfaction out of anything anymore.
3	I am dissatisfied or bored with everything.

5

0 I don’t feel particularly guilty

1 I feel guilty a good part of the time.

2 I feel quite guilty most of the time.

3 I feel guilty all of the time.

6

0 I don’t feel I am being punished.

1 I feel I may be punished.

2 I expect to be punished.

3 I feel I am being punished.

7

0 I don’t feel disappointed in myself.

1 I am disappointed in myself.

2 I am disgusted with myself.

3 I hate myself.

8

0 I don’t feel I am any worse than anybody else.

1 I am critical of myself for my weaknesses or mistakes.

2 I blame myself all the time for my faults.

3 I blame myself for everything bad that happens.

9

0 I don’t have any thoughts of killing myself.

1 I have thoughts of killing myself, but I would not carry them out.

2 I would like to kill myself.

I will kill myself if I had a chance

10

0 I don’t cry any more than usual.

1 I cry more now than I used to.

2 I cry all the time now.

3 I used to be able to cry, but now I can’t cry even though I want to.

11

0 I am no more irritated by things than I ever was.

1 I am slightly more irritated now than usual.

2 I am quite annoyed or irritated a good deal of the time

3 I feel irritated all the time.

12

0 I have not lost interest in other people.

1 I am less interested in other people than I used to be.

2 I have lost most of my interest in other people.

3 I have lost all of my interest in other people.

13

0 I make decisions about as well as I ever could.

1 I put off making decisions more than I used to.

2 I have greater difficulty in making decisions more than I used to.

3 I can’t make decisions at all anymore

14

0 I don't feel that I look any worse than I used to.

1 I am worried that I am looking old or unattractive.

2 I feel there are permanent changes in my appearance that make me look Unattractive

3 I believe that I look ugly.

15

0 I can work about as well as before.

1 It takes an extra effort to get started at doing something.

2 I have to push myself very hard to do anything.

3 I can't do any work at all.

16

0 I can sleep as well as usual.

1 I don't sleep as well as I used to.

2 I wake up 1-2 hours earlier than usual and find it hard to get back to sleep.

3 I wake up several hours earlier than I used to and cannot get back to sleep.

17

0 I don't get more tired than usual.

1 I get tired more easily than I used to.

2 I get tired from doing almost anything.

3 I am too tired to do anything.

18

0 My appetite is no worse than usual.

1 My appetite is not as good as it used to be.

2 My appetite is much worse now.

3 I have no appetite at all anymore.

19

0 I haven't lost much weight, lately.

1 I have lost more than five pounds.

2 I have lost more than ten pounds.

3 I have lost more than fifteen pounds.

20

0 I am no more worried about my health than usual.

1 I am worried about physical problems like aches, pains, upset stomach, or constipation.

2 I am very worried about physical problems and it's hard to think of much else.

3 I am so worried about my physical problems that I cannot think of anything else.

21

0 I have not noticed any recent change in my interest in sex.

1 I am less interested in sex than I used to be.

2 I have almost no interest in sex.

3 I have lost interest in sex completely.

In-depth interview guide:

1. What did you feel when you heard the diagnosis of your child the first time?
2. Why did you feel that way? Prob
3. What were your feelings about yourself after knowing the diagnosis of your child? Prob
4. What were your feelings about your child after knowing the diagnosis of your child? Prob
5. What was the time length taken to experience those feelings? Prob
6. What does it mean to you to have a child with cancer? Prob
7. If your child is aware of his/her diagnoses what was his/her reaction when he /she was told the first time? Prob
8. What is the feeling of your child to his/her situation currently? Prob
9. What are the factors that bothered you most while you are taking care of your child? Prob
10. How the diagnosis of your child does impacted your life? Prob
11. What were the mechanisms you used to cope with these circumstances? Prob

ቃለ-መጠይቅ

1. **የልጅዎን በካንሰር በሽታ መያዝ ለመጀመሪያ ጊዜ ሲሰሙ የተሰማዎት ስሜት ምን ነበር?**
2. **ይህ አይነት ስሜት የተፈጠረብዎት ለምን ይመስልዎታል?**
3. **የልጅዎን በካንሰር በሽታ መያዝ ሲያውቁ በራስዎ ላይ የተፈጠረው ስሜት ምን ነበር?**
4. **ልጅዎ በካንሰር በሽታ መያዙን ሲያውቁ ስለልጅዎ ምን ተሰማዎ?.**
5. **የተጠቀሱት የድብርት ስሜቶች ለመለየት የወሰደው ጊዜ ምን ያህል ነበር?**
6. **በካንሰር በሽታ የተያዘ ልጅ አለዎት ማለት በእርስዎ እይታ ምን ማለት ነው?**
7. **ልጅዎ ስለ ካንሰር በሽታ የሚያውቅ/የምታውቅ ከሆነ ለመጀመሪያ ጊዜ በበሽታው ስለመያዙ/ሏ ሲነገረው/ራት አጸፋዊ መልሱ/ሷ ምን ነበር?**
8. **ልጅዎ በአሁኑ ሰዓት ስለ በሽታው/ዋ ያለው/ላት ስሜት ምን ይመስላል?**
9. **ለልጅዎ እንክብካቤ በሚያደርጉበት ወቅት በጣም አሳሳቢ/አስጨናቂ የሆነብዎት ነገር ምንድን ነው?**
10. **የልጅዎ በካንሰር በሽታ መያዝ በምን አይነት መንገድ ህይወትዎ ላይ ጫና ያሳደረብዎ ይመስሎዎታል?**
11. **ሁኔታዎችን ለመቋቋም የተጠቀሟቸው ዘዴዎች ምንድን ናቸው?**

ANNEX 5:
AMHARIC VERSION QUESTIONNAIRE

1.	**የግል መረጃ**	
1.1	እድሜ	1. 18- 24 **አመት** ☐ 2. 25-30 **አመት** ☐ 3. 31-35 **አመት** ☐ 4. 36 -40 **አመት** ☐ 5. 41 – 45 **አመት** ☐ 6. ≥ 46 **አመት** ☐
1.2	**ጾታ**	1. **ወንድ** ☐ 2. **ሴት** ☐
1.3	**የቤተሰብ ሁኔታ**	1. **ሁለቱም ወላጆች** ☐ 2. **አንድ ወላጅ** ☐
1.4	**የአባት የስራ ሁኔታ**	1. **ነጋዴ** ☐ 2. **የመንግስት ሰራተኛ** ☐ 3. **ገበሬ** ☐ 4. **የቀን ሰራተኛ** ☐ 5. **ሌላ ካለ ይጥቀሱ**_____
1.5	የእናት የስራ ሁኔታ	1. **የቤት እመቤት** ☐ 2. **የመንግስት ሰራተኛ** ☐ 3. **ነጋዴ** ☐ 4. **የቀን ሰራተኛ** ☐ 5. **ገበሬ** ☐ 6. **ሌላ ካለ ይጥቀሱ**_____
1.6	**የጋብቻ ሁኔታ**	1. **ያላገባ/ች** ☐ 2. **ያገባ/ች** ☐ 3. **የታጨ/ች** ☐ 4. **የፈታ/ች** ☐ 5. **ሌላ ካለ ይጥቀሱ**_____
1.7	**የልጆች ብዛት**	1. 0-3 **ልጆች** ☐ 2. 4- 6 **ልጆች** ☐ 3. ≥ 7 **ልጆች** ☐

1.8	የታማሚው/ዋ ልጅ እድሜ	1. 0- 23 ወር ☐ 2. 2 – 5 አመት ☐ 3. 6-10 አመት ☐ 4. 11-15 አመት ☐ 5. 16-18 አመት ☐
1.9	የእናት የትምህርት ደረጃ	1. ያልተማረ/ች ☐ 2. ማንበብና መጻፍ ☐ 3. 1ኛ ደረጃ ያጠናቀቀ/ች ☐ 4.2ኛ ደረጃ ያጠናቀቀ/ች ☐ 5. ዲፕሎማና ከዛ በላይ ☐
1.10	የአባት የትምህርት ደረጃ	1. ያልተማረ/ች ☐ 2. ማንበብና መጻፍ ☐ 3. 1ኛ ደረጃ ያጠናቀቀ/ች ☐ 4.2ኛ ደረጃ ያጠናቀቀ/ች ☐ 5. ዲፕሎማና ከዛ በላይ ☐
1.11	ከዚህ በፊት የድብርት ችግር አጋጥምዎት ያውቃል?	1.አዎ ☐ 2. አይደለም ☐
2	ማህበራዊና ኢኮኖሚያዊ ጉዳዮች	
2.1	የቤተሰብ ጠቅላላ ወርሃዊ ገቢ በኢት. ብር	1. 500-1500 ☐ 2. 1501-2500 ☐ 3. 2501-3500 ☐ 4. 3501 -4500 ☐ 5. ≥4501 ☐
2.2 ሌላ የድጋፍ ምንጭ		1. ከዘመድ ☐ 2. ከቀጣሪ መ/ቤት ☐ 3.ከኢንሹራንስ ካምፓኒ ☐ 4. ሌላ ካለ ይጥቀሱ_____
3	የህክምና አሰጣጥ ሂደት	

3.1	**የመድሃኒት የጎንዮሽ ጉዳት**	1.**የህመም ስሜት** ☐ 2. **የጉሮሮ ቁስለት** ☐ **3.ማቅለሽለሽናማስ**ታወክ ☐ 4. **ተቅማጥ** ☐ 5. **የጸጉር መሳሳት** ☐ 6. **የምግብ ፍላጎት ማነስ** ☐ 7. **ድካም** ☐ 8. **ሌላ ካለ ይጥቀሱ**_____
3.2	የህክምና አይነት	ነ. ኬሞቴራፒ/ኬቴ/ ☐ 2. ጨረር ☐ 3. ቀዶ ጥገና ☐ 4. ጨረርና ቀዶ ጥገና ☐ 5. ኬቴ እና ቀዶ ጥገና ☐ 6. ጨረርና እና ኬቴ ☐ 7.ኬቴ ቀዶ ጥገና እናጨረር ☐
3.3	የበሽታውን የወደፊት ውጤት ማወቅዎ ያስከተለብዎ ጫና አለን?	1. አዎ ☐ 2. አይደለም ☐
4.**ክባቢያዊ ጉዳዮች**		
4.1	**የሆስፒታል ቆይታ ጊዜ**	1. 1-3 **ሳምንት** ☐ 2. 4-6 **ሳምንት** ☐ 3. 7 - 9 **ሳምንት** ☐ 4. ≥10 **ሳምንት** ☐
4.2	**የመኖሪያ አድራሻ**	1. **አዲስ አበባ** ☐ 2. **ክልል** ☐
4.3	**የጤና ባለሙያ ባህርይ**	1. **መልካም** ☐ 2. **የማይጋብዝ** ☐

<u>የወላጆች ድብርት መለኪየ ጥያቄዎች</u>

<u>ለሚከተሉት ጥያቄዎች ትክክለኛውን መልስዎ በስተግራ በተጻፉት ቁጥሮች በማክበብ ምላሽዎን ያመልክቱ፡፡</u>

1.
   0. ሀዘን አይሰማኝም
   1. ሀዘን ይሰማኛል
   2. ሁልጊዜ አዝናለሁ እናም ከሀዘን መውጣት አልቻልኩም
   3. በጣም አዝናለሁ መቋቋም ባለመቻሌም ደስታ የለኝም
2.
   0. በተለይ ስለ ወደፊቱ ተስፋ አልቆርጥም.
   1. ስለ ወደ ፊቱ ተስፋ መቁረጥ ይሰማኛል
   2. ምንም ወደ ፊት እንደ ማልመለከት ይሰማኛል
   3. ወደ ፊት ተስፋ ቢስነት ይሰማኛል እናም ነገሮች ሁሉ መሻሻል እንደ ማይችሉ ይሰማኛል
3.
   0. እንደ አልተሳካለት/እንዳላለፈለት/ውድቀት አይሰማኝም
   1. ከመካከለኛ ሰው በላይ እንደ ሆንኩ ይሰማኛል.
   2. ህይወቴን ወደ ኋላ ተመለከትሁ፣ ማየት የምችለው ሁሉ የውድቀቶች ማአት/ብዛት ነው
   3. እንደሰው የሚሰማኝ ሙሉ ውድቀት ነው
4.
   0. እንደ ለመድኩት ከነገሮች ብዙ እርካታ አገኛለሁ
   1. በለመድኩት መንገድ በነገሮችን አልደሰትም
   2. ከምንም ነገር አንዳች ተጨማሪ እውነተኛ እርካታ አላገኝም
   3. በሁሉም ነገር አልረካም ወይንም ሰለቸኝ
5.
   0. በተለይ ጥፋተኝነት አይሰማኝም
   1. ጊዜው ደህናው/ ክፉት ጥፋተኝነት ይሰማኛል
   2. አብዛኛውን ጊዜ/ሰአት በጣም ጥፋተኝነት ይሰማኛል
   3. ሁል ጊዜ ጥፋተኝነት ይሰማኛል
6.
   0. እንደምቀጣ አይሰማኝም/ተቀጪነት አይሰማኝም
   1. እንደምቀጣ ይሰማኛል/ እቀጣ ይሆናል
   2. እንደምቀጣ እጠብቃለሁ
   3. እየተቀጣሁ መሆኑ ይሰማኛል.
7.
   0 በውስጤ መበሳጨት/ማዘን አልተሰማኝም
   1. በውስጤ/በራሴ አዝናለሁ/ እበሳጫለሁ
   2. ከራሴ ጋር ተጣልቻለሁ
   3. እራሴን ጠላሁ
8.
   0. ከሌሎች የተሻልኩ የሆንኩ ነኝ ብዬ አይሰማኝም
   1.እኔ ለድክመቶቼና ለስህተቶቼ ዋናው/እኩይ ነኝ .
   2.ለስህተቶቼ ሁሉ እራሴን እወቅሳለሁ/ሃላፊው እኔው ነኝ
   3.ለሆነው መጥፎ ነገር ሁሉ እራሴን እወቅሳለሁ/ሃላፊው እኔው ነኝ

9.

0. እራሴን የመግደል/የማጥፋት ምንም/አንዳችም ሀሳብ የለኝም
1.የእራስ ማጥፋት ሀሳብ አለኝ , ነገር ግን አላደርገውም
2.እራሴን ባጠፋ ይሻለኛል
3.እድል ቢኖረኝ እራሴን አጠፋለሁ

10.

0 ከወትሮው/ከተለመደው በላይ አልጮህም/አላለቅስም
1.ከበፊቱ አሁን በበለጠ አለቅሳለሁ.
2.አሁን ሁል ጊዜ አለቅሳለሁ
3.አልቃሻ ሆኛለሁ ፣ ነገርግን አሁን ላልቅስ ብልም አልችልም

11.

0.ከእንግህ ወዲህ አልቆጭም/አልብተከተከም/እህህ አልልም
1. ከተለመደው አሁን በትንሹ ተነጫንጫለሁ/ተበሳጭቻሉ/ እህህ ብያለሁ
2.አብዛኛውን ጊዜ ባጣም እናደዳለሁ ወይም እህህ እላለሁ
3.ሁል ጊዜ ብስጭት ይሰማኛል

12.

0. ለሌሎች ሰዎች ፍላጎቴ አልጠፋም
1. በፊት ከነበረኝ ለሌሎች ሰዎች ፍላጎቴ አነስተኛ ነው
2. በአብዛኛው ለሌሎች ሰዎች የነበረኝ ፍላጎት ጠፍቷል
3. ለሌሎች ሰዎች ያለኝ የእኔ ፍለጎት ጠፍ

13.

1. ውሳኔዎች ከምችለው በላይ ሆነውብኛል
2. የማልወስናቸው በፊት ከማደርገው በላይ ሆነውብኛል
3. በውሳኔዎች አሰጣጥ ከለመድኩት በበለጠ አስቸጋሪ ሆነውብኛል
4. ጨርሶ ውሳኔዎችን መስጠት አልቻልኩም

14.

0. ከነበርኩት እንደማላንስ አይሰማኝም
1. ያረጀሁና የማልስብ መሆኔን መመልከቴ ያስጨንቀኛል
2. ለሰዎች የማልስብ የሚያደርገኝ በእኔ ገጽታ የማይለወጥ ለውጦች እንዳሉ ይሰማኛል
3. አስቀያሚ እንደሆንኩ አምናለሁ

15.

0. እንደፊቱ መስራት እችላለሁ.
1. አንዳንድ ነገር ለመስራት/ ለመጀመር ተጨማሪ ጥረት ይወስዳል/ይፈልጋል
2. አንዳንድ ነገር ለመስራት እራሴን ማነሳሳት/ መገፋፋት አለብኝ
3. ጨርሶ ምንም አይነት ስራ መስራት አልችልም

16.

0. እንደተለመደው መተኛት እችላለሁ
1. እንደተለመደው መተኛት አልችልም
2. ከተለመደው 1-2 ሰአት ቀደም ብዬ እነቃለሁ እናም ተመልሼ ለመተኛት ከባድ ሆኖ አገኘዋለሁ
3. ከተለመደው ብዙ ሰአት ቀደም ብዬ እነቃለሁ እናም ተመልሼ ለመተኛት አልችልም

17.

0. ከተለመደው በበለጠ አልደክምም
1. ከተለመደው በበለጠ በቀላሉ እደክማለሁ
2. በአብዛኛው ምንም ነገር ማድረግ/መስራት ይደክመኛል
3. ምንም ነገር ለመስራት/ለማድረግ በጣም ይደክመኛል

18.

0. የምግብ ፍላጎቴ ከተለመደው አያንስም
1. የምግብ ፍላጎቴ እንደበፊቱ ጥሩ አይደለም
2. የምግብ ፍላጎቴ አሁን በጣም ቀንሷል
3. ከእንግዲህ ወዲህ የምግብ ፍላጎት አይኖረኝም

19.

0. ቢሆንም፣ አሁን ብዙ ክብደት አልቀነስኩም
1. ከ5 ኪሎ በላይ ክብደት ቀነስኩ
2. ከ10 ኪሎ በላይ ክብደት ቀነስኩ
3. ከ15 ኪሎ በላይ ክብደት ቀነስኩ

20.

0. ከተለመደው ጊዜ ስለ ጤናዬ ምንም አልጨነቅም
1. ስለ አካላዊ ችግሮች ህመም፣ ቃንዛ፣ የሆድ መረበሽ/መቆጣት ወይንም ድርቀት የመሳሰሉት ያስጨንቁኛል
2. ስለ አካላዊ ችግሮች በጣም እጨነቃለሁ እናም ከዚህ በላይ ብዙ ተጨማሪ ማሰብ ከባድ ነው
3. ከዚህ ሌላ በተጨማሪ ማሰብ የማልችለው ስለ አካለዊ ችገሮች እኔ በጣም እጨነቃለሁ

21.

0 በጾታ ግንኙነት ፍላጎቴ ምንም አይነት ፍላጎት አላየሁም
1 ከቀድሞው የጾታ ግንኙነት ፍላጎቴ አንሷል
2 የጾታ ግንኙነት ፍላጎት የለኝም ማለት ይቻላል
3 ሙሉ ለሙሉ የጾታ ግንኙነት ፍላጎቴን አጥቻለሁ