

ADDIS ABABA UNIVERSITY  
COLLEGE OF HEALTH SCIENCES  
SCHOOL OF NURSING AND MIDWIFERY

ASSESSMENT OF CAREGIVER STRAIN AND ASSOCIATED FACTORS  
AMONG CAREGIVERS OF CHILDREN WITH CANCER ATTENDING  
TIKUR ANBESSA SPECIALIZED HOSPITAL, ADDIS ABABA,  
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## LIST OF ABBREVIATIONS AND ACRONYMS

CSI	Caregiver Strain Index
EPI-INFO	Epidemiological information
ETB	Ethiopian birr
GIS	Geographic Information System
IRB	Institutional Review Board
MCSI	Modified Caregiver Strain Index
MSPSS	Multidimensional Scale of Perceived Social Support
NANDA	North American Nursing Diagnosis
SPSS	Statistical Program for Social Sciences
TASH	Tikur Anbessa Specialized Hospital
WHO	World Health Organization
ZBI	Zarit Burden Interview

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## ABSTRACT

**Background:** High levels of strain are potential contributors to develop a sign and symptoms of depression, anxiety, poor marital satisfaction and increase risk mortality. Caregivers with strain have limited capacity to provide the care that the patient needs. The aim of this study was to assess caregiver strain and associated factors among family caregivers of childhood cancer patients in TASH Addis Ababa, Ethiopia, 2020.

**Methods:** a cross sectional study design was carried out among 153 family caregivers of children with cancer attending Tikur Anbessa specialized hospital using interviewer administrated. Multidimensional scale of perceived social support and modified caregiver strain was used to assess perceived social support and caregiver strain respectively. the data collection period was from April 15 to May 15 2020. The collected data was entered and cleaned using Epi-data 4.6 and then analyzed using SPSS version 25. Multiple linear regression was conducted to identify variables at  $P < 0.05$ .

**Result:** From 153 family caregivers 81(52.9%) were male and 72(47.1%) were between age group 35-49. Seventy-two (47.1%) of them had moderate level of perceived social support. The multiple linear regressions show a significant and association between caregiver strain and caregiver's age, duration of caregiving and perceived social support with P-value of 0.007, 0.006, and 0.003 respectively.

**Conclusion:** The mean score of caregiver strain was 20.915 with standard deviation of 3.6417, One hundred forty (91.5%) of family caregivers report financial strain. Caregiver's age, duration of caregiving and perceived social support were significantly associated with caregiver strain.

**Recommendation:** Focus must be given on family caregivers and make caregiver strain a routine nursing activity along with improving the socioeconomic status of the family caregivers.

**Key words:** Caregiver strain, family caregivers, childhood cancer, mixed study design, Tikur Anbessa specialized hospital, Ethiopia.

# CHAPTER ONE

## 1. INTRODUCTION

### 1.1 Background of the study

Mortality and morbidity related to cancer in children are increasing rapidly particularly in low and middle-income countries (1). According to world health organization each year, 300,000 new cases are diagnosed in children aged between 0-19 years and in our country Ethiopia, it reaches around 6000 new cases of childhood cancer are diagnosed each year with a mortality rate close to 100% if not treated (2,3). Cancer in children and adolescents is biologically different from adults (4).

Leukemia, brain cancer, lymphomas and solid tumors like neuroblastoma and Wilm's tumor are the most common childhood cancer (5). Each year 100,000 of children less than 15 years of age die from cancer and 90% of the death occur in resource limited countries (6). Lack of accurate diagnosis and treatment, high cost of health service and lack of trained health care professionals are some of the causes related to decreased survival rates in low and middle-income countries (7).

The diagnosis of childhood cancer brings a drastic change as in the life of family's in terms of change in role, financial difficulties, disruption of family dynamics and ineffective coping mechanisms (8).

At a very young age children tends to be very dependent on their family to get things done and this dependency will get even higher when they are sick, as they constantly demand someone to provide care for them, Caregiver is anyone who helps a person with any medical condition. The help that caregivers provide involves assisting with activity of daily living like cleaning, cooking, using toilet, etc. medication administration, transporting the patient from house to the hospital and from hospital to house. Providing care without gaining any financial reward in return called family caregiving (9). Children with cancer may get care from their parents, older sibling, and relatives both in the hospital and in the house.

Giving care for the sick child needs an extra financial, emotional as well time investment and these are quite demanding and sometimes difficult to attain, which makes an imbalance between the demand and the resource on hand leading to stress. When a caregiver feels overwhelmed and unable to continue his/her responsibility as a caregiver that is when caregiver role strain is recognized (10).

According to the North American Nursing Diagnosis (NANDA) committee, Caregiver Role Strain is, defined as “A state in which an individual is experiencing physical, emotional, social, and financial burden (s) in the process of giving care to another” (11). A strain is "caregiver's perception of enduring problems or an altered state of wellbeing” (12).

## **1.2 Statement of the problem**

Family caregivers have responsibility that is not only confined in one specific job description. Because of these they tend to neglect their health leading to deterioration in physical, psychological and social wellbeing which is associated with impaired immunity, heart disease, depression, anxiety, anger, sleep disturbance, severe fatigue and early death (13).

Mosher in 2013 found that caregivers have three main challenges and the common challenges faced by 38% of caregivers were a profound sense of uncertainty towards the patient's future prognosis and functional decline. Another challenge identified by 33% of caregivers was time to consume efforts to manage the patient's emotional response to the illness. Fourteen percent of caregiver has recognized that practical tasks including arranging the patient medical care as one of their greatest challenge (14). Fifty-two percent of caregivers spent more than 8 hours a day in providing care for the patient (15).

When coping strategies fail to control the level of these stressors, the health of caregivers and prognosis of the child is negatively affected. Chronic stressors affect the poor health of caregivers due to the stimulation of the sympathetic nervous system (SNS) and the hypothalamic-pituitary-adrenal (HPA) axis, which is responsible for the secretion of cortisol. An elevated level of cortisol causes increased blood glucose, delayed wound healing, decreased inflammatory and immune response (16). Caregivers also reported the occurrence of psychosomatic disorders with symptoms like sleep disruption (24%), headache (20%) and asthenia (16%) (15).

Studies show that four out of ten caregivers experience a high level of strain resulting in low life satisfaction and health-related quality of life, increased health risk behaviors such as smoking, increased anxiety and depression symptoms (17–19). Social withdrawal, loss of interest, excessive anger, sleep problems, difficulties in concentrating, feeling very tired are some of the common sign which is seen in caregivers with strain. High levels of strain are potential contributors to develop a sign and symptoms of depression, anxiety, poor marital satisfaction and increase risk mortality (20,21). Caregivers with strain have limited capacity to provide the care that the patient needs (22).

Even though number of researches were conducted in an area of caregiver role strain in dementia, Alzheimer's disease and children with developmental delay and few with cancer in a different part of the world. Researches that show the impact of cancer on the family caregivers particularly in childhood cancer is very limited after extensive search the researcher is unable to similar research in the study area. Therefore, this study will be one of its kinds to address this gap by investigating the strain in family caregivers of childhood cancer in TASH in the year 2020.

### **1.3 Justification of the study**

One of the rarely addressed areas of caregiving is Caregiver role strain. Despite the tremendous amount of contribution of family caregivers in the treatment and recovery process of a child with cancer, health care providers fail to recognize and manage their needs. Implementation of individualized and unique intervention is a requirement, so to do these identifying the strain that exists within the caregivers is vital and initial task screening these caregivers for caregiver strain is very important as it is linked with different health outcomes and mortality risk for caregiver (20,21). Yet still there is no research conducted to assess caregiver strain in TASH therefore this study will fill the gap by assessing the level and associated factors of caregiver strain among family caregivers of child with cancer.

#### **1.4 Significance of the study**

The issue related to caregiver strain is important and vital in all aspect including government and policymakers, as the cost of saving is higher in informal caregivers (family caregivers) in terms of time and money. These study findings contribute to policy makers in adopting or designing caregiver handbook or guidelines, health promotion program for caregivers. For health care providers to identify areas of help where to assist caregivers i.e. providing emotional, financial, and physical assistance and the hospital could use the finding to adjust the nursing care plan in to more inclusive to caregivers as well, as caregiver role strain is part of NANDA's nursing diagnosis.

## CHAPTER TWO

### 2 LITERATURE REVIEW

#### 2.1 Introduction

The concept burden, and strain are mostly used interchangeably understanding of the concepts are very important. Burden can be defined as ‘the strain or load borne by a person who cares for a chronically ill, disabled, or elderly family member’ and strain as ‘the caregiver perception of enduring problems or altered state of wellbeing’ where the caregiver become unable to carry out the caregiving responsibilities (12,23).

According to the North American Nursing Diagnosis (NANDA) committee, Caregiver Role Strain is, defined as “A state in which an individual is experiencing physical, emotional, social, and financial burden (s) in the process of giving care to another” (11). Defining characters and related factors are presented in table 1.

Caregiver strain primarily understood as subjective and objective caregiver strain, subjective caregiver strain referring to caregiver feeling. Subjective caregiver strain has two subdivisions i.e. subjective internalized strain (feeling sad, worrying about the future) and subjective externalized strain example: anger). While the objective caregiver strain implies the observable negative consequences of the problem example: difficulties with neighbors, financial strain, interrupted personal time, missing work, disrupted family relationships (24). Each of these could occur in caregiver of patients with chronic illness including caregivers of children with cancer.

Table 1: caregiver strain, nursing diagnosis application to practice 14th edition, 2013

Defining characters	Related factors
<p><b>Expressed or Observed</b></p> <ul style="list-style-type: none"> <li>• Insufficient time or physical energy</li> <li>• Difficulty performing required caregiving activities</li> <li>• Conflicts between caregiving responsibilities and other important roles (e.g., work, relationships)</li> <li>• Apprehension about the future for the care receiver's health and ability to provide care</li> <li>• Apprehension about the care receiver's care when the caregiver is ill or deceased</li> <li>• Feelings of depression or anger</li> <li>• Feelings of exhaustion and resentment</li> </ul>	<p><b>Pathophysiologic</b></p> <p>Related to unrelenting or complex care requirements secondary to:</p> <ul style="list-style-type: none"> <li>• Addiction</li> <li>• Chronic mental illness Cognitive problems</li> <li>• Debilitating conditions (acute, progressive)</li> <li>• Disability</li> <li>• Progressive dementia</li> <li>• The unpredictability of illness course</li> </ul>
	<p>Treatment-Related</p> <ul style="list-style-type: none"> <li>• Related to 24-hour care responsibilities</li> <li>• Related to time-consuming activities (e.g., dialysis, transportation)</li> <li>• Related to the complexity of activities</li> <li>• Related to increasing care needs</li> </ul>
	<p><b>Situational (Personal, Environmental)</b></p> <ul style="list-style-type: none"> <li>• Related to years of caregiving</li> <li>• Related to the unpredictability of care situation or illness course</li> <li>• Related to inadequate informal support</li> <li>• Related to unrealistic expectations of caregiver by care receiver, self, or others</li> <li>• Related to the pattern of impaired individual coping (e.g., abuse, violence, addiction)</li> <li>• Related to the compromised physical or mental health of the caregiver</li> <li>• Related to history of poor relationship or family dysfunction</li> <li>• Related to history of a marginal family coping</li> <li>• Related to duration of caregiving required</li> <li>• Related to isolation</li> <li>• Related to insufficient respite</li> <li>• Related to insufficient finances*</li> <li>• Related to inadequate community resources</li> </ul>

## **2.2 Prevalence of caregiver strain**

Bonnie et al assessed strain and satisfaction in caregivers of veterans with chronic illness using caregiver strain index (CSI) and Pos Aspect scale respectively, in cross-sectional study design among 120 caregivers in 2008 in USA found a mean strain score of 5.0 (SD 3.9: range 0-13) , 37% reported score greater than 7 which indicate high caregiving strain (25).

Mixed method done by Lisa Church et al. among 1282 family caregivers in Nebraska and western Iowa in USA nursing homes found that the mean score on caregiver strain index 5.48 (SD,3.29) with 42.7% of caregivers scoring greater than 7 (26).

Dr. R Shankar et al on their descriptive study conducted in India among 60 caregivers of cancer survivors found that 78% of caregivers had severe strain while 22% of them had a moderate level of the strain all of which had physical strain, the majority (85%) had sleep disturbance and financial strain (27).

In a cross-sectional study of family resource study by Avegille T and Manue F in 2011 among ninety Filipino family caregivers found 30% were predisposed to caregiver strain and 15.6% were with sever caregiver strain (8).

Cross-sectional Study by Shu-Mei Tsai and Hsiv Hung Wang on caregiver's strain and social support among 127 mothers of intellectually disabled children in Taiwan in 2009 using CSI report that the mean score of the strain of the mothers was 6.38 (SD=3.71) (28).

A cross-sectional study on the impact of caregiving a child with cancer among 48 Zimbabwean caregivers was assessed by Dambi JM, Markotor FG and Kaseke F in 2015 and found that caregivers report a mean score of CSI 7.4 (SD=2.7) with the financial strain of 87.5% (29).

## **2.3 Factors Associated with Caregiver Strain**

Socio-demographic factors like gender, educational status, age and low annual income, caregiver related factors such as type of caregiver i.e. formal and informal caregiver, year of caregiving and factors related to the patient including functional status and stage of malignancy are significantly associated with a high level of strain in caregivers (30).

### **2.3.1 Child's character**

Among several factors, contributing to the caregiver strain characteristics of a child including illness type, stage and symptoms are some of the factors. This association widely studied in children and youth with emotional and behavioral disorders showing the type of child's mental illness, level of child's symptomology, level of child's impairment and externalizing behavioral problems associated with caregiver strain.

A cross sectional study among 125 parents of children with cancer in oncology department of Shohada Hospital, Tehran, Iran, between March to August 2017 by Mehrnza Ahmadi found a positive correlation between child's age and caregiver burden ( $r=0.17, P=0.04$ ). The study also reported that acute myeloid leukemia and Ewing sarcoma significantly associate with caregiver burden with  $\beta=0.36, P<0.01$  and  $\beta=0.16, P<0.007$  respectively (31).

An assessment of perceived social support and caregiver strain by Chrystal Edge Shroeder and Rory Remer in a cross-sectional survey in 2007 among 140 caregiver of children with Tourette's disorder aged between 6 to 18 years, the result of regression indicated greater the symptom severity of the child's Tourette disorder the greater caregiver strain ( $B=0.60; P<0.001$ ) (32).

### **2.3.2 Caregiver's characters**

In addition to child illness character, the characteristics of caregivers can also be a stressor. Caregivers characteristics targeted in this study include health status, age and educational status.

Most caregiver strain studies focus on the health impact of strain has on the caregiver but the other way around meaning caregiver's prior mental and physical health can also become one of contributing factors to caregiver strain (33).

The mother's health status had a negative correlation with strain in Shu-Mei Tsai on their cross-sectional study of the relationship between caregiver's strain and social support among 127 mothers of children with intellectual disability found in Taiwan in 2003 using caregiver strain index. That the worse the mother's health status was the higher the strain felt ( $\beta=-0.533$ ;  $P<0.001$ ) (28).

Cross sectional study conducted by Jingting Wang et al. on 130 parents of newly diagnosed children with acute lymphoblastic leukemia in china found that the better health status of parent lead to lower caregiver burden ( $r=-0.199$ ) (30).

A study done by Min Zhang et al using a cross-sectional study design to assess burden and strain of 212 family caregiver of a patient with Dementia in china in 2018 reported that younger caregivers ( $51.4 \pm 12.7$ ) had a higher level of strain (30). Similarly, Julie H. Carter et al in 2010 study on comparison of young versus old caregivers in the early stage of Parkinson's diseases found that, young spouse report higher level of strain (35). On the other hand, using similar study design Bonnie J. Wakefield et al studied Strain and Satisfaction in 120 Caregivers of Veterans with Chronic Illness in USA 2012 and found that increased caregivers age were significantly associated with higher caregiver strain (25).

Regarding education, a descriptive study by R Shankar et al in 2016 about the relationship between strain and burden among sixty caregivers of cancer survivors reported that caregivers who completed their college-level had 100% of severe strain as compared to school level and no formal education, which was 85% and 65% respectively (27).

As regards marital status a cross-sectional study by Rosa Casado Mejia and Esperanza Ruiz Arias on the influence of gender and care strategy in family caregiver strain among 328 family caregivers in Spain in 2012 found that divorce caregivers report CSI average score of 8.47 (36).

Lindsay S and Craig Anne Heflinger on their qualitative interview in 2013 found that caregivers described their understanding towards the child's emotional and behavioral problem as a predictable and normative response to previous stressful event in the family such

as abuse, trauma or divorce and this respondents were less likely to report feeling of strain (37).

### **2.3.3 Family Resource**

Resource this study targets are financial income and social support. The Min Zhang et al Cross-sectional study in the assessment of Family caregiver burden and strain in 2018 shows low-income groups (less than \$ 3000 per year) was found to have a high level of strain and burden (30). Also, a descriptive study by R Shankar Shanmugam et al in 2016 on the relationship between strain and burden in cancer survivors among 60 caregivers using CSI and Zarit burden interview (ZBI) shows statically significant association ( $P<0.001$ ) between less level of income and strain (27).

A cross sectional study among 125 parents of children with cancer in oncology department of Shohada Hospital, Tehran, Iran, between March to August 2017 by Mehrza Ahmadi indicated a negative correlation between parent's income and caregiver burden ( $r=-0.24, P=0.006$ ) (31).

Support that the caregiver receive from family members, close friends, and significant others in terms of emotional (includes showing concern, trust, and love) informational (providing relevant information and advice), instrumental (providing housekeeping and baby setting service) and appraisal support (support caregiver self-esteem and acknowledge what the caregiver is doing) (28).

Kristen M.McCabe et al study racial or ethnic differences in caregiver strain and perceived social support among parents of youth with emotional and behavioral problems in San Diego in 2003 found that social support was significantly inversely associated to caregiver strain (38).

Similarly, the cross-sectional survey study by Chrystal Edge Shroeder and Rory Remer in 2007 on perceived social support and caregiver strain in 140 caregivers of children with Tourette disorder age between 6 to 18 indicated that the more perceived social support of the caregiver is the less caregiver strain is ( $\beta=-0.35; P<0.001$ ) (32).

Shu-Mei Tsai and Hsiv Hung Wang on their cross-sectional study of the relationship between caregiver's strain and social support among 127 mothers of children with intellectual disability found in Taiwan in 2003 using CSI report that adequate social support is negatively correlated with caregiver strain ( $r=-0.420; P<0.001$ ) (28).

Lower caregiver strain was significantly associated ( $P < 0.01$ ) with increased social support ( $r = -0.380$ ) in a cross sectional study by Anne F et al. among 441 parents of children with cancer in Canada in 2010 (39).

Jingting Wang et al. in their cross sectional study conducted among 130 parents of newly diagnosed children with acute lymphoblastic leukemia in china reported that negative relation exist between social support and caregiver burden indicating that better social support result lower caregiver burden ( $r = -0.255$ ) (34).

#### **2.4 Theoretical framework of factors Associated with Caregiver Strain**

The ABCX model serves as the basis for family studies. The model was first developed by Reuben Hill (1949, 1958), following prior research conducted by himself and others (Angell, 1936; Cavan & Ranck, 1938) to explain crisis among families. According to Hill's definition:

- A is the stressors which ("a situation for which the family has had little or no prior preparation and must, therefore, be viewed as problematic") interacts with B
- B is a family resource, "factors in a family organization that, by their presence, kept the family from a crisis or, by their absence, urged a family into crisis.) In turn, interact with C
- C is the definition the family makes for the stressor causes X (the crisis)

Later this model is modified by Hamilton McCubbin and Joan Patterson (1982, 1983a, 1983b), based on their longitudinal "study of families who had a husband or father held captive or unaccounted for" in the Vietnam War as Double ABCX model. The variables that exist as pre-crisis remain the same they only added post-crisis variables to explain how families adapt to the crisis and why some are better adaptors than others (40).

For the present study, A (stressors) is child characteristics which include factors such as cancer type, stage and treatment, and caregiver's age educational level and health status are considered as factors precipitating strain. B (family resource) includes the level of income and social support C (perception) including understanding about the child's cancer and its treatment and X (the crisis) is caregivers' strain.

## **2.5 Literature summary**

The discussed and presented studies conducted on caregiver strain revealed factors that contribute to caregiver strain. All the factors were categorized as caregiver related factors, which in turn can be grouped as stressors and resources

Factors related to caregiver: include caregiver's age, health status, educational status, income level, and social support. Regarding age, the younger caregiver is the higher caregiver strain will be on the other hand caregiver strain also significantly associated with increased caregiver's age. Caregivers who have completed college report sever caregiver strain than those who have no education and have school level education. Regarding the health of the caregiver, the worse the health of the caregiver is the higher the strain.

### **Literature gap**

While reviewing studies conducted on caregiver strain and its predicting factors some gap identified was:

- Most of the researches conducted were cohort, longitudinal survey, and meta-analysis.
- Most of the studies limited on children with an emotional and behavioral disorder, autism spectrum and developmental delay. In addition, even if the studies focus on cancer most of it conducted among caregivers of adult cancer patients.
- The child's cancer type and stage, type and number of treatment (which are placed in the conceptual framework as child-related stressors) association with caregiver strain was not widely assessed.

## 2.6 Conceptual frameworks

The conceptual framework adopted for this study presented in figure1. It shows stressors or precipitating factors (Aa), family resource (Bb), family perception (Cc) and crisis (Xx). Stressors or precipitating factors are child's cancer type, stage, treatment and number of treatments, caregiver's health status, age and education. Factor used by the family to prevent the crisis from happening are income and social support, family understands of child's illness and the crisis is caregiver strain. This conceptual framework is adopted only to show possible factors of caregiver strain and coping will not be assessed.

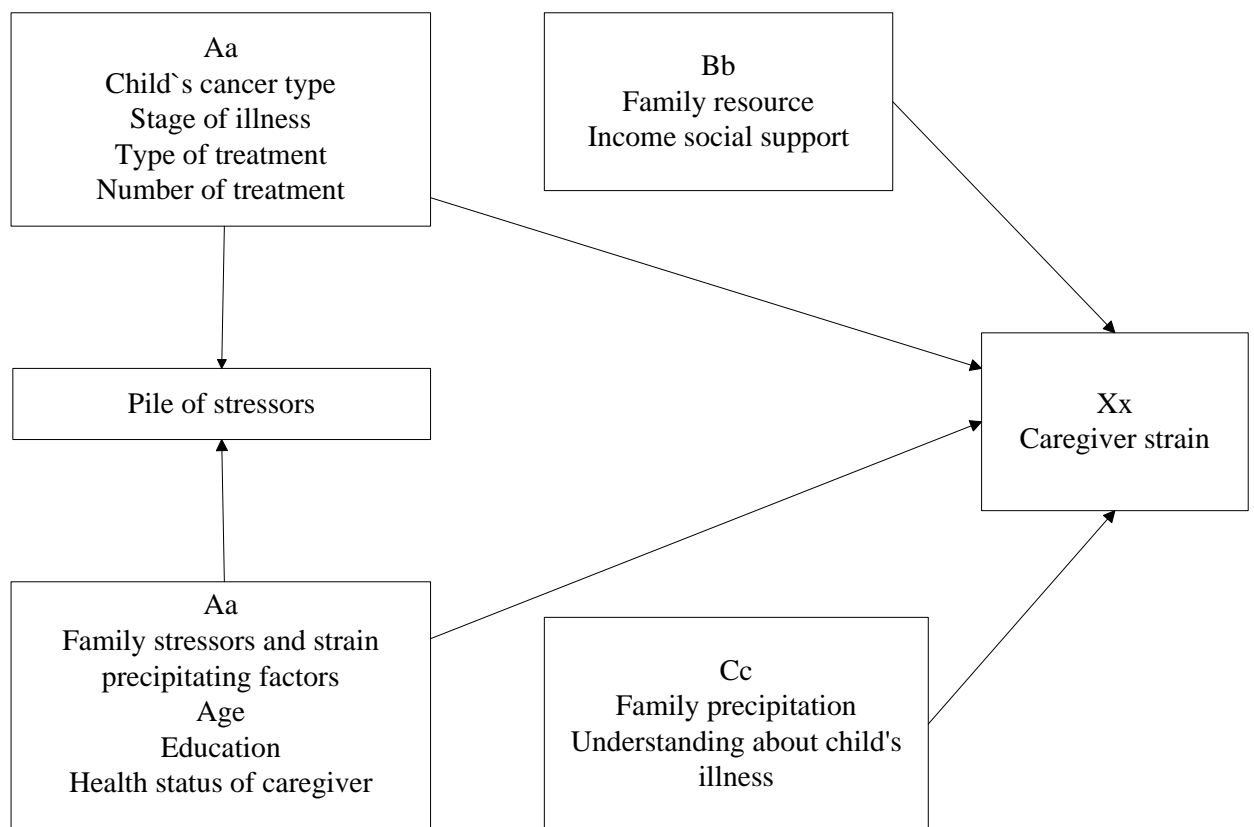


Figure 1: Conceptual framework adopted from double ABCX model

## **CHAPTER THREE**

### **3 OBJECTIVE**

#### **3.1 General objective**

- To assess caregiver strain and associated factors among family caregivers of childhood cancer patients in TASH Addis Ababa, Ethiopia, 2020

#### **3.2 Specific objective**

1. To determine the level of caregiver strain among family caregiver of child with cancer in TASH
2. To determine factors associated with caregiver strain among family caregiver of child with cancer in TASH

## CHAPTER FOUR

### 4 METHODS AND MATERIALS

#### 4.1 Study Area and Period

The study was carried out in Tikur Anbessa specialized hospital which is located in Lideta sub-city Addis Ababa. Addis Ababa is the capital city of Ethiopia and the largest city in the nation by population, according to the 2007 census total population was 3,384,569 but it is estimated population count as per 2017 was close to 4 million. The city has ten sub-cities with 330 kebeles organized in 28 woredas (43). Tikur Anbessa specialized hospital is the largest tertiary university teaching hospital with capacity of 700 beds. Pediatric oncology hematology ward contains 42 beds, and has hemato-oncologists, hemato-pathologists, residents and nurses. The unit provide both inpatient and outpatient service for around 800-1000 children with cancer in the past one year (source of information, unpublished HMIS data from TASH pediatric oncology outpatient and inpatient abstract register book of 2019/20). Data collecting period was from April 15 to May 15 2020.

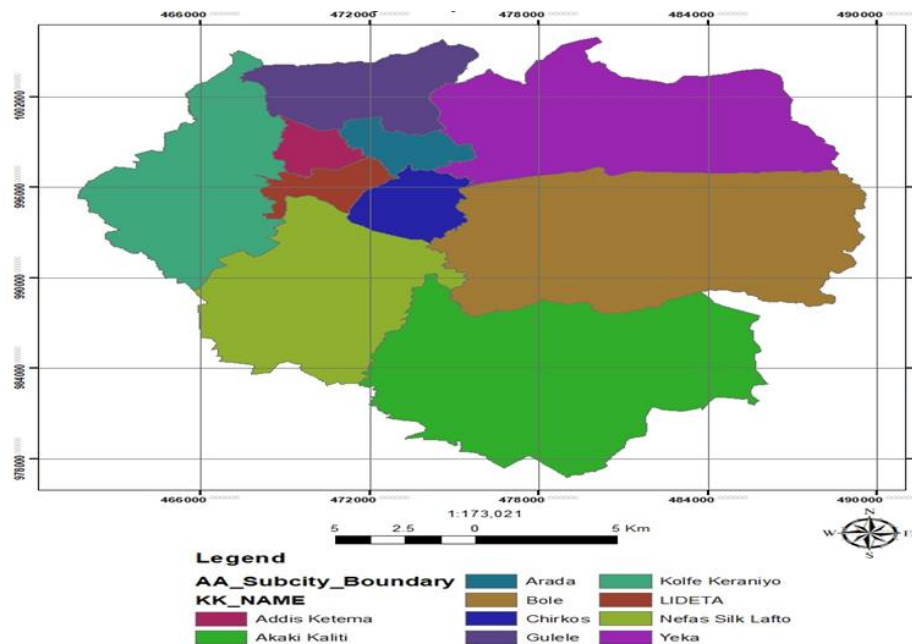


Figure 2: Sub city of Addis Ababa (website and own computation using GIS software)

## **4.1 Study design**

- Hospital based cross-sectional study

## **4.2 Population**

### **4.2.1 Source Population**

- All Caregiver of a child with cancer attending TASH during study period

### **4.2.2 Study Population**

- All caregivers of a child with cancer who are attending TASH during study period and fulfill the inclusion criteria

## **4.3 Eligibility Criteria**

### **4.3.1 Inclusion Criteria**

- Family caregivers who are giving care for a child who has started the cancer treatment.
- Family caregivers who have been providing care for at least one month since the initiation of the treatment.

### **4.3.2 Exclusion Criteria**

- Family caregivers who are less than 18 years

### **4.3.3 Sample Size Determination and sampling technique**

Due to the limitation of source population during study period, it was no necessary to calculate sample size but only to include all by census method. Using consecutive Sampling technique, 153 family caregivers who fulfill the inclusion criteria became a sample until the end of data collection period using consecutive sampling technique.

### **4.3.4 Data Collection Tool and Procedure**

Caregiver strain: is measured using a modified caregiver strain index, developed by Thornton and Travis in 2003 after testing its reliability on 158 family caregivers in USA founding internal reliability of  $\alpha=0.90$  (12). The MCSI contains 13 questions each one of them, assessing the personal, physical, psychological, social and financial domain of caregiver. Scoring 2, 1 and 0 for responses for 'yes' regularly, 'yes' sometimes and 'no' respectively which makes it easy to administer, score and show correlation between this study's dependent

and independent variables. Score range from 0 to 26, the higher the score is the higher caregiver strain is.

Multidimensional scale of perceived social used to measure family caregiver's perceived social support from family, friends and significant other. Zimet et al developed the tool in 1988, the tool contain 12 questions each scored from 1 (very strongly disagree) to 7 (very strongly agree) (36). The multidimensional scale of perceived social support has been previously used in local setting in north west Amhara region to determine the level of social support and association factors in prison institutions and has been shown to be valid, reliable and culturally accepted (cronbach's alpha: 0.952) (45).

Secondary data was obtained from chart to obtain information related to child's clinical profiles i.e. cancer type, type of treatment and number of treatments. In addition, two data collectors who have previous data collecting experience (1 assigned at Amstegna and one at TASH pediatric oncology units) in a separated and quite room. The data collected from April 15 to May 15 2020.

#### **4.3.5 Study Variable**

##### **4.3.5.1 Dependent variable**

- Caregiver strain

##### **4.3.5.2 Independent variables**

###### Child's characteristic variables

Age

Sex

Cancer type

Cancer stage

Treatment type

Number of treatments

###### Caregiver's characteristic variables

Age

Educational status

Health status

Perceived social support

Level of income

Perception about the child's illness

#### **4.3.6 Operational Definition**

Caregiver strain: caregiver strain is the reaction of caregiver has towards giving care to a child who has cancer, usually characterized by lack of sleep, fatigue, feeling overwhelmed.

Caregiver strain measured by MCSI, According to the MCSI, caregiver's level of strain cannot be classified as low, moderate, and severe (12).

Perceived social support: family caregiver's subjective decision of the support that offered to them from friends, family and significant other (46).

Number of treatment: indicate how many of the three main cancer treatments the child has received.

One: means the child has received only one of the three main treatment types.

Two: means the child has received two of the three main treatment types.

Three: means the child has received all of the three main treatment types.

#### **4.3.7 Data Quality Assurance**

To assure the data quality, the data collectors have received a two days training. The collected data were reviewed and checked for consistency, clarity, completeness and accuracy daily. Expert for a better understanding of the concepts had translate the initial version of questionnaire which was in English to the local language Amharic and then the Amharic version was again translated back to English to check for inconsistency. The questionnaire was pretested first at Jimma medical center pediatric oncology unit after translating the questionnaire to local language oromifa and some modification on 9, which was 5% of the estimated sample size respondents made accordingly.

#### **4.4 Data Analysis**

The collected data was cleared and edited then entered to Epi-data version 4.6. The descriptive analysis done to shows the frequency and percentage of the variables by using statistical software SPSS version 25. Using tables, the finding of the analysis presented. Multiple linear logistic regression was used to explain the link between outcome and explanatory variables. The result of the study final model will be express at 95% confidence interval and the statistical significance of the variables confirmed if the p value is less than 0.05.

#### **4.5 Research model**

The dependent and independent variables of the study was extracted based on conceptual framework of this study. The drawn research model in the study is multiple linear regressions.

$$Y_{Xx} = \beta_0 + \beta_1 X_{c1} + \beta_2 X_{c2} + \beta_3 X_{c3} + \beta_4 X_{c4} + \beta_5 X_{c5} + \beta_6 X_{c6} + \beta_7 X_{cg1} + \beta_8 X_{cg2} + \beta_9 X_{cg3} + \beta_{10} X_{cg4} + \beta_{11} X_{cg5}$$

Where as

$Y_{xx}$  = caregiver strain

$xc_1, xc_2, xc_3, xc_4, xc_5, xc_6$ = child related variables (child age, child sex, Cancer type, Cancer stage, Treatment type and Number of treatment respectively).

$xcg_1, xcg_2, xcg_3, xcg_4, xcg_5$ = caregiver related variables (Caregiver age, Caregiver educational status, Caregiver health status, Caregiver perceived social support and Caregiver level of income respectively).

In addition,  $\beta_0$  is an intercept and  $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_7, \beta_8, \beta_9, \beta_{10}$  and  $\beta_{11}$  are the coefficient of parameter of explanatory variables (child related variables and caregiver related variables) of dependent variable (Caregiver strain) or slope of each independent variable.

#### **4.6 Ethical Consideration**

Ethical clearance was obtained from Addis Ababa University College of health science school of Nursing and Midwifery, to get permission and cooperation from department of pediatric and child health of TASH. The aim of the study was explained to the concerned individuals in the hospital and the study participants to obtain verbal informed consent. For data collection, informed consent was provided to all participants, giving them a full right to participate, refuse and withdrawal from the study at any time and will be informed that the study is free from potential harm as well as additional benefit because of participating. The questionnaire did not include participants' identification information such as child's card number, child and caregiver name to keep their confidentiality.

#### **4.7 Data Dissemination**

The result of the study will be submitted to Addis Ababa University College of Health and medical science department of nursing and midwifery and it will be disseminated to TASH. Furthermore, the paper will be presented in workshops and seminars. Finally, the manuscript will be submitted to scientific journals for possible publication.

## **CHAPTER FIVE: RESULT**

### **5.1 Socio demographic characteristic of caregivers**

One hundred fifty-three participants were included in the present study. Mean age of respondent was 34.63 with standard deviation of 9.62. Those in the age group of 35-49 years were 72 (47.1%). Eighty-one (52.9%) were men. Regarding educational level 62(40.5%) of respondents cannot read and write and 125 (81.7%) of the participant were married. As to their occupation farmer 62(40.5%) were of the highest proportion. Out of family caregiver one hundred thirty eight (90.2%) were parents and 15 (9.8%) were siblings, grandparents and other relatives and 61 (39.9%) of family caregivers provided care for duration of 1-2 years. (Table 2)

**Table 2: Socio demographic characteristic of caregivers of children with cancer attending TASH 2020 G.C (n=153)**

Variable	Frequency	Percent
<b>Age</b>		
Less than 20	11	7.2
20-34 year	78	51.0
35-49 year	49	32.0
>= 50 year	15	9.8
<b>Sex</b>		
Male	81	52.9
Female	72	47.1
<b>Marital status</b>		
Currently living with partners	125	81.7
Currently not living with partners	28	18.3
<b>Education level</b>		
Illiterate	37	24.2
Primary	69	45.1
Secondary	25	16.3
More than secondary	22	14.4
<b>Occupation</b>		
House Wife	30	19.6
Government employed	17	11.1
Self employed	21	13.7
Farmer	62	40.5
Other	23	15.1
<b>Relation of caregiver to the child</b>		
Parent	138	90.2
other	15	9.8
<b>Caregiving duration</b>		
Less than 6 months	37	24.2
6-11 month	28	18.3
1-2 year	46	30.1
3-4 year	36	23.5
Greater or equal to 5 year	6	3.9

## 5.2 Socio demographic characteristic of children with cancer

The mean age of the children was 6.53 with standard deviation of 3.69, 57(37.3%) of them being in age group between 0-4 years. Seventy-eight (51%) of children was male. Most of the children presented with leukemia 57(37.3%). Almost all of the children were receiving chemotherapy 152(99.3%).

**Table 3: Socio demographic characteristic of children with cancer attending TASH June 2020 G.C (n=153)**

<b>Variable</b>	<b>Frequency</b>	<b>Percent</b>
<b>Child age</b>		
0-4	57	37.3
5-9	53	34.6
10-14	43	28.1
<b>Child sex</b>		
Male	78	51.0
Female	75	49.0
<b>Child cancer Stage</b>		
Stage I	9	5.9
Stage II	23	15.0
Stage III	42	27.5
Stage IV	22	14.4
Standard (low) risk	35	22.9
High risk	22	14.4
<b>Child cancer type</b>		
Leukemia	57	37.3
Lymphoma	22	14.4
Retinoblastoma	23	15
Neuroblastoma	6	3.9
Wilm's tumor	33	21.6
Sarcoma	10	6.5
Other	2	1.3
<b>Type of treatment</b>		
Chemotherapy	152	99.3
Surgery	1	0.7
<b>Number of treatments</b>		
One	114	74.5
Other	39	35.5

### **5.3 Perceived social support**

The perceived social support that the family caregivers receive from friends, family and significant other was measured using MSPSS, it is a 12-item instrument used to measure perceived social support. The MSPSS has 7-likert scale. Scale has three subscales measuring support from significant other, family and friend each having four items. The total mean score was 48.15 with standard deviation of 18.76 ranging from 12 to 84. Eighty-seven (56.6%) of family caregivers disagree that they can talk about their problem with their friends and 72(47.1%) of family caregivers strongly disagreed on their family's willingness to help them make decision. Mean score for support from significant other, support from friend and support from family were 5.22, 3.09 and 3.72, respectively. (Table 4)

**Table 4: perceived social support among the caregivers of children with cancer as per MCSI attending TASH 2020 G.C (n=153)**

Variables	Response	
	Disagree (n %)	Agree (n %)
<b>Significant other subscale</b>		
There is a special person who is around when I am in need.	39(25.5)	114(74.5)
There is a special person with whom I can share my joys and sorrows	33(21.6)	120(78.4)
I have a special person who is a real source of comfort to me	39(25.5)	114(74.5)
There is a special person in my life who cares about my feelings	35(22.9)	118(77.1)
Mean	5.22	
Standard deviation	2.319	
<b>Friend subscale</b>		
I can talk about my problems with my friends	87(56.9)	66(43.1)
My friends really try to help me	90(58.9)	63(41.1)
I can count on my friends when things go wrong	89(58.2)	64(41.8)
I have friends with whom I can share my joys and sorrows	88(57.5)	65(42.5)
Mean	3.09	
Standard deviation	2.30	
<b>Family subscale</b>		
I can talk about my problems with my family	68(44.4)	85(55.6)
I get the emotional help and support I need from my family	60(39.2)	93(60.8)
My family is willing to help me make decisions	72(47.1)	81(52.9)
My family really tries to help me	78(51)	75(49)
Mean	3.72	
Standard deviation	2.36	

## 5.4 Caregiver strain

Regarding the MCSI, the mean score was 20.91 with standard deviation of 3.64 with minimum and maximum score of 12 and 26 respectively. The parent of the children reported as they feel completely overwhelmed 151(98.7%), as caregiving has a financial strain 140(91.5%) and there have been emotional adjustments 135(88.2%) on the regular bases. The lower proportion of parents reported as they experience disturbed sleep 64(41.8%), feel as caregiving has a physical strain 54(35.3%) and as some behavior of the child are upsetting 96(62.7%) on a regular basis.

**Table 5: strain among the caregivers of children with cancer as per MCSI attending TASH 2020 G.C (n=153)**

Variable	Response		
	No (n %)	Yes sometimes (n %)	Yes on regular basis (n %)
My sleep is disturbed	47(30.7)	42(27.5)	64(41.8)
Caregiving is inconvenient	15 (9.8)	32(20.9)	106(69.3)
Caregiving is a physical strain	77(50.3)	22(14.4)	54(35.3)
Caregiving is confining	6(3.9)	15(9.8)	132(86.3)
There have been family adjustments	18(11.8)	17(11.1)	118(77.1)
There have been changes in personal plans	10(6.5)	11(7.2)	132(86.3)
There have been other demands on my time	21(13.7)	11(7.2)	121(79.1)
There have been emotional adjustments	8(5.2)	10(6.5)	135(88.2)
Some behaviors of the child are upsetting	26(17.0)	31(20.3)	96(62.7)
Change in the child	29(19.0)	11(7.2)	113(73.9)
There have been work adjustments	32(20.9)	7(4.6)	114(74.5)
Caregiving is a financial strain	3(2.0)	10(6.5)	140(91.5)
I feel completely overwhelmed	1(0.7)	1(0.7)	151(98.7)

## **5.5 Factors associated with caregiver strain**

Prior to looking the relationship between dependent and independent variables, dummy variable for each independent variable was created, then only dummy variables with frequency of greater than or equal to 10 were entered in to linear regression. 95% Confidence interval was assumed. Those dummy variables were interrelated with the dependent variable caregiver strain in bivariate analysis. During Bivariate analysis caregiver's sex, caregiver's age, marital status, educational level, relation to child, duration of caregiving, and perceived social support were statistically significant variables.

**Table 6: list of bivariate analysis of caregiver strain among family caregivers of children with cancer attending TASH**

Socio-demographic predictors	Caregiver strain		
	Unstandardized $\beta$	95%CI of $\beta$	p-value
<b>Caregiver sex</b>			
Female	-0.103	-0.233,0.027	0.118
Male	1.00		
<b>Caregiver age</b>			
<20	-0.362	-0.609,-0.116	0.004
35-49	-0.011	-0.081,0.059	0.751
>=50	0.077	0.005,0.150	0.036
20-34 years	1.00		
<b>Marital status</b>			
Single	-0.36	-0.587,-0.133	0.002
Divorce	0.029	-0.224,0.283	0.818
Widow	-0.299	-0.706,0.108	0.149
Married	1.00		
<b>Education level</b>			
Uneducated	-0.043	-0.198,0.108	0.561
Secondary	-0.133	-0.308,0.043	0.138
More than secondary	0.138	-0.047,0.323	0.142
Primary	1.00		
<b>Relation to child</b>			
Sibling	-0.225	-0.466,0.015	0.066
Grandparent	0.212	-0.363,0.787	0.467
Other	-0.796	-1.597,0.005	0.052
Parents	1.00		
<b>Duration of caregiving</b>			
< 6 month	0.026	-0.123,0.179	0.734
6-11 month	0.037	-0.132,0.206	0.662
3-4 years	-0.090	-0.243,0.064	0.250
>=5 years	-0.303	-0.636,0.031	0.075
<b>Child cancer type</b>			
Lymphoma	0.046	-0.153,0.246	0.647
Retinoblastoma	0.098	-0.099,0.294	0.327
Wilm's tumor	-0.014	-0.188,0.159	0.871
Sarcoma	0.028	-0.244,0.30	0.839
Leukemia	1.00		
<b>Child cancer stage</b>			
Stage I	-0.079	-0.220,0.379	0.601
Stage II	-0.07	-0.282,0.141	0.512
Stage IV	0.009	-0.206,0.223	0.937
Stage III	1.00		
Support from family	0.009	-0.018,0.037	0.510
Support from friends	0.007	-0.022,0.035	0.632
Support from significant others	0.054	0.027,0.081	0.000

After doing multivariate analysis and the assumptions of linearity and normality were tested. The tolerance and variance inflation factor (VIF) shows result of VIF less than 10 and tolerance greater than 0.2 indicating there is no collinearity among variables. Caregiver's age , duration of caregiving and perceived social support were found to be statistically significant with a P-value of 0.007, 0.006 and 0.003 respectively.

**Table 7: list of multivariate analysis of caregiver strain among family caregivers of children with cancer attending TASH**

Predictors	Caregiver strain		
	Unstandardized $\beta$	95%CI of $\beta$	p-value
<b>Caregiver sex</b>			
Female	-0.515	-4.48, 3.45	0.798
Male	1.00		
<b>Caregiver age</b>			
<20 years	-0.217	-0.537,0.104	0.183
>=50 years	<b>0.103</b>	<b>0.028, 0.178</b>	<b>0.007*</b>
20-34 years	1.00		
<b>Educational level</b>			
Secondary education	-0.838	-0.263,0.077	0.281
More than secondary	-2.374	-0.079,0.283	0.265
Primary education	1.00		
<b>Marital status</b>			
Single	0.069	-0.266,0.403	0.629
Married	1.00		
Support from significant other	<b>0.059</b>	<b>0.02,0.098</b>	<b>0.003*</b>
<b>Relation to the child</b>			
Sibling	-0.174	-0.744,0.397	0.548
Other	-0.684	-1.474, 0.101	0.087
Parent	1.00		
<b>Duration of caregiving</b>			
>=2 years	<b>-0.455</b>	<b>-0.775,-0.135</b>	<b>0.006*</b>
1-2 years	1.00		

## 5.6 Discussion

In this MCSI was used to assess the caregiver strain and the study result shows, 98.7% of them feeling overwhelmed and majority (91.5%) of them having financial strain. The financial strain may be due to most of the family caregivers (40.5%) were farmers because of this they do not have sustainable income and this lead to decreased financial resource to cover up for their costs including food, housing and medical expenses. In addition, there are no many governmental and nongovernmental organizations to help them financially.

This study finding is in line with finding of study conducted in Zimbabwean by Dambi JM et al. to demine the impact of caregiving a child with cancer among 48 caregivers of children with cancer and the result shows caregivers having the financial strain of 87.5%. According to the ABCX model, family crisis (in this study caregiver strain) is determined by the level of perceived social support the family is getting, caregivers and child characteristics and family's perception. Social support have an important role in reducing caregiver strain as it ease the negative aspects of caregiving such as emotional distress, health concerns and financial strain (28,47).

For this study, a unit increase in perceived social support from significant other will increase caregiver strain by 0.059 at P-value of 0.003, showing a significant and direct relation between caregiver strain and perceived social support from significant other. This find is different from the finding of study conducted in Taiwan by Shu-Mei Tsai and Hsiu-Hung Wang; to determine the relationship between caregiver strain and social support among 127 mothers of children with intellectually disable children using caregiver strain and social support scale and the result shows social support and caregiver strain had significant and negative correlation. This difference the cultural difference found in our country as responsibilities and closeness between families is greater especially in time of crisis.

The find of this study indicate an indirect significant relation between caregiver strain and duration of caregiving, caregivers who had been providing care for greater than or equal to five years significantly associate with caregiver strain with  $\beta = -0.455$ , P-value of 0.006. this may be due to the longer caregivers engage in caregiving activities the more familiar they will get with the child condition and the hospital environment and tend to accept their situation.

The current study also finds out that caregiver's age greater than equal to 50 significantly associate with caregiver strain( $\beta=0.103$ , $P\text{-value}=0.007$ ), old caregivers have caregiver strain compare to younger caregivers. This may be due to aged caregivers have additional responsibility to provide care for their family apart from caring for the sick child, lacking their own time.

This study finding is different from study conducted by Min Zhang et al. in china in 2018 reporting that younger caregivers had a higher level of strain. The difference can be because of difference in sample size and the time of study, which took two years of study period with 212-study participant while the current study included only 153 participants with one-month study period.

Most of the studies shows that significant association between caregivers age, sex and marital status (25,30,35,36,48). Nevertheless, for this study, no significant associations found were between caregiver strain and the independent factors except caregiver's educational level, employment status and perceived social support. There was no evidence for significant association existing between demographic variables i.e. caregiver's age, sex, marital status, duration of caregiving and relation to child. Similarly, child related variables i.e. child's age, sex, cancer stage and type were not associated. Further studies needed to determine the relation between these variables.

### **Strength**

The strength of the study is that it is originality in providing information about caregiver strain and associated factors as there is insufficient information related to caregiver strain in the study area.

### **Limitation**

The limitation of the study is that it only indicates the caregiver strain and its associated factors in one hospital (Tikur Anbessa Specialized Hospital) so the conclusion might not apply to the general population.

## CHAPTER SIX

### CONCLUSION AND RECOMMENDATION

#### 6.1 Conclusion

According to this study the mean score of caregiver strain was 20.915 with standard deviation of 3.6417, 91.5% of family caregivers report financial strain. Caregiver's age, duration of caregiving and perceived social support were significantly associated with caregiver strain with P-value of 0.007, 0.006, and 0.003 respectively.

#### 6.2 Recommendation

- 1 To oncology unit: making the caregiver strain assessment a routine nursing activity. arranging support group discussion to enable the family caregivers share their experience
- 2 To TASH: to develop a health care service that focuses on child and family caregiver's physical and psychosocial wellbeing.
- 3 To the department of nursing: to encourage researchers in this kind of topics and made further investigation on the associated factors.
- 4 Policy makers: to develop a strategy that will help improve the family caregivers socioeconomic status and the social support they are receiving.
- 5 Nursing implication: as an oncology nurse, nurses can help family caregivers by giving the family caregivers education and offer support and guidance in every activity to reduce caregiver strain and promote the family caregiver's physical and psychological wellbeing.

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## APPENDIX

### Research question (English version)

#### Information sheet (English Version)

You are invited to participate in a study to be conducted by MSC student Kalkidan Lemessa Addis Ababa University, College of Health Sciences, Department of clinical oncology nursing. Please read the following statements and ask any unclear points before you agree to participate.

#### Introduction

The topic of this study is the assessment of caregiver strain among family caregivers of children with cancer in TASH, Addis Ababa. Participation in this study is exclusively voluntarily. If you are not interested to participate and you have every right to withdraw yourself from the study at any time, there will be no consequences and you will get all the services provided in the hospital with no problems. If you decide to participate, you have to sign on the consent permission form.

#### What is expected from me as a participant in the study?

As a participant of this study, you will be requested to cooperate in answering the questionnaire.

### **Potential Risks and Discomforts**

There will be no potential risks or discomfort by taking part in this study

### **What will happen to the result of the study?**

The result of the study will be used for a master's degree thesis in clinical oncology nursing. It also will be published in a way that you will not be identified in any report or publication.

### **Compensation for participation**

You will not receive any payment for your participation in this research study.

### **Confidentiality**

On the request paper, your name or your identities will not be mentioned. Samples and information given by the participants will serve only for this study, not for any other purpose.

### **Person to contact**

Please direct any questions or problems you may encounter during this study to the principal investigator

Call 0922117261 or

Email [kal12kebu@gmail.com](mailto:kal12kebu@gmail.com)

Consent form (English version)

This page contains an agreement signature to participate in the study entitled "caregiver strain and associated factors among family caregivers of children with cancer", TASH Addis Ababa. Therefore, please read the following points and sign your signature at the end of the space provided.

1. I understand the objective of the study in "caregiver strain and associated factors among family caregivers of children with cancer ", TASH Addis Ababa.
2. I know that the information and measurement taken from me that are going to be used for this study only.
3. I understand that all the information given for the study and the results are confidential.
4. I understand that I have a right to withdraw from the study at any time.

Therefore, with a full understanding of the situations, I agree to give the entire necessary information.

Agreed \_\_\_\_\_

Don't agree \_\_\_\_\_

Date\_\_\_\_\_

### Part I: background information of patient

- Put “√” mark as per the questions required in the box.

S.No	Child information	
1	Child's sex	1. Male <input type="checkbox"/>
		2. Female <input type="checkbox"/>
2	Child's age	_____month/year
<b>Chart review</b>		
3	Cancer type	_____
4	Cancer stage	1. Stage I <input type="checkbox"/>
		2. Stage II <input type="checkbox"/>
		3. Stage III <input type="checkbox"/>
		4. Stage IV <input type="checkbox"/>
5	Type of treatment	1. Chemotherapy <input type="checkbox"/>
		2. Surgery <input type="checkbox"/>
		3. Radiotherapy <input type="checkbox"/>
		4. Other <input type="checkbox"/>
6	Number of treatment	1. One <input type="checkbox"/>
		2. Two <input type="checkbox"/>
		3. Three <input type="checkbox"/>

### Part II: background information of caregiver

- Put “√” mark as per the questions required in the box.

No	Caregiver information	
1	Caregiver's sex	1. Male <input type="checkbox"/>
		2. Female <input type="checkbox"/>
2	Caregiver's age	_____years
3	Educational status	1. Illiterate <input type="checkbox"/>
		2. Primary <input type="checkbox"/>

		3. Secondary <input type="checkbox"/>
		4. More than secondary <input type="checkbox"/>
4	Marital status	1. Never married <input type="checkbox"/>
		2. Married <input type="checkbox"/>
		3. Divorced/separated <input type="checkbox"/>
		4. Widowed <input type="checkbox"/>
5	Income	_____ETB/month/year
6	Employment	1. Unemployed <input type="checkbox"/>
		2. Government employed <input type="checkbox"/>
		3. Self employed <input type="checkbox"/>
7	Relation of caregiver to the child	1. Parent <input type="checkbox"/>
		2. Sibling <input type="checkbox"/>
		3. Grandparent <input type="checkbox"/>
		4. Other <input type="checkbox"/>
8	Duration of caregiving	_____Month/year
9	Do you have any known chronic illness	1. Yes <input type="checkbox"/>
		2. No <input type="checkbox"/>
		3. I do not know <input type="checkbox"/>
10	If your answer is yes, what type of illness you have	_____

**Part III: Assessment of parent understanding**

- Put “√” mark as per the questions required in the box.

No	Assessment of parent’s understanding of child’s illness		
1	Aware of the causes of childhood cancer	Yes <input type="checkbox"/>	No <input type="checkbox"/>
2	Aware of the side effects of the child’s cancer treatment	Yes <input type="checkbox"/>	No <input type="checkbox"/>

**Part IV: Modified caregiver strain index**

Put “√” mark as per the questions required in the box.

No		Yes, On a Regular Basis = 2	Yes, Sometimes = 1	No=0
1.	My sleep is disturbed (For example: the person I care for is in and out of bed or wanders around at night)			
2.	Caregiving is inconvenient (For example: helping takes so much time or reduce time for social gathering )			
3.	Caregiving is a physical strain (For example: lifting in and out of a chair; effort or concentration is required)			
4.	Caregiving is confining (For example: helping restricts free time or I cannot go visiting)			
5.	There have been family adjustments (For example: helping has disrupted my routine; there has been no privacy)			
6.	There have been changes in personal plans (For example: I had to turn down a job; I could not go visit my relatives)			
7.	There have been other demands on my time (For example: other family members need me)			
8.	There have been emotional adjustments (For example: severe arguments about caregiving)			
9.	Some behavior of the child are upsetting( for example: become			

	aggressive or won't listen to me)			
10.	Change in the child ( for example: weight loss, hair loss)			
11.	There have been work adjustments (For example: I have to take time off for caregiving duties)			
12.	Caregiving is a financial strain			
13.	I feel completely overwhelmed (For example: I worry about the person I care for; I have concerns about how I will manage)			

Total Score = Multidimensional Scale of Perceived Social Support (Zimet, Dahlem, Zimet& Farley, 1988)

Circle the “1” if you Very Strongly Disagree

Circle the “2” if you strongly disagree

Circle the “3” if you mildly disagree

Circle the “4” if you are Neutral

Circle the “5” if you mildly agree

Circle the “6” if you strongly agree

Circle the “7” if you Very Strongly Agree

No		1	2	3	4	5	6	7
1.	There is a special person who is around when I am in need.	1	2	3	4	5	6	7
2.	There is a special person with whom I can share my joys and sorrows	1	2	3	4	5	6	7
3.	My family really tries to help me	1	2	3	4	5	6	7
4.	I get the emotional help and support I need from my family	1	2	3	4	5	6	7
5.	I have a special person who is a real source of comfort to me	1	2	3	4	5	6	7
6.	My friends really try to help me	1	2	3	4	5	6	7
7.	I can count on my friends when things go wrong	1	2	3	4	5	6	7
8.	I can talk about my problems with my family	1	2	3	4	5	6	7
9.	I have friends with whom I can share my joys and sorrows	1	2	3	4	5	6	7
10.	There is a special person in my life who cares about my feelings	1	2	3	4	5	6	7
11.	My family is willing to help me make decisions	1	2	3	4	5	6	7
12.	I can talk about my problems with my friends	1	2	3	4	5	6	7

Thank you for your time!

**Research question (Amharic version)**

**Information sheet (Amharic Version)**

በአዲስ አበባ ዩኒቨርሲቲ በካንሰር ህክምናና የትምህርት ክፍል የሁለተኛ ዲግሪ ተማሪ በሆነችው ቃልኪዳን ለሜሳ በምታጠናው ጥናት ላይ "በካንሰር የተያዙ ህፃናት አስታማሚዎች ጫና እና ተያያዥ ምክንያቶችን በአዲስ አበባ፣ ጥቁር አንበሳ ስፔሃላይዝድ ሆስፒታል" ነው እንዲሳተፍ ተጋብዘዋል። እባካትን ከዚህ በታች ያሉትን ፅዕ-ፎች በጥንቃቄ ያንብቡ፣ ለማንኛውም ያልገባዎት ሀሳብ ከመስማማቶ በፊት እባካትን ይጠይቁ።

**መግቢያ**

የጥናቱ ዋና አላማ "በካንሰር የተያዙ ህፃናት አስታማሚዎች ጫና እና ተያያዥ ምክንያቶችን በአዲስ አበባ፣ ጥቁር አንበሳ ስፔሃላይዝድ ሆስፒታል" ነው። ጥናቱ ላይ ላለመሳተፍ ሆነ ከጥናቱ በማንኛውም ሰዓት የመውጣት መብት አለዎት። መጠይቁ ላይ የመሳተፍ ሙሉ ለሙሉ የርስ ፍቃደኝነት ይጠይቃል። ምንም የሚደርሰበት ነገር የለም፣ እንዲሁም ከሆስፒታሉ ማንኛውንም አገልግሎት ያለምንም ችግር ያገኛሉ። ለመሳተፍ ከወሰኑ የሰምምነት ቅፅ ላይ ፊርማዎትን ማኖር ይኖርባታል።

**ጥናቱ ላይ በመሳተፍ ከርስ የሚጠበቅባት ነገር ?**

በጥናቱ ላይ እንደተሳታፊነቶ፣ መጠይቁን በመመለስ ይተባበሩን።

**የሚያጋጥሞ ችግር እና አለመመቻት ?**

መጠይቁ ላይ በመሳተፍ ምንም አይነት የሚያጋጥሞ ችግር እና አለመመቻት የለም።

**የጥናቱ ውጤት ላይ ምን ያጋጥማል ?**

የጥናቱ ውጤት የሚሆነው ለሁለተኛ ዲግሪ በኪሊኒካል አንካሎ ጂ ለመያዝ ሲሆን፣ ጥናቱ ሲታተም የርስ ማንነት አይጠቅሰም ።

**በመሳተፍ የሚያገኙት ጥቅም ?**

ጥናቱ ላይ በመሳተፍ ምንም አይነት ክፍያ ወይም ጥቅም አይሰጥም።

**ሚሰጥር መያዝ**

መጠይቁን በሚሞሉበት ጊዜ የርስ ሰም እና ማንነት አይጠቀሰም. በተሳታፊዎች የሚሠጡ መረጃዎች እና ሳፕሎች ለጥናቱ ብቻ ነው የሚያገለግሉት።

**ጥያቄ ካሎት ?**

መጠይቁን በሚሞሉበት ጊዜ ለሚያጋጥሞ ማንኛውም ጥያቄ ወይም ችግር የሚያናግሩት የ ጥናቱን አጥኚ ባለሙያ አድራሻ::

**ስልክ:** 0922117261 ወይም

**ኢሜል:** [kali2kebu@gmail.com](mailto:kali2kebu@gmail.com)

የሰምምነት ቅፅ

ይህ ገፅ የሰምምነት ቅጽ ሲሆን በካንሰር የተያዙ ህፃናት አሰታሚዎች ጫና እና ተያያዥ ምክንያቶችን በአዲስ አበባ፣ ጥቁር አንበሳ ስፔሻላይዥድ ሆስፒታል በሚደረደው ጥናት ላይ ለሚሳተፉ ተሳታፊዎች የተዘጋጀ ነው። እባካትን ከዚህ በታች የጠቀሱት ነጥቦች በደንብ አንብበው ወይም አዳምጠው ከታች ባለው ባታ ላይ ፊርማዎትን ያኑሩ።

1. የጥናቱ አላማ "በካንሰር የተያዙ ህፃናት አሰታሚዎች ጫና እና ተያያዥ ምክንያቶችን በአዲስ አበባ፣ ጥቁር አንበሳ ስፔሻላይዥድ ሆስፒታል ማጥናት መሆኑን ተረድቻለው።

2. ለጥናቱ የምሥጠው የኔ መረጃዎች እና ውጤቶች ሁሉ ለጥናቱ ብቻ መሆኑን ተረድቻለው።

3. ለጥናቱ የምሥጠው መረጃዎች እና ውጤቶች በሚሰጥር የተያዙ መሆናቸው ተረድቻለው።

4. ከጥናቱ በማንኛውም ሰዓት የመውጣት መብት አለኝ ።

ከላይ የቀረቡት ነጥቦችን በመረዳት፣ አስፈላጊ መረጃዎችን ለመስጠት ተስማምቻለው።

ተስማምቻለው \_\_\_\_\_

አልትማማውም \_\_\_\_\_

ቀን \_\_\_\_\_

**በተራ ቁጥር አንድ፤ የ አሰታሚው መረጃ**

በተራ ቁጥር አንድ ለቀረቡት ጥያቄዎች በቀረቡት የምርጫ አማራጾች ውስጥ መልሱን ምረጡ፡፡

ተራ ቁጥር	የ አሰታሚው መረጃ
1	የ አሰታሚው ያታ
	1. ሴት <input type="checkbox"/> 2. ወንድ <input type="checkbox"/>
2	የ አሰታሚው ዕድሜ ? _____
3	የ ትምህርት ደረጃ ?
	1. ያልተማረ <input type="checkbox"/>
	2. የመጀመሪያ ደረጃ ያጠናቀቀ <input type="checkbox"/>
	3. የሁለተኛ ደረጃ ያጠናቀቀ <input type="checkbox"/>
4. ከ ሁለተኛ ደረጃ በላይ ያጠናቀቀ <input type="checkbox"/>	
4	የ ጋብቻ ሁኔታ ?
	1. ያላገባ <input type="checkbox"/>
	2. ያገባ <input type="checkbox"/>
	3. የተፋታ <input type="checkbox"/>
4. የ ትዳር ጎደኛው የሞተ <input type="checkbox"/>	
5	የ ገቢው ሁኔታ ? _____ በየወሩ/በዓመት
6	የ ሰራ ሁኔታ ?
	1. ሰራ አጥ <input type="checkbox"/>
	2. የመንግስት ሠራተኛ <input type="checkbox"/>
3. የግል ሠራተኛ <input type="checkbox"/>	
7	ከ ታሚው ህፃን ጋር ያሉት ግንኙነት ?
	1. ወላጅ <input type="checkbox"/> 2. ዘመድ <input type="checkbox"/>

		3. አያት <input type="checkbox"/>
		4. ሌሎች <input type="checkbox"/>
8	የታማሚውን የአስታማሙበት የጊዜ ቆይታ ?	_____
9	በሀኪም የታወቀ ህመም አለባት ?	1. አዎ <input type="checkbox"/>
		2. አይደለም <input type="checkbox"/>
10	መልሳ አዎ ከሆነ፣ ምን አይነት ህመም ነው ያለበት ?	_____

**በተራ ቁጥር 2: የታማሚው መረጃ**

በተራ ቁጥር ሁለት ለቀረቡት ጥያቄዎች በቀረቡት የምርጫ አማራጾች ውስጥ መልሱን ምረጡ።

ተራ ቁጥር	የታማሚው መረጃ	
1	የህፃኑ/ኛ የታ	1. ወንድ <input type="checkbox"/>
		2. ሴት <input type="checkbox"/>
2	የህፃኑ/ኛ ዕድሜ	_____
<b>ከታካሚው የህክምና ካርድ የሚወሰድ</b>		
3	የ ካንሰር አይነት	_____
4	የ ካንሰር ደረጃ	1. ደረጃ አንድ <input type="checkbox"/>
		2. ደረጃ ሁለት <input type="checkbox"/>
		3. ደረጃ ሳስት <input type="checkbox"/>

		4. ደረጃ አራት <input type="checkbox"/>
5	የህክምና አይነት	1. ኬምቴራፒ <input type="checkbox"/>
		2. ቀዳ ጥገና <input type="checkbox"/>
		3. ራዲዮቴራፒ <input type="checkbox"/>
6	የህክምና ቁጥር	1. አንድ <input type="checkbox"/>
		2. ሁለት <input type="checkbox"/>
		3. ሳስት <input type="checkbox"/>

**በተራ ቁጥር 3፡ ወላጆች ስለ ህፃናት ካንሰር ህመም ያላቸው እውቀት**

በተራ ቁጥር ሳስት ለቀረቡት ጥያቄዎች በቀረቡት የምርጫ አማራጾች ውስጥ መልሱን ምረጡ፡፡

ተራ ቁጥር	ወላጆች ስለ ህፃናት ካንሰር ህመም ያላቸው እውቀት	
	የ ህፃናት ካንሰር ህመም የሚያመጡ ምክንያቶች ያውቃሉ?	1 አውቃለው <input type="checkbox"/> 2 አላውቅም <input type="checkbox"/>
	የ ህፃናት ካንሰር ህመም ህክምና የሚያመጡ ተዳጋኝ ተፅዕኖች ያውቃሉ ?	1 አውቃለው <input type="checkbox"/> 2 አላውቅም <input type="checkbox"/>

**ተራ ቁጥር 4:**

በተራ ቁጥር አራት ለቀረቡት ጥያቄዎች በቀረቡት የምርጫ አማራጾች ውስጥ መልሶን ምረጡ።

ተራ ቁጥር		አዋ ሁሌም	አዋ አልፎ አልፎ	አይ
1.	እንቅልፎ ይስተጎሎብታል (ለምሳሌ፡ የታመቦት ህፃን በመኝታው ሰዐት እንቅስቃሴ ላይ ይቃዛል ወይም በእቅድ ልቡ ይንቀሳቀሳል)			
2.	የማሰታመም ሂደት የማይመች ነው (ለምሳሌ፡ መንከባከብ ረጅም ጊዜ ይወስድባታል ወይም ለማህበራዊ ተሳትፎ ጊዜዎችን ቀንሥባታል)			
3.	የማሰታመም ሂደት የአካል ተዕዕኖ አለው (ለምሳሌ ፡ ታማሚው ከወንበር ላይ ማንሳት/ማስቀመጥ፣ ጥረት ወይም ትኩረት ይፈልጋል)			
4.	የማሰታመም ሂደት የዕለት ተዕለት ተግባርን ይገድብባታል (ለምሳሌ የዕረፍት ጊዜ አንዳይኖር ወይም ባታወቁት እንዳይጎብኙ ይከለክላታል)			
5.	የማሰታመም ሂደት ወስጥ በቤተሰብ ሁኔታ ላይ ለውጥ ፈጥሮል (ለምሳሌ ታማሚውን መርዳት የዕለት ተዕለት ተግባርን ረብሾል፣ ምንም የራሱ ጊዜ እንዳይኖር አግርጎል)			
6.	የማሰታመም ሂደቱ የግሎ ዕቅድ ላይ ለውጥ ፈጥሮል (ለምሳሌ ሰራዊትን እንዲያቸርጡ እረፍት እንዳይኖር ወይም ቤተሠብ እንዳይጠይቁ አግርጎታል)			
7.	ታማሚውን በሚሰታምሙበት ወቅት በተጨማሪ			

	ሌሎች የሚያደርገቸው ድርጊቶች አሉ (ለምሳሌ ሌሎች የቤተሰቡ አባላቶች እኔን ይፈልጉኛል)			
8.	የማሰታመም ሂደት የራሱ ስሜት ላይ ለውጥ ፈጥሮል (ለምሳሌ በማሰትምበት ወቅት በጣም እጨነቃለው)			
9.	አንዳንድ የልጄ ባህሪዎች አስቸጋሪዎች ናቸው (ለምሳሌ፤ ሀይለኝነቱ/ቷ ወይም የምለውን/የምላትን አለመስማማት)			
10.	በልጄ ላይ ለውጦች አሉ (ለምሳሌ፡ ክብደት መቀነስ፤ ፀጉር መነቀል)			
11.	የማሰታመም ሂደት ሥራዎች ላይ ለውጥ ፈጥሮል (ለምሳሌ ለማሰታመም ብለው የሥራ ፍቃድ ወሰደዋል)			
12.	የማሰታመም ሂደት የገንዘብ ተፅዕኖ ፈጥሮል			
13.	የማሰታመም ሂደት ሁሌም ያሳሰበኛል (ለምሳሌ ስለማሰታመሙ ታማሚ እጨነቃለው፤ እንዴት እንደማሰታመሙ ያሳሰበኛል)			

አጠቃላይ ውጤት (ከመልቲ ዳይሜሽን ሰኬል ኦፍ ፕሪሲዩድ ሳሻል ስፖርት (ዚሜት ዳክላም፣ ዚሜት ፋሊይ፣1988))

በተራ ቁጥር 5 ለቀረቡት ጥያቄዎች ከዚህ በታች ባሉት አማራጾች መሰረት መልስ ሰጡ፡፡

በጥያቄው እጅግ በጣም ካልተሰማሙ ቁጥር 1 አክብቡ

በጥያቄው በጣም ካልተሰማሙ ቁጥር 2 አክብቡ

በጥያቄው በመጠኑ ካልተሰማሙ ቁጥር 3 አክብቡ

ለጥያቄው ምንም መልስ ከሌሎት ቁጥር 4 አክብቡ

በጥያቄው በመጠኑ ከተሰማሙ ቁጥር 5 አክብቡ

በጥያቄው በጣም ከተሰማሙ ቁጥር 6 አክብቡ

በጥያቄው እጅግ በጣም ከተሰማሙ ቁጥር 7 አክብቡ

**ተራ ቁጥር 5:**

ተራ ቁጥር		1	2	3	4	5	6	7
1.	የኔ የምለው ሰው አለኝ ርዳታ በምፈልግበት ሰዓት ሁሌም አብሮኝ/አብራኝ የሚሆን/ የምትሆን	1	2	3	4	5	6	7
2.	የኔ የምለው ሰው አለኝ በምደሰትበት እና በማዘንበት ጊዜ የማጋራው/የምጋራት	1	2	3	4	5	6	7
3.	ቤተሰቤ ይረዳኛል/ይደግፈኛል	1	2	3	4	5	6	7
4.	ቤተሰቤ የሚያሰፈልገኝን የ ሞራል ድጋፍ እና እርዳታ ይሰጠኛል	1	2	3	4	5	6	7
5.	የምቼቴ ምክንያት የሆነ የኔ የምለው ሰው አለኝ	1	2	3	4	5	6	7
6.	ጎደኞቼ ድጋፍ እና እርዳታ ይሰጠኛል	1	2	3	4	5	6	7
7.	ምንም ችግር ሲፈጠር ሲፈጠር ጎደኞቼ ይደርሱልኛል	1	2	3	4	5	6	7
8.	ሰለ ችግሬ ከ ቤተሰቦቼ ጋር አወራለው	1	2	3	4	5	6	7
9.	በምደሰትበት እና በማዘንበት ጊዜ የማጋራት/የማጋራው ጎደኛ አለኝ	1	2	3	4	5	6	7
10.	ሰለ ሰሜቴ የሚጨነቅ የኔ የምለው ሰው አለ	1	2	3	4	5	6	7

11.	ቤተሰቦቼ በህይወቴ በምወሰነው ውሳኔ ላይ በፍቃደነት ይረዱኛል	1	2	3	4	5	6	7
12.	ሰለ ችግራ ከ ጎደኞቼ ጋር አወራለው	1	2	3	4	5	6	7

ጊዜዎን ሰጥተው ስለተሳተፉ አመሰግናለው።

## Research question (afaan Oromo version)

### Information sheet (Afaan Oromo Version)

Gafi afaan oromo

Addis Ababa university nursing fi dechisftu narsingi kuta barrumsa digiri lamaffa baratu kan tate qalkidan lammessa isa qo.acha jirtufi “ wa.e daiman kansari dhan qabamani chimina waliantota fi irrati umamu wantota wal qabatan Addis Ababa xuqure anbasa ispeshalist hospitalti” akka hirmatan kabajan isin qafana

Keyyata

Wa.e qo.ana ini guddan “ wa.e daiman kansari dhan qabamani chimina waliantota fi irrati umamu wantota wal qabatan Addis Ababa xuqure anbasa ispeshalist hospitalti” qo.anarati hirmachus ta.e qo.anara yore barbadan bahu ni dandesu.

Gafi irrati hirmachuf gutuman gututi totuman kessan nigafatama.

Qo.ana kan irrati dhiyachu kessanif qama kessan irrati, xinsamu kessan irrati fi hawasuma kessani irrati humtu hin ummamu, gargas yoo barbadan hospital kanrra vakko tokko male ni fayyadamtu. Kanafu qo.an kan irrat hirmachu yoo barbadan fulla wali gala irrat mallatto kessan malatessa.

Qo.an irrat hirmachudhaf kan isinirra egamu?

Qo.an irrat akkuma hirmatn gafiwan debisudhan nu gargara

Rakko isin muddatu fi isiniti tolu dhisu?

Gafiwan kan irrati hirmachudhan wanti issin muddatu ta.e wanti dhiphisu hin jiru

Qabxxi qo.anritti maltu nama mudachu danda.a?

Qabxxin qo.ana kan ta.u digiri lamafadhan kilinik onkoloj wan ta.e qo.ana kun yero bahu maluman kessan hin gafatamu

Hirmachu kessanif wanti isin fayyadamton?

Qo.an kan irratti hirmachu kessani wanti isinf kanfalamus ta.e fayidan isnif kennamu hin jiru

Dhokasa qabu

Gafiwan yerro qutan maqa kessani fi maluma kessene hin himina, hirmatotan kan kenamu qo.an qafat nu gargara

Gafi yoo qabatan

Bilbila 0922117261 yokin

Email [kal12kebu@gmail.com](mailto:kal12kebu@gmail.com)

Consent form( afaan oromo version)

Fula woli galtuma

Fulli kun wali galtuma yoo ta.u “ wa.e daiman kansari dhan qabamani chimina waliantota fi irrati umamu wantota wal qabatan Addis Ababa xuquire anbasa ispeshalist hospitalti”. Kan tasifamu qo.an kanarra warra kirmatan kan qo.ophaedha. kabajamtota iddo duwa araban gadi dubi sadhan ykn dhagechudhan irrati mallatessa

Nan tasisa\_\_\_\_\_

Hin tasisu\_\_\_\_\_

Guyya \_\_\_\_\_

## Lakkofsa tokko.hawasama fi economomwan irrati gaffiwan

Lakkofsa tokko irrati gaffiwan dhiyyatan debbi kenna:

lakkofa	Wa.e wal.anchisa	
1	Sala wal.anchisa	3. dhubara <input type="checkbox"/>
		4. dhira <input type="checkbox"/>
2	Umuri wal.anchisa ?	_____
3	Sadarka barumsa ?	5. kan hin barane <input type="checkbox"/>
		6. sadarka dura kan xumure <input type="checkbox"/>
		7. sadarka lammata kan xumure <input type="checkbox"/>
		8. sadarka lammata ol kan xumure <input type="checkbox"/>
4	Wa.e ga.ila isa ?	5. kan hin fudhin <input type="checkbox"/>
		6. kan fudhe <input type="checkbox"/>
		7. kan hike <input type="checkbox"/>
		8. hirriyan gaila kan du.e <input type="checkbox"/>
5	Wa.e gali isa ?	_____ jia.an/waggadhan
6	Wa.e hojji isa ?	4. gifti mana <input type="checkbox"/>
		5. hojjeta motuma <input type="checkbox"/>
		6. hojjieta dhunfa <input type="checkbox"/>
		7. Qotte bula <input type="checkbox"/>
		8. Hojjeta guyya <input type="checkbox"/>

		9. daldal <input type="checkbox"/>
		10. barata/tu <input type="checkbox"/>
7	Da.ima kansaridhan qabam wajjin walitti dhufenya qaban? ?	5. hadha/abba <input type="checkbox"/>
		6. obboleti ykn obbolessa <input type="checkbox"/>
		7. firra <input type="checkbox"/>
		8. akao <input type="checkbox"/>
		9. Kan birra <input type="checkbox"/>
8	Yero dhukubsafan itti waldhame?	_____
9	Wal.antotan kan bekame dhukuba ni qabadhu ?	3. eyen <input type="checkbox"/>
		4. lakki <input type="checkbox"/>
10	Debbin kessan eyen yoo ta.e dhukkuba akkamt qabadhu ?	_____

**Lakkofsa lamma: wa.e dhukubsata**

Lakkofsa lamma jalati kan dhiyatan fillano ta.an kessa debi kessan filadha::

lakkofsa	Wa.e dhukubsata	
1	Sala daimicha	3. dhubara <input type="checkbox"/>
		4. dhira <input type="checkbox"/>
2	Ummuri daimicha	_____
<b>Kardi dhukubsata irra kan fudhatame</b>		

3	Bifa kansaricha	_____
4	Sadarka kansaricha	5. sadarka tokko <input type="checkbox"/>
		6. sadarka lamma <input type="checkbox"/>
		7. sadarka sadi <input type="checkbox"/>
		8. sadarka afur <input type="checkbox"/>
5	Bifa wal.adhuma	4. kemo teraphi <input type="checkbox"/>
		5. baqaqsudha suphu <input type="checkbox"/>
		6. radiu teraphi <input type="checkbox"/>
6	Waladhan fudhate	4. tokko <input type="checkbox"/>
		5. lamma <input type="checkbox"/>
		6. sadi <input type="checkbox"/>

**Lakkofsa 3: mati wa.e dhukuba kansari daima irrati bekumsa qaban**

Lakkofsa sadi jalati kan dhiyatan filano kessa filachudhan dabis

lakkofsa	Mati dhukuba kansari irrati bekumsaisan qaban	
	Dukuda kansari daima fiddu kan danda.an ni bektu?	1 nan beka <input type="checkbox"/> 2 hin beku <input type="checkbox"/>
	Dhukkubni kansari daiman yalamu irrati dabalau dandau ni bektu ?	1 nan beka <input type="checkbox"/> 2 hin beku <input type="checkbox"/>

#### **lakkofsa 4:**

lakkofsa 4 irrati gafiwan dhiyatanif filano kessa kan jiru filadha::

<b>lakkofsa</b>		<b>Eyen yero</b>	<b>Eyen darbe darbe</b>	<b>laki</b>
<b>a</b>		<b>huduma</b>		
14.	Iriba isin jala hirisa (fakenaf,daimni isin jala dhukusate yero rafu iriba kessa ni dudubata, iriba kessa ni socha.a)			
15.	Ademsa dhukusachisu kessati wanta isni hintole ni jira(fakenaf kununsudhaf yero haye isinti fudhata yoki hawasuma kessan irrati yeron isin hirisa)			
16.	Ademsa dhukusachisu irrati qama irrati vokkan umu ni jira(fakenaf dhukusata iddo tessama irra kassu, tesisu human yoking ilalcha ni barbachisa)			
17.	Ademsa dhukusachisu kessati gocha guyya guyya tasisftan isin jala hanqisa(fakkenyaf boqona akka hin fudhane iddowan gara gara akka hin ilale is tasisa)			
18.	Ademsa dhukusachisu kessati mati kessan irrati jijirama fide(fekenaf dhukubsaticha gargarub gochota guyya guyya kessani akka hin gabane isin tasiera)			
19.	Ademsa dhukusachisu irrati karrora dhunfa kessani irrati jijirama umme(fekenaf hojji akka addan kutan, boqqona akka hin argane yoking mati			

	akka hin gafane isin godhera)			
20.	Dhukubsata yero dhibamsiffniti dabalata wanti gotan ni jira(fekenanf mati kan biros na barbadu)			
21.	Ademsa dhukusachisu irrati fedhi kessan irrati jijirama fidde jira (fekenaf yeron dhibamsisu sana baye.en dhiphadha)			
22.	Yero tokko amali dai.ma baye rakkisadha(fekenaf humnuma isa/ishi, yoking immo wanta jedhu tole naf hin jedhu/hin jettu)			
23.	Daima kiyyarti jijirammi ni jirra(fekenaf dabasan buqa.u)			
24.	Ademsa dhukusachisu kessati hojji kessan irrati jijirama fidde(fekenaf dhibamsisudha jecha eyama iddo hojjiti fudhatani)			
25.	Ademsa dhukusachisu kessati rakkon malaqa isin muddate			
26.	Ademsa dhukusachisu kessati yero hunda na yachisa(fekenaf wa.en nama daima bayen dhipadha akkamit akkan dhibamsisu nan dhipisa)			

Lakkofsa 5 dhukubsatani hawasa kessati degarsi isan argatan:

Gafi irrati yoo bsye baye waligalu didan lakkofsa 1 irrati nanessa

Gafi irrati yoo bsye waligalu didan lakkofsa 2 irrati nanessa

Gafi kan irrati gababumati waligalu didan lakkofsa 3 irrati nanessa

Gafi irrati gonkuma dabi yoo qabachu batan 4 irrati nanessa

Gafi irrati gababumati yoo waligaltan lakkofsa 5 irrati nanessa

Gafi irrati baye yoo waligaltan lakkofsa 6 irrati nanessa

Gafi irrati baye baye yoo waligaltan lakkofsa 7 irrati nanessa

**lakkofsa 5:**

Lakkofsa		1	2	3	4	5	6	7
13.	Nama kiyya kanan jedhu nan qaba yero huna gargarsa yoon barbadu kan na wajjin ta.u/tatu	1	2	3	4	5	6	7
14.	Nama kiyya kanan jedhu nan qaba yero gamaduf yero gaddu kana itti himu	1	2	3	4	5	6	7
15.	Matin koo na gargare	1	2	3	4	5	6	7
16.	Matin koo wanta na bar bachisu gargara morli fi gargarasa adda naf tasisa	1	2	3	4	5	6	7
17.	Sababa nati tolu kiyyaf nama kiyya kanan jedhu nan qaba	1	2	3	4	5	6	7
18.	Hiriyani kiyya gargarsa naf tasisu	1	2	3	4	5	6	7
19.	Rakko tokko yoo umamu hiriyoni koo naf qa.qabu	1	2	3	4	5	6	7
20.	Wa.e rakko koti mati koo walin nanhasa.a	1	2	3	4	5	6	7

21.	Yeron gamadu fi yero gaduti hirriyan wali hasa.u nan qaba	1	2	3	4	5	6	7
22.	Wa.e fadhi kiyya kan naf rakketu nama kiyya kanan jedhu nan qaba	1	2	3	4	5	6	7
23.	Matin kiyya jirenya kiyya kessatti murten murtesu irratti gama chudhan na gargaru	1	2	3	4	5	6	7
24.	Wa.e rakko kiyya hirri yota kiyya walin nan hasa.a	1	2	3	4	5	6	7

**APPROVAL SHEET**  
**ADDIS ABABA UNIVERSITY**  
**COLLEGE OF HEALTH SCIENCES SCHOOL OF NURSING AND**  
**MIDWIFERY DEPARTMENT OF NURSING**

I, the undersigned MSc student, declare that I have submitted my original work on a title Caregiver strain and associated factors among family caregivers of children with cancer attending Tikur Anbessa specialized hospital in 2020/2012 for the examination.

**Submitted by:**

Name of student	Signature	Date

This paper work has been submitted for examination with my approval as an advisor.

**Approved by:**

1. _____		
Name of Major Advisor	Signature	Date

2. _____		
Name of Co-Advisor	Signature	Date

APPROVAL BY THE BOARD OF EXAMINATION

This paper by Kalkidan Lemessa is accepted in its present form by the board of examiners as satisfying thesis requirement for the degree of masters in oncology nurse.

INTERNAL EXAMINER:

_____	_____	_____	_____
NAME	RANK	SIGNATURE	DATE

RESEARCH ADVISORS:

_____	_____	_____	_____
NAME	RANK	SIGNATURE	DATE

_____	_____	_____	_____
NAME	RANK	SIGNATURE	DATE

DEPARTMENT HEAD

_____	_____	_____	_____
NAME	RANK	SIGNATURE	