ADDIS ABABA UNIVERSITY

COLLEGE OF HEALT SCIENCE

SCHOOL OF NURSING AND MIDWFERY

POSTGRAGUATE SUDY

RESILIENCE AND ASSOCIATED FACTORS AMONG MOTHERS OF CHILDREN WITH CONGENITAL HEART DISEASES IN SELECTED HOSPITALS IN ADDIS ABABA, ETHIOPIA 2023.

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A THESIS SUBMITTED TO SCHOOL OF GRADUATE STUDIES OF ADDIS ABABA UNIVERSITY IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTERS OF SCIENCE IN CARDIOVASCULAR NURSING IN SCHOOL OF NURSING AND MIDWIFERY

Addis Ababa Ethiopia

JUNE 2023

ADDIS ABABA UNIVERSITY

COLLEGE OF HEALTH SCIENCES

DEPARTMENT OF NURSING AND MIDWIFERY

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Duration of study	**Data Collection Period from February 27 to April 27**
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This thesis by Tadesse Molla is accepted in its present form by the board of examiners as satisfying thesis requirement for the degree of masters in Cardiovascular Nursing

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Acknowledgement

I would like to thank Addis Ababa University for giving me this chance to do the thesis. Next, my deepest appreciation and gratitude would go to my advisors Mr. Tadesse B (**BSc, MSc, Ass. Professor**) and Sr. Sosina Workineh (**BScN, MCON**) for their unreserved constructive comments and guidance. Finally, I would also like to thank my classmates who support me in data collection and analysis for this thesis. I have great appreciation and thank for study participants.

Acronyms or Abbreviations

AOR----------Adjusted Odd Ratio

APA----------American Psychological Association

CHD----------Congenital Heart Disease

CICU---------Cardiac Intensive Care Unite

ETB----------Ethiopian Birr

GC ----------Gregorian calendar

ICU ----------Intensive Care Unite

IRB----------Institutional Review Board

LOT----------Life Orientation Test

MOH----------Minster of Health

MSPSS---- ---Multidimensional Scale of Perceived Social Support

OPD----------Out Patient Department

OR ----------Odd Ratio

RS----------Resilience Scale

SD ----------Standard Deviation

SPHMMC---Saint Paul's Hospital Millennium Medical College

TASH--------Tikur Anbessa Specialized Hospital

USA ---------United States of America

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ABSTRACT

Introduction: Congenital heart defect (CHD) is a problem that born with birth of child that affects the mother's mental and physical health and also their caring and supportive functions. Resilience is defined as the capacity to deal with and recover from adversity and is one of the most important elements affecting health. It prevents negative consequences of facing difficulties and life stresses, improves the quality of life, and promotes satisfaction and mental and social health.

Objectives: To determine resilience and associated factors among mothers of children with congenital heart disease.

Methodology: A total of **272** mothers were participated in the cross-sectional study using a systematic sampling method. The study was taken place from February 27 to April 27 at Tikur Anbessa Specialized Hospital, St. Paul's Hospital Millennium Medical College and Yekatit12 Hospital Medical College Cardiac clinic. The data was collected using kobo collector software then exported and analyzed by SPSS version 25. For Descriptive presentation frequency and percentage were used and simple linear regression and multiple linear regression was conducted and the association in which $P<0.05$ was considered as significant.

Result: The total 272 mothers were participated in the study. The mean age of the mothers and children was 33.71±5.72 and 4.26±2.74 in years, respectively. Age of child associated with resilience by (B=1.4, 95%CI: 0.68-2.18, P<0.001). More than 2/3rd of the participants 222(81.6%) were married and live in urban areas 190(69.9%). The regression analysis showed that social support in the dimension of friend support (p=0.011, B=0.09) and significant others (P=0.014, B=0.08) and optimism (P<0.001, B=0.47) were associated with resilience in mothers of children with CHD.

Conclusion: The results showed that the level of resilience in most of mothers was moderate. Two variables, social support and mothers' optimism, were associated with mothers' resilience. Investigating stressful problems and improving the resilience of mothers important to improve the quality-of-life mothers of children with CHD and their families.

Key terms: Resilience, Social support, Heart defect, optimism

Introduction

Congenital heart defect (CHD) is a problem that born with a child. It is leading congenital abnormalities, that the occurrence is increasing in constant manner. These problem accounts about one-third of all the major congenital defects. Community studies on the prevalence of CHD worldwide was found to 8 - 12% live births and constant throughout the world(1). And study done in urban America describes the prevalence of CHD occurring in approximately 3–9 of every 1,000 live births(2).The extent in developing societies is high. CHD show continuous elevation from 1970 to 2017, to a level of 9.4/1000(3). But the time trend and the progress of CHD up to now is unknown.

In Africa, approximately 10/1000 children have significant CHD. But, they have almost no access to any treatment. Around 1/2 of cases died within a few years of birth(4).

In Ethiopia, study conducted at Hawassa University show that congenital heart defects (CHD) prevalence in Ethiopia is around 7.9/1000 live births(4).

CHD is chronic disease that described by anatomical as well as physiological problems in the cardiovascular system present during birth(5).Children with CHD exposed to physical and neurological developmental problems, which aggravates family anxiety, and compromises happiness of family. Mostly mothers are obligated to give care for children due to these reason different studies showed that mothers' level of stress was high(6).

Motherhood is a blessing, a gift, a relationship that never ends and a love that never dies. It is passing a multiple challenge life situations starting from conception to give birth. which is unsabstitution life condition. The children are the source of happiness, worthiness, security for their parents. Being a mother is a love that grows continually and a connection that is unmatched from any other relationship. It's being terrified that you can't prevent pain, injustice, heartbreak and at times even death. It's laughing by child activity that may not even funny, but the way they act makes it's hilarious. It's being strong for them when you are weak. It's smiling when you want to cry, and crying when you're smiling with pride(7). There for losing their children happiness by chronic disease is touching for mothers.

Mothers of children with chronic diseases expressed the uncertainty of their children's future. Mothers of children with CHD are reported higher levels of uncertainty. That the mothers with CHD children had problems not with the severity of disease but with uncertainty about the future life, the cure plan and the outcome of disease(8). It starts at the beginning of congenital cardiac defect confirmation to hospital admission and surgical intervention time, it may last more than several times(9). These stress full responsibility of caring child with cardiac defect become cause of family health problem. Due to the high concern of mother for entire family, the idea of resilience is crucial(10).

Resilience is explained in the way that the power of facing and regain from unpleasant situations(11). Which is the most significant factor converting health problems and the outcome is adapting a boring life event. It protects bad outcomes from engaging unpleasant life conditions and psychological problems. In general it increases safety of family in different situations like healthy condition and living contentment(12). Resilience is a condition which relates in circumstance of life, influenced by individual, group, and community events among mothers with cardiac defected children(13).

This study planned to assess resilience and determinants such as personal profiles, social support and optimism of mothers with cardiac defect children, and also personal and diseases character of children.

Statement of the problem

As studies show that from mothers who had children with different chronic diseases, 56.7% were in stable physical and spiritual health status(14). According to mothers of congenital heart disease children, the above number was also lower. When parents' health disturbed, they are exposed to different psychological health instability like bipolar disorder, unable to communicate with their children and that affects physical and mental health. And also affects emotional help and giving care role of mothers and parents(12) similarly the way of child's health management and progress(15). Parents continue to have concerns about how their child's illness and treatment affect their child's daily functioning, development, and overall wellbeing(16). These mothers need support to develop positive adaptation.

Families of congenital heart disease children have unpredictable future life and health condition(17). Unreliability of the problem can aggravate emotional stress and compromise expected in the future. For developing resilience level, Social support has great significance to increase health and family maintenance(18). As a study indicated, internal characters of a person affects the resilience level more than socioeconomical status which are external influences of person's resilience(19). In different way, Even though social support is important for decreasing psychological problems and outcome of family stress among mothers of congenital heart diseases children(20), the influence social support for resilience of different mothers who are giving care and family stress is unknown. Mostly from duplicated factors like long period for giving care, expensive cost of treatment to the parents, can decrease their perceived social support.

Based on this topic, no study done on resilience among mothers of cardiac patient children and associated determinants in Ethiopia. More researches were done in developed countries on mothers' resilience. Therefore, assessing resilience and the determinants among parents with congenital heart defect in our country was necessary for filling gaps to improve resilience level.

Significance of the study

The study would be used; - **for health institutions** to develop health education programs for parents specially mothers who give care for congenital defect children.

For health care professionals to give societal awareness about the importance of social support for parents with chronic ill children. Developing relation with these clients for insuring to increase resilience.

For policy makers to stablish cardiac association that can give more information about resilience, social support, positive optimistic and helping function of mothers.

For future researchers for identifying more causes which affect the family resilience level. To incorporate large study area like out of hospital settings.

Literature Review

Introduction

Congenital heart defect (CHD) is a serious cause of high morbidity and mortality. It is significant structural and functional heart disease present at birth(21). Mothers dream of giving birth to the healthy child, although the birth of a child with congenital heart disease challenges and clouds their dreams. When a child is born with congenital anomalies, the unexpected and permanent character of this event generally increases a mother's risk to stressors. Childhood illnesses rudely shatter the sensibilities and decrease mother's resilience level(1).

Resilience is defined conceptually by McCubbin and McCubbin (1993) by including all aspects of positive adaptation process to a traumatic life event(13). Different scientists studied resilience to determine its impact on health promotion and overall well-being(11).The Merriam-Webster dictionary (2009) defined resilience: as it is the ability of a tensioned body recover to its size and shape after deformation caused by compressive stress and an ability to adjust easily to change(22).

American Psychological Association defined resilience as "the ability to adapt to stress and adversity". Resilience is one of the concepts mostly linked to social support and satisfaction with life(23). Being resilient is being optimism, self- enhancement, hardiness, and developing coping experiences(24).Resilience as a concept has been described as having a positive impact on coping and adaptation when faced with difficult life situations(13)

Resilience

The study conducted in Iran showed that more than half of participants were moderate level of resilience. From the participants, low resilience accounts 14.7%, moderate resilience 66.2% and high resilience were accounted19.1% (25). Similar study done in China, according to 15DRS-II the mean resilience score was 3.75 with standard deviation of 0.61 95% confidence interval of 1.89 to 4.89, 1 and 5 indicated the lowest and the highest point

in the resilience level respectively(26). Another study done in China on resilience of caregivers of children with congenital pseudarthrosis of the tibia show that mean resilience score of caregivers was 151.79 with standard deviation of 30.79, the lowest and highest scores were 20 and 231 respectively(27).

A study conducted in Iran, showed about half of parents of persons with various mental abnormalities scored moderate resilience(28). The study done in China on cancer patients family level of resilience indicated that good resilience and persistence(29). And Also the other research conducted on the resilience of caregivers of patients with chronic neurological disorders like thalassemia(30) as well as cerebral palsy(9) were showed high resilience level.

Associated Factors of Resilience

Social support factors

Social support is the perception and actuality that one is supported or assisted by others, that is part of a supportive social network(31). It has high effect on individual's present health status as well as essential for future life condition, that relatively high cause for several health problems even for death than other confirmed causes of health in the society(32).

Social support increases the level of resilience among parents of patients who have chronic illness and congenital defected heart(33). The study done on parents' resilience, result of social support based on family, friend and significant others were ($r=0.29$ $P=0.001$, $r=0.36$ $P<0.001$, $r=0.61$ $P<0.001$) respectively, that associated with parents' resilience. In similar variable, regression analysis of social support associated with the resilience of mothers with p-value less than 0.001 and unstandardized beta is equal to 2.20. One unit increasing in the social support that increase resilience level of caregivers for 2.2 units averagely(25).

The study done in Brazil on Social Support and correlation of social support to depression, 74.4% was self-perceived indicated fair, good social support account 55% and confirmed as major depression were 27.8% disorder. From the variables, depressed health as well as very low self-perceived health, Social Support measure medians have been lower compared to other variables, to give unsatisfactory social support. Satisfactory Social Support had OR =

2.32 (34). Another study done in India on level of social support perceived by the parents of children with intellectually disabled (37.2%) perceived a high level of social support, 34.5% perceived a moderate level of social support, and 28.3% perceived a low level of social support(35), that showed low social support perception than the above one.

Positive optimism

Optimism is a self- positive feeling and better adjustment which described by a greater self-esteem(36). A qualitative study suggested that optimism was associated with a lower risk of cardiovascular problems and any cause of mortality(37).

The study done in Iran on resilience of mothers showed that optimism (r=0.27, P=0.006). The regression result of participants optimism record was P=0.003 unstandardized beta B=0.76 that correlates to caregivers' resilience level. caregivers' optimism level also correlated to their resilience level maximizing in a unit of optimism maximizes resilience of caregivers by 0.76 unit. Different researches have confirmed effect of optimism on the resilience outcome(25)

Sociodemographic and Clinical Characteristics

The study don in united states of America shows that caregivers resilience result variety according to their income variation and their work differences. That is income less than $20,000 scored 0.45 below than income level of caregivers >$100,000 on resilience score of caregivers that indicated when economy status developed resilience of the family also developed(15).The same study on families of who had masters and above increased their level of resilience by 0.25units than secondary school holders.

Study done in China based on parents of children who had pseudarthrosis of the tibia shows that the most Caregivers were age from 31– 40 averages of 62.27% and from this, 30.34% which was the highest record, were farmers. The highest number of the parents' educational level were elementary school (37.20%). In average caregivers' monthly income was 1000–5000 yuan (54.09%)(27). When we see parents' resilience result, parents without work had 38.7% but who were on work accounted 40.3 percent. When income of the parents become good reversely the resilience level gets poor(27)

Study in Korea on CHD parenting stress was related to the children's age ($p < .01$) which is significant and education level ($p = .03$). Scheffé's test showed that the mothers of school age children have a higher level of parenting stress than mothers of infants, toddlers and preschoolers. Parenting stress was decreased in mothers with higher level of education. How- ever, it was not significantly related to the children's cardiac anomalies(38).

Through process families' exposure to different challenges during supporting congenital ill children, can develop resilience in the family. That means as family stay with problems for long time the resilience level also increased(39). As a study revealed that caregivers of ill children engaged several challenges like passing via triage as well as confirming specific disease and its grade, high risk management of the problem like surgery, decrease in mental and physical development of child, even up to termination of breath trained(40). Although, mothers of children that have been elected to cardiac surgery were revealed unsupported sense, unpredictive feeling, unhappiness, as well as tension starting from informed confirmed children's disease to their life(41). These conditions like facing many challenges encourage some mothers to become strong and develop high resilience(40).

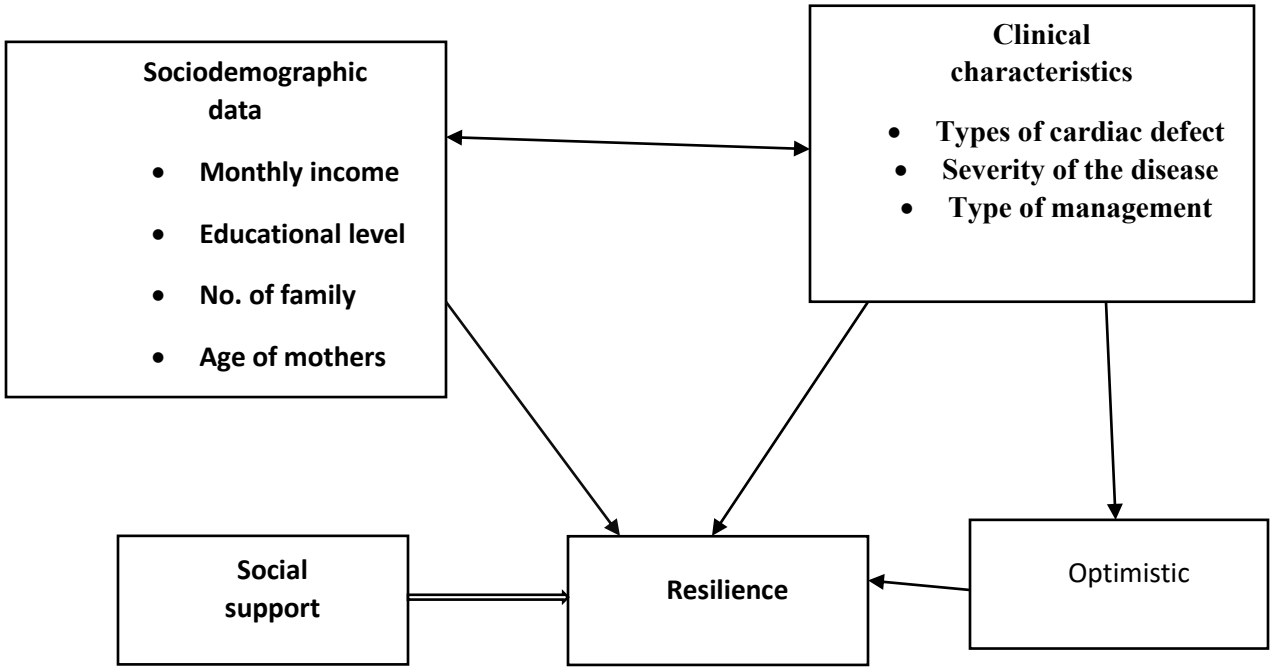

Figure1; the conceptual Frame-work for resilience and association factors among mothers with CHD in select Hospitals Addis Ababa, Ethiopia,2023 GC

(Source; this conceptual Frame-work formulated according to different literatures(13,34,36).

Objective of the study

General objective

- To assess resilience and associated factors among mothers of children with congenital heart diseases in selected hospitals in Addis Ababa Ethiopia 2023.

Specific objectives

- To determine resilience among mothers of CHD children.
- To identify determinants of resilient among mothers of CHD children

METHODS AND MATERIAL

Study Area and Period

TASH, SPHMMC and Yekatit 12 Hospital Medical College were areas where the research was done.

TASH, is a tertiary referral and teaching hospital in Addis Ababa, Ethiopia. It has more than 800 beds. Tikur Anbessa Hospital is the first public hospital in the country that provides cardiology specialist cardiac care to patients coming from different regions of the country. This hospital also gives referral services to individuals from all hospitals and health institutions from all regions of the country.

The Cardiology Division is staffed by Cardiologists and provide diagnostic and treatment services to all patients seen at the dedicated outpatient departments in addition to the hospital's medical wards, medical intensive care unit (ICU), cardiac intensive care unit (CICU) and other departments in the hospital. The referral outpatient department population of Cardiac clinics includes all patients seen at Tikur Anbessa hospital who were referred directly for a suspected cardiac disorder. These include patients requiring more definitive investigation or treatment of suspected or confirmed cardiovascular disease, who were seen initially at the general medical outpatient facilities, other outpatient departments at the hospital; and patients being initially admitted to the general medical or any other ward at Tikur Anbessa Hospital who need a cardiological consultation. It is also a training Centre for undergraduate and postgraduate medical students, dentists, nurses, midwives, pharmacists, medical laboratory technologists, radiology technologists, and others who solve the community health problems and the country at large(42). Total population, **600** children with CHD patients have monthly follow up in TASH.

St Paul Millennium Medical College (SPHMMC) is the second largest tertiary governmental Teaching Hospitals in Addis Ababa, Ethiopia. The hospital has a bed capacity of 350, of which 45 beds are allocated to medical wards and 14 beds for ICU. Among others, it has 8 medical regular outpatient departments (OPDs) for follow up patients working the whole weekdays and big adult medical emergency OPD providing care 7/24. The hospital provides

follow-up patients, emergency patients and referrals from other Hospitals in the country and health centers in the catchment area(43). Total population, **50** children with CHD patients have monthly follow up in SPHMMC.

Yekatit12 Hospital Medical College is found in Addis Ababa the capital city of Ethiopia and it is supposed to serve more than 5 million patients in the catchment area. The hospital has six major departments. And 200 to 250 patients were being served per day through six units at the OPD(44). In this hospital, pediatric cardiac clinic, gives services only 4 days in a month due to start service recently. Therefore, patient flow also very low. Total population, **40** CHD pediatric patients per month in Yekatit12 Hospital Medical College.

The study was conducted in the pediatric outpatient departments of these three Hospitals on all mothers of children with congenital cardiovascular disease from **February 27 to April 27 2023.**

Study Design

The research design was institutional cross-sectional study.

Description of the population

Source population

All mothers of children with congenital heart disease on pediatric outpatient department who were being evaluated and treated in cardiac units were considered as a source population.

Study population

Study population was randomly selected mothers who have heart disease children on follow up and fulfilling the inclusion criteria of three hospitals (TASH, SPHMMC and Yekatit12 medical college) during time of the study.

Eligibility Criteria

Inclusion Criteria

- ✓ Mothers who have congenital heart defect children below six years. Because they need more support from mothers.
- ✓ Being biological mother of the patient.
- ✓ The cardiac problem of the child should be confirmed by a cardiologist.
- ✓ Mothers must be knowing their children illness.
- ✓ Mothers who were present on follow up.

Exclusion criteria

- ✓ Mothers who were not present during their children follow up.
- ✓ Mothers who have known mental and physical health problems from their medical history were not included.

Sampling method

Sample size determination

For this study the total population was **690**. Since the population was less than 10,000, sample size for this particular study determined by single population proportion formula.

Assumptions for sample size determination: - A 95% confidence level, margin of error (0.05), since the research was not done in Ethiopia, p-value considered as 50%.

(p= 50%) was substituted in the following single population proportion formula.

$$n = \frac{(Z\alpha/2)2\ p\ (1-p)}{d^2}$$

$$= \frac{(1.96)2\ (0.5)\ (0.5)}{(0.05)2} = 384$$

Sample size for finite population

$$= 384/\ (1+(384-1)/690) = 247$$

Where n= required sample size

Z= 1.96, at α =0.05 with 95% level of confidence, indicates critical value of normal distribution

P= (Proportion of resilience 50%)

d= 0.05 (5% margin of error); and added non-respondent rate of 10%.

Final sample size **272**, this sample size was used to determine the resilience of the given population.

Sampling Technique

From 12 governmental hospitals, three hospitals were selected due to patient flow and having pediatric cardiac clinics. Study participants were selected using a systematic random sampling technique from each hospital. First, from monthly appointed children with CHD follow up data in those hospitals were obtained from the head of nurses of pediatric cardiac clinics and the respective proportions were calculated for each hospital by using stratified sampling technique (sample size were divided by total numbers of cases in those three hospitals and multiplied by number of cases in each hospital). The participants who met inclusion criteria was included until the desired sample size achieved.

Sampling technique

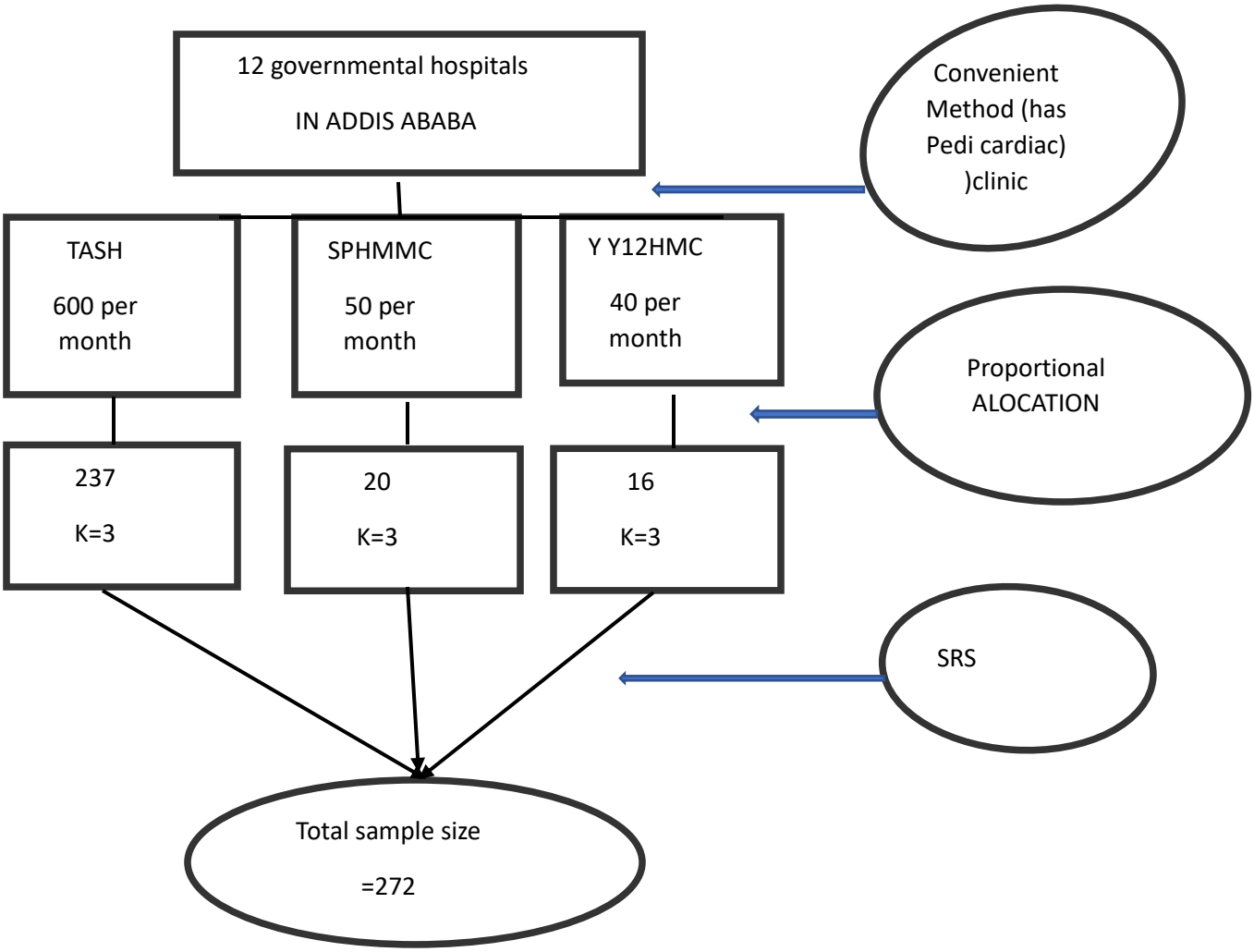

Figure2; stratified random sampling, sample proportion for each hospital.

Study Variables

Dependent variable

- Resilience

Independent variables

- Socio-demographic characteristics (age, residence area, occupation, marital status, monthly income, education level, and type of health insurance)
- Characteristics of the children (Types of cardiac defect, Severity of the disease, Type of management)
- Social support
- Positive optimism

Operational Definitions

Based on Wagnild and Young Resilience Scale (RS)(26).

High resilience: Participants who scores (106-125)

Moderate resilience: Participants who scores (86- 105)

Low resilience: Participants who scores low (60-85)

Very low resilience: Participants who scores (<60)

Life Orientation Test (LOT)(45)

optimistic orientation: scores above 12

pessimistic orientation: scores below 12

Based on MSPSS social support (46)

Better social support; scores 48 - 60

Good social support; scores 24 - 48

Poor social support; scores 12 – 24

The above operational definitions were not revised after pre-test result. Because the participants had not daut about the definitions.

Data Collection Tool

Data was collected using the following four parts of questionnaires:

Part 1. Used to evaluate demographic characteristics of the participants such as age of mother and child, occupational status of mother, marital status, total number of children, disease type, birth order of the child, education status of mother, repetition of admission, insurance type and disease history the remaining family member(25).

Part 2. Used to measure resilience level using Resilience Scale (RS) of Wagnild and Young that test the resilience develop as an individual characteristic by Likert scale having five points, the lowest point represents1 and the highest point 5. This includes two variables, first personal competence has seventeen items and second acceptance of self and life has eight items, the total score of these 25 items were 25 minimum and 125 maximum score(26).

Part 3. This was based on MSPSS that has 3 subscales such as family support, friends support and support of significant others. It has 12 items, 4 items for family support, 4 items for friend support and the remaining 4 items represents significant others. This is five point Likert scale represents score 1 strongly disagree, 2 disagree, 3 neutral, 4 agree and score 5 strongly agree(47). Its total value records from 12 to 60 points, in general higher ranks reflect higher perceived social support(48). This multidimensional scale of perceived social support were translated in several languages as well as approved for validity and reliability(49). The Persian version of this tool was used for different researches(50). Psychometric research showed that the 3-factor model of Persian version Cronbach's alpha was 0.84 for the total item and for the 3 factors between 0.85- 0.93. In this study, the

reliability of whole item was 0.92 and its reliability was between 0.81-0.89 in sub-scales(47).

Part 4. To evaluate optimistic and pessimistic orientation level by using Life Orientation Test (LOT) Scheier et al. in 1994 was developing this test which has 10 items of Likert scale with five points from 0 to 4. Item 2, 5, 6 and 8 are not ranked. Therefor total score ranges from 0 to 24, the rank higher than 12 shows optimistic character and score under 12 shows pessimistic character(51). It was reviewed by Kajbaf et al. (2006) with 0.74 reliability and the repeatability value of 0.87 were acceptable.

Data Quality Assurance

The resilience questionnaires of this study were translated from English to Amharic then the Amharic version also again translated to English language by cardiovascular professionals for steadiness and similarity of meaning. The Amharic version was pre-tested for 5% of the sample in Zewditu Hospital. Modifications for the items were not made due to positive feedback obtained from the participants.

Each questionnaire was checked after the data collection for completeness, missed values. Data collectors (BSc nurses) was trained for one day. During data collection, supervision was done closely. Before data exporting from kobo toolbox, every questionnaire was checked for completeness.

Data Analysis

Data was entered and exported to the SPSS version of 25. Data has been cleaned and explored for outliers, missed values and any inconsistencies before analysis.

Simple linear and Multiple linear regression analysis was applied on the dependent and independent variables. Therefore, resilience of participants was analyzed against the other variables social support and positive optimism, clinical characteristics.

Simple linear regression with p-value less than or equal to 0.25 was entered into multiple regression analysis. And for those whose $p<0.05$ was depicted as significant association and were reported.

Ethical consideration

Approval for the general confidential data was gained from the Ethics Review Board of the School of nursing and midwifery; College of Health Sciences, Addis Ababa University, and from the Institutional Review Board (IRB) of TASH, SPHMMC and Yekatit12 Hospital Medical College. I had obtained written consent from randomly selected participants prior to administration of questionnaire.

Dissemination plan

The result of this will be submitted to Addis Ababa University College of Health science, School of nursing and midwifery and it will be disseminated to other concerned bodies like, Minster of Health (MOH), Ethiopian heart association and policy makers. Finally, manuscript will be submitted to scientific journals for possible publication.

Result

Socio-demographic data of the study participants

1. Demographic characteristics of mothers of children with congenital heart diseases

Table 1. resilience score of mothers/children based on different characters

variables	F (%)	Total resilience score Mean ± SD	P Value
Residency			0.000
urban	190(69.9)	98.38±11.40	
rural	82(30.1)	79.46±15.65	
Occupation			0.000
employed	81(29.8)	101.89±11.10	
Unemployed	191(70.2)	98.06±11.56	
Educational level			0.000
Under secondary school	73(26.8)	83.00±13.89	
Above secondary school	199(73.2)	96.90±13.78	
Marital status			0.000
married	222(81.6)	93.56±14.37	
unmarried	50(18.4)	92.30±16.39	
Number of children			0.000
Up to two	57(21.0)	89.00±17.40	
Above two	215(79.0)	98.37±13.23	
Child birth order			0.015
First child	71(26.1)	90.77±16.43	
Not first child	201(73.9)	96.23±13.72	
Types of insurance			0.000
heath insurance	161(59.2)	87.41±15.50	
Self	53(40.8)	101.50±10.27	

History of the other family members			0.706
no record	265(97.4)	92.62±15.57	
1 record	7(2.6)	94.86±11.65	

*#With out work, above secondary school, health insurance atrial septal defect was showed as significant *one-way ANOVA*

From total 272 mothers, more than 2/3rd of the participants was married 222(81.6%) and live in urban areas 190(69.9%). Most of the participants were unemployed 191(70.2%) and above secondary school 199(73.2%). The rest of participant profiles has presented within the Table 1.

2. Clinical condition for children

Table 2. multiple regression analysis on resilience of mothers related to clinical condition of child

Model		Unstandardized		Standardized	t	Sig.	95.0% CI for B	
		B	Std. Error	Beta			Lower B	Upper B
1	(Constant)	84.792	3.124		27.14	0.000	78.641	90.943
	Age of child	1.433	.381	.253	3.764	0.000	.683	2.182
	Type of disease	-.039	.389	-.006	-.099	0.921	-.804	.727
	Frequency of hospitalization	1.578	2.531	.042	.623	0.533	-3.406	6.562
Dependent Variable: resilience mean score								

The result showed that age of child had association with resilience of mothers at (B=1.4, 95%CI: 0.68-2.18, P<0.0001). When ages of child increases in a year, the resilience of the mother increases by 1.4 units. While types of diseases and frequency of hospitalization had no association with resilience of mothers of children with CHD (Table 2).

Table 3. Mean score of resilience with its dimensions among mothers with CHD children

Item	Frequency	mean and SD	lower	upper
Resilience				
low	81(29.8)	72.58±10.139	45	58
moderate	134(49.2)	97.56±5.259	59	91
high	57(21.0)	109.75±2.837	92	117
Total	272	92.68±15.474	45	117

One way ANOVA; t-test

The mean and standard deviation of resilience level among mothers was 92.68±15.47 (Table 3). From the participants, low resilience score was 29.8%, moderate resilience score was 49.3%, and high resilience score was 21%. T-test and one way ANOVA test were used to analysis corelate resilience mean ranks with participant profiles and clinical conditions of children independently.

Table 4: Associated factors of resilience related to characteristics of mothers/children based on analysis of simple linear regression

Variable	Mean and SD	Ranks resilience	p-value
Monthly income	5755.89± 3196.90	0.000	0.000
Age of mothers	33.71±5.72	0.029	0.000
Age of child	4.26±2.74	0.062	0.000
Family support	11.83± 5.18	0.017	0.551
Friend support	8.56±4.09	0.149	0.000
Significant others' support	16.14±4.46	0.105	0.002
Tota social support	36.55±8.91	0.064	0.000

**ANOVA; Pearson correlation; *t-test

The total 272 mothers were participated in the study. The mean age of the mothers was 33.71 with standard deviation of 5.72 and the mean age of children was 4.26 with standard deviation of 2.74 in years. Age of child and age of mother associated with resilience by B=0.06, $P < 0.001$ and $B = 0.03$, $P < 0.001$ respectively (Table 4).

Table 5. the multiple regression analysis on dependent variable of resilience

Model		Unstandardized		Standardized	T	Sig.
		B	Std. Error	Beta		
1	Constant	3.057	.149		20.582	.000
	Family support	-.026	.027	-.055	-.983	.326
	Friend support	.087	.034	.144	2.554	.011
	Significant others	.077	.031	.138	2.479	.014
	Optimistic	.468	.070	.379	6.662	.000

Optimism of the participant ($r = 0.43$, $P < 0.001$) and the three-dimension social support of the participants ($r = 0.03$ $P = 0.55$, $r = 0.24$ $P < 0.001$, $r = 0.18$ $P = 0.002$), that was associated with resilience significantly except family support, Table 3. Then selected and imported in regression model. No need of entering the score of participants' social support ($r = 0.23$, $P < 0.001$) in the regression model due to the occurrence of a co-linearity effect. From the regression analysis result two variables of social support in perspective of friend support ($p = 0.011$, $B = 0.09$) and significant others ($P = 0.014$, $B = 0.08$) as well as according to participants optimism score ($P < 0.001$, $B = 0.47$) have been correlated to resilience of participants of congenital heart problems child. Increasing one unit by friends support increases resilience level by 0.09 units, increasing significant others support in a unit that increases the level of resilience with 0.08 units and increasing optimism level in a unit, that increases resilience level by 0.47units (Table 5).

Discussion

From this study resilience scores indicated, most of participants had moderate resilience level. From perspective of social support, friend' support and significant others and also optimism the participants, have been associated significantly with resilience. Nearly half of the mothers had moderate resilience but the high resilience level accounts lower than other level of resilience. Study done on parents of mental disorder patients show that half of them were moderate resilience level(52). In the other way research conducted in Iran reported that above half of participants were moderate resilience level(25). And study on parents of children with cancer in China reported an average level of resilience and tenacity(19). Unlike our study, The research on thalassemia as well as cerebral palsy among chronic diseases indicated that high level of resilience of participants(30). The difference from this study could be due to different in sociodemographic background and different disease type of the children and different methodologies. The age of the child had association on mothers' resilience level. This result showed that when mothers exposed to the child's problems for long period, they become adapt and develop their resilience level from different challenges of child care over time, as we noticed during data collection. The result showed that living in urban area, being employed, being married and had high educational level increases mothers' resilience level. Unlike this, the study in Iran showed that mothers' resilience had no association the above variables(25). The difference might be due to different in economic and social development among these different societies.

Different studies accepted the significant association of social support with resilience of participants with different challenge situations. A study in Australia with qualitative study design, on resilience of parents of critical patients who were in ICU indicated the way that social support was one of the essential factors to increase parents resilience level(12). Results of present study indicated, there was significant correlations between social support by friends and significant others with parents' resilience. Increasing one unit in the social support, resilience level of the participants can increase in 0.08 units relatively. A strong relationship to help others can maximize confidence level of individuals in revers can minimize psychological disorders in participants, which has great value in increasing resilience. Social support also can promote

recovery of family from psychological tension. Again, can decrease stressful situations in to low damaging state. The finding in our study is relatively same to the findings of a study done in Iran which indicated mothers of children with CHD received support from significant others had high resilience(25). Similarly research conducted in our country, on family resilience of mothers with cancerous child, accepting friend's support gain encouraging result on resilience level(53). Mothers who have chronic ill child, will have affected the quality of life. Perceived social support was associated with chronic sick children family's life quality as indicated a study done on this area. Mothers who get better social support live with meaningful life and feel security. Can reduce the outcome of stresses on themselves and also, their stress level become low, which promote better health status. According to present investigation, participants' optimism level had high correlation with parents' resilience level when one unit increase on optimism level also resilience of participants increased by 0.47 unit in average. As multiple researches proved, optimism can predict the resilience of families and better outcome on psychological disorders of mothers. The base of good mental situation as well as optimistic character is adaptive nature and positive value of life. So that optimistic parents can increase their resilience by improving the quality of life and setting plans for the family. Optimism is powerful mind setting concept for selecting better way and better solutions for challenged problems and develop the performance for adapting life problems positively. It is looking towards life positively. It helps mothers to manage and adapt positively life problems. This study conducted on resilience among mothers of congenital heart disease children at three selected public hospitals of Black Lion Specialized Hospital, St. Paul's Hospital Millennium Medical College and Yekatit12 Hospital Medical College by purposive sampling technique then, the results were generalized properly. As Limitation, the data collection tools have personally reported character, accuracy of participants answer were affected by these large number of questionnaires. Fathers were not included. As a strength of the study, there is no study in Ethiopia done on resilience of mothers with CHD children, it is the first one that oversee the problem. This study result may use as clue for further study. Investigating stressful problems and increasing the level of resilience among families with CHD children is a good nursing practice for the profession of the field. The results of this investigation may be necessary for planning and intervening on health promoting activities which can increase parents and congenita heart defect children quality of life in general.

Conclusion and recommendations

According to this study most mothers' resilience level was moderate. For better life of families who have congenital heart defect children, social support plays great role. So, advancing and giving more attention to social support is helpful. As a profession assess mothers social support, is needed to give several supports according to their personal needs, incomes, as well as societal believes. In health setup educational programs and training about optimism must be included. This training can be given by individual vocations, group discussion, by stressing on mothers' ability, and supported with Leaflets. Further longitudinal studies should be recommended by considering moderating role of variables like mother and child and also considering optimism and social support as a predictor factors.

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Appendix

Annex A: Information sheet and consent form for participants

Information sheet for participants

Research Project: To assess resilience and associated factors among mothers of children with CHD; at TASH, SPHMMC and Yekatit12 hospital medical college Addis Ababa, Ethiopia 2023; Quantitative Study

Name of Principal Investigator: Tadesse Molla Allefe

This information sheet and consent form is prepared by the investigator whose main aim is to determine resilience and associated factors among mothers of children with CHD; Addis Ababa, Ethiopia;

The investigator is a master's student at School of Nursing and Midwifery, College of health sciences, Addis Ababa University.

Purpose: This research mainly tries to assess resilience and associated factors among mothers of children with CHD.

Procedures: we are kindly invited you to participate in this research because we believe you can give important information. If you are voluntary to participate, please read, understand and sign the consent form. Then, you will be asked to give your response by the data collectors and will be further asked to sign an assent form. The questionnaires will take 30 minutes approximately to complete. All the responses given by the participants and the results obtained will be kept unnamed and confidential. No one outside the research team will have access to your responses.

Risk and/or Discomfort: you will not face any risk while participating in this research but it might take a bit of your time.

Benefits: There are no immediate benefits for participants, but this research will have enormous benefits in the future, because the result will show resilience and associated factors among mothers of children with CHD. Identifying such factors will provide basis for interventions and basic information for future studies.

Compensation: This is totally a voluntary participation.

Confidentiality and Anonymity: All the information that you will provide will remain confidential and no need to write name. All data collected will be coded and stored securely and cannot be used by any third party.

Right to Refuse or withdraw: you have the full right to refuse to participate in this research. Refusing to participate will not affect you in any way.

Persons to contact for further information: you can contact the principal investigator for any information in the following address:

Name: Tadesse Molla

Tel: +251-918-28-13-38

Email: tadessemolla39@gmail.com

If you have any concern regarding ethical issues, you can contact Institutional Review Board by the following address:

Institutional Review Board

Tel: +251-118-961-396

Email: chs.irb@aau.edu.et

Thank You!!!

Consent form

I have been informed about the purpose, objectives and process of this study. I also understood that the research imposes no risk and no complication to me and my family.

If you are agreed to participate in this study, I appreciate your truthfulness, and please put a tick [✔] on the 'Yes' box and your signature below to show your agreement. If you are not agreed please put a tick [✔] on the 'No' box.

Are you willing to participate in this study?

Yes [ ] Signature _____

Date_____

No [ ]

Annex B: English version of the questionnaire for literate participant

Section 1: Socio-Demographic Data Questionaries

From the alternatives circle your response.

NO.	Variables	Response
101.	Age of mother	
102.	Age of child	
103.	Residency Area	1.Urban 2.Rural
104.	Occupation	1.Employed 2.Self-employed 3.house wife
105.	Marital Status	1.Single 2.Married 3.Widow/er 4.Di-virced 5.Co-Habited
106.	Monthly income	
107.	Educational Level	1. Unable to read and write 2. Primary 3. Secondary 4. Diploma and above
108.	Types of child's insurance	1. health insurance 2. social insurance 3. others
109.	Number of children	1. 1-2 2. 3 and more

110.	Child's birth order	1. the first 2. second and third 3. the last child
111.	History of the disease in other family members	1. no record 2. 1 record 3. 2 records
112.	Type of Disease	1. Atrial septal defect 2. Ventricular septal defect 3. Aortic Coarctation 4. Tetralogy of Fallot 5. Arterial stenosis 6. Aortic stenosis
113.	Frequency of hospitalization	1. 1-2 2. 3-4

From section 2- section 4 tick [✔] in the box blow your response.

Section 2: Resilience questionnaires

NO.	Items	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
201.	When I make plans, I follow through with them/					
202.	I usually manage one way or another.					
203.	I am able to depend on myself more than anyone else.					
204.	Keeping interested in things is important to me.					
205.	I can be on my own if I have to.					
206.	I feel proud that I have accomplished things in life.					
207.	I usually take things in my stride.					
208.	I am friends with myself.					

209.	I feel that I can handle many things at a time.					
210.	I am determined.					
211.	I seldom wonder what the point of it all is.					
212.	I take things one day at a time.					
213.	I can get through difficult times because I've experienced difficulty before.					
214.	I have self-discipline.					
215.	I keep interested in things.					
216.	I can usually find something to laugh about.					
217.	My belief in myself gets me through hard times.					
218.	In an emergency, I'm somebody people generally can rely on.					
219.	I can usually look at a situation in a number of ways.					
220.	Sometimes I make myself do things whether I want to or not.					
221.	My life has meaning.					
222.	I do not dwell on things that I can't do anything about.					
223.	When I am in a difficult situation, I can usually find my way out of it.					
224.	I have enough energy to do what I have to do.					
225.	It's okay if there are people who don't like me.					

Section 3: Questionnaires about social support

NO	Items	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
301.	There is a special person who is around when I am in need.					
302.	There is a special person with whom I can share my joys and sorrows.					
303.	My family really tries to help me.					
2304.	I get the emotional help and support I need from my family					
305.	I have a special person who is a real source of comfort to me					
306.	My friends really try to help me.					
307.	I can count on my friends when things go wrong.					
308.	I can talk about my problems with my family.					
309.	I have friends with whom I can share my joys and sorrows.					
310.	There is a special person in my life who cares about my feelings.					
311.	My family is willing to help me make decisions					
312	I can talk about my problems with my friends.					

Section 4: life orientation test questionnaires

No	Item	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
401.	In uncertain times, I usually expect the best.					
402.	It's easy for me to relax					
403.	If something can go wrong for me, it will. (R)					
404.	I'm always optimistic about my future.					
405.	I enjoy my friends a lot.					
406.	It's important for me to keep busy.					
407.	I hardly ever expect things to go my way. (R)					
408.	I don't get upset too easily.					
409.	I rarely count on good things happening to me. (R)					
410.	Overall, I expect more good things to happen to me than bad.					

Annex-C-Amharic Version of information sheet and consent form

አባሪ 1፣ የተሳታፊዎች መረጃ ቅጽ

የጥናቱ ርዕስ፡- በአዲስ አበባ ባሉ የመንግስት ሆስፒታሎች ከትትል ያላቸው በተፈጥሮ የልብ ችግር ያለባቸው ልጆችን እናቶች አስቸጋሪ ሁኔታን የመቋቋም ችሎታ እና ተያያዝ ችግሮችን መጠየቅ/ማጥናት

ጤና ይስጥልኝ ..... እባላለው፡፡ እኔ ዛሬ እዚህ የተገኘሁት በአዲስ አበባ ዩኒቨርሲቲ በጤና የማስተርስ ተማሪ የሆነውን **ታደሰ ሞላ** በመወከል ሲሆን በአዲስ አበባ ባሉ የመንግስት ሆስፒታሎች ከላይ በተጠቀሰው ርዕስ ላይ ጥናት እያደረገ ነው፡፡ በጥናቱ ላይ ለመሳተፍ ከመወሰንዎ በፊት የጥናቱን አላማ ፣ጥናቱ ላይ በመሳተፍዎ የሚያገኙት ጥቅም እና ጉዳት እንዲሁም ደግሞ ከእርስዎ

የሚጠበቀውን ሁኔታ እንደሚከተለው እገልፅሎታለው፡፡

አላማ፡- በአዲስ አበባ ባሉ የመንግስት ሆስፒታሎች ከትትል ያላቸው በተፈጥሮ የልብ ችግር ያለባቸው ልጆችን እናቶች አስቸጋሪ ሁኔታን የመቋቋም ችሎታ እና ተያያዝ ችግሮችን መጠየቅ/ማጥናት

ቅደም ተከተል፡- የስምምነት ወረቀቱን ከፈረሙ በኋላ የተዋቀሩና አግባብ ያላቸውን ጥያቄዎች መረጃ ሰብሳቢው ይጠይቆታል ምላሽዎም ወረቀቱ ላይ ይሰፍራል መጠየቁም ቢበዛ ከ25-30 ደቂቃ ይወስዳል፡፡

ለተጠያቂው የሚሰጠው ጥቅም፡ በተፈጥሮ የልብ ችግር ያለባቸው ልጆችን እናቶች አስቸጋሪ ሁኔታን የመቋቋም ችሎታ እና ተያያዝ ችግሮችን ማወቅ፡፡ የዚህን ጥናት ውጤትም ሌሎች ጤናን በተመለከተ መተዳደሪያ ደንብ ለሚያወጡ ግለሰቦች፣ አስተዳደሪዎች፣ ጥናትን ለሚያከናውኑ ግለሰቦችና መሠረታዊ የሆነ መረጃ ይሰጣል፡፡ ተጠያቂው ሆነ ሌሎች እናቶች ብሎም ማህበረሰቡ ዘላቂነት ያለው ጥቅም ያገኛል፡፡ ይህም የጥናቱ ውጤት ይህን አይነት ችግር ላለባቸው ልጆች ወላጅ እናቶች ፍላጎት ላይ የተመሰረተ ትክክለኛ የሆነ የመረጃ አቅርቦትና ዝርጋታን ለማስፈፀም እንደ ግብአት የሚረዳ ነው፡፡

የሚያስከትለው ጉዳት፡- በዚህ ጥናት ላይ መሳተፍ የሚያስከትለው ምንም አይነት ጉዳት የለም

የተጠያቂው መብቶች፡- ለመሳተፍም ሆነ ላለመሳተፍ ሙሉ መብት አሎት፣ መጠየቁን ጀምረው ከመሀል የማቆምም ሆነ ያልፈለጉትን ጥያቄ ያለመመለስ ሙሉ መብት አሎት

ሚስጥራዊነት፡- ሁሉም መረጃ ሚስጥራዊነቱ የተጠበቀ ሲሆን የዕርሶ ስም በመጠየቁ ላይ አይሰፍርም የምንጠቀመው የሚስጥ ቁጥር ነው በጥናቱ ላይ መሳተፍ በሆስፒታሉ ካለዎት ግንኙነት ጋር ተፅእኖ የለዉም በጥናቱ ላይ ለመሳተፍ የሚፈልጉ ከሆነ ወይ የተያያዘውን መረጃ ስምምነት መፈረም ወይም ደግሞ መስማማትዎን ጥናቱን ለሚሰበስበዉ ሠዉ ይንገሩ እነሱም በርስዎ ስም ይፈርማሉ፡፡

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Annex C: Consent form (Amharic version)

አባሪ 2፣ ፈቃደኝነትን ማረጋገጫ ቅጽ

እኔ በአዲስ አበባ ባሉ የመንግስት ሆስፒታሎች ክትትል ያላቸው በተፈጥሮ የልብ ችግር ያለባቸው ልጆችን እናቶች አስቸጋሪ ሁኔታን የመቋቋም ችሎታ እና ተያያዥ ችግሮችን መጠየቅ/ማጥናት ላይ ለመሳተፍ ፍቃደኛ ነኝ (አዎ ወይም የለም የሚለዉን ያክብቡ)

1. አዎ
2. የለም

ቀን .....

ፊርማ .....

የምላሽ ሰጪ ፊርማ .....

የጠያቂዉ ሰው ፊርማ ……. ማዕረግ ----------

Questionaries for the Quantitative Data

Section 1: Associating Questionnaires -Amharic Version

PART-I: ማህበራዊ-ነክ መረጃዎች

ተ.ቁ	ጥያቄ	መልስ
101.	የእናት ዕድሜ	
102.	የልጅ ዕድሜ	
103.	የመኖሪያ አካባቢ	1. ከተማ 2. ገጠር
104.	የሥራ ሁኔታ	1. የመንግስት ተቀጣሪ 2. የግል ተቀጣሪ 3. የግል ስራ 4. የቤት እመቤት
105.	. የጋብቻ ሁኔታ	1. ያላገባች 2. ያገባች 3. በሞት የተለያየች 4. በፍች የተለያየች 5. አብሮ መኖር
106.	ወርሃዊ ገቢ	
107.	የትምህርት ደረጃ	1. ማንበብ እና መጻፍ የማይችል 2. አንደኛ ደረጃ 3. ሁለተኛ ደረጃ 4. ዲፕሎማ እና ከዚያ በላይ
108.	የልጆች መድን ዓይነቶች	1. የጤና ኢንሹራንስ 2. ማህበራዊ ዋስትና 3. ሌሎች
109.	የልጆች ብዛት	1. 1-2 2. 3 እና ተጨማሪ
110.	የልብ ህመም ያለበት ስንተኛው ልጅ ነው	1. የመጀመሪያው 2. ሁለተኛው 3. ሶስተኛው

		4. ሁለተኛ እና ሶስተኛ 5. የመጨረሻው ልጅ
111.	ይህ በሽታ በሌሎች የቤተሰብ አባላት ተከስቶ ያውቃል	1. የለም 2. 1 የቤተሰብ አባል 3. 2 የቤተሰብ አባላት
112.	የበሽታ አይነት	1. የላይኛው የልብ ክፍሎች ክፍተት 2. የታችኛው የልብ ክፍሎችክፍተት 3. ትልቁ የደም ቧንቧ (የደም ቅዳ) ክፍል መጥበብ 4. የፋሎት ቴትራሎጂ 5. ደም ወሳጅ ቧንቧዎች 6. ትልቁ የደም ቧንቧ (የደም ቅዳ) መጥበብ
113.	ሆስፒታል የመተኛት ድግግሞሽ	1. 1-2 2. 3-4

Section 2: Resilience questionnaires-Amharic Version

PART I- THE Wagnild and Young Resilience Scale

እባክዎት ለቀረቡት ጥያቄዎች ከመልስዎ ስር የራይት[✔] ምልክት ያድርጉ።

ተ.ቁ	ጥያቄ	በጣም አልስማማም	አልስማማም	ገለልተኛ	እስማማለሁ	በጣም እስማማለሁ
201.	እቅድ በማዘጋጀት እራሴን እመራለሁ					
202.	ብዙውን ጊዜ ሁኔታዎችን በአንድ ወይም በሌላ መንገድ አስተካክላለሁ					
203.	ከማንም በላይ በራሴ ላይ መታመን እችላለሁ።					
204.	በነገሮች ላይ ያለኝን ፍላጎት መጠበቅ ለእኔ አስፈላጊ ነው።					
205.	መሆን ካለብኝ በራሴ መሆን እችላለሁ።					
206.	በህይወቴ ውስጥ ነገሮችን በማሳካቴ					

	ኩራት ይሰማኛል።					
207	ብዙ ጊዜ ነገሮችን በሂደት አያለሁ።					
208.	በራሴ እተማመናለሁ።					
209.	ብዙ ነገሮችን በአንድ ጊዜ ማስተናገድ እንደምችል ይሰማኛል።					
210.	ቆራጥ ነኝ።					
211.	የሁሉ ነገር ምን እንደሆነ ብዙም አይገርመኝም።					
212.	ለሚመጣው ችግር ከመጨነቅ ይልቅ አሁን ላሉ ችግሮች መፍትሄ እሰራለ፡፡					
213.	አስቸጋሪ ጊዜያትን ማለፍ እችላለሁ ምክንያቱም ከዚህ በፊት ችግር አጋጥሞኛል.					
214.	እስከ ግቤ ፍጻሜ በአላማየ እጸናለሁ፤					
215.	በነገሮች ላይ ፍላጎት እኖራለሁ.					
216.	ብዙ ጊዜ የምስቅበት ነገር አገኛለሁ።					
217.	በራሴ ላይ ያለኝ እምነት በአስቸጋሪ ጊዜያት ውስጥ ያሳልፈኛል.					
218.	በድንገተኛ ጊዜ፣ በአጠቃላይ ሰዎች ሊመኩበት የሚችሉት ሰው ነኝ።					
219.	ብዙ ጊዜ ሁኔታን በተለያዩ መንገዶች ማየት እችላለሁ።					
220.	አንዳንድ ጊዜ ፈልጌም ባልፈልግም ነገር እራሴን አደርጋለሁ።					
221.	ሕይወቴ ትርጉም አለው.					
222.	ምንም ማድረግ የማልችላቸው ነገሮች ላይ አላተኩርም።					
223.	በአስቸጋሪ ሁኔታ ውስጥ ስሆን አብዛኛውን ጊዜ መውጫውን ማግኘት እችላለሁ.					
224.	ማድረግ ያለብኝን ለመስራት በቂ ጉልበት አለኝ።					

225.	የማይወዱኝ ሰዎች ካሉ ምንም አይደለም.					

PART III- Multidimensional Scale of Perceived Social Support

እባክዎት ለቀረቡት ጥያቄዎች ከመልስዎ ስር የራይት[✔] ምልክት ያድርጉ።

ተ.ቁ	ጥያቄ	በጣም አልስማማም	አልስማማም	ገለልተኛ	እስማማለሁ	በጣም እስማማለሁ
301	ሲቸግረኝ አጠገቤ የሆነ ልዩ ሰው አለ።					
302.	ደስታዬን እና ሀዘኔን የምካፍልበት ልዩ ሰው አለ።					
303.	ቤተሰቤ በእውነት ሊረዱኝ ይሞክራሉ።					
304.	ከቤተሰቤ የምፈልገውን ስሜታዊ እርዳታ እና ድጋፍ አገኛለሁ።					
305.	ለእኔ እውነተኛ የመጽናኛ ምንጭ የሆነ ልዩ ሰው አለኝ					
306.	ጓደኞቼ ሊረዱኝ ይሞክራሉ።					
307.	ነገሮች ሲበላሹ ጓደኞቼን ልተማመንባቸው እችላለሁ።					
308.	ስለ ችግሮቼ ከቤተሰቤ ጋር ማውራት እችላለሁ።					
309.	ደስታዬን እና ሀዘኔን የምካፈልባቸው ጓደኞች አሉኝ።					
310.	በህይወቴ ውስጥ ስለ ስሜቴ የሚያስብ ልዩ ሰው አለ።					
311.	ቤተሰቦቼ በነገሮች ስዎስን ሊረዱኝ ፈቃደኞች ናቸው።					
312.	ስለ ችግሮቼ ከጓደኞቼ ጋር ማውራት እችላለሁ።					

PART IV : Life Orientation Test (LOT)

እባክዎት ለቀረቡት ጥያቄዎች ከመልስዎ ስር የራይት[✔] ምልክት ያድርጉ።

ተ.ቁ	ጥያቄ	በጣም አልስማማም	አልስማማም	ገለልተኛ	እስማማለሁ	በጣም እስማማለሁ
401.	ብዙ ጊዜ በምይመኝ ሁኔታም ሁኜ ጥሩውን እጠብቃለሁ።					
402.	ዘና ለማለት ለኔ ቀላል ነው፡፡					
403.	የሆነ ነገር በእኔ ላይ ሊሳሳት የሚችል ከሆነ, ይሆናል፡፡					
404.	ስለወደፊት ህይወቴ ሁሌም ብሩህ ተስፋ አለኝ።					
405.	በጓደኞቼ በጣም ደስ ይለኛል፡፡					
406.	በሥራ መጠመድ ለእኔ አስፈላጊ ነው።					
407.	ነገሮች በእኔ መንገድ ይሄዳሉ ብዬ አልጠብቅም።					
408.	በቀላሉ አልናደድም።					
409.	ጥሩ ነገር እየደረሰልኝ እንደሆነ ብዙም አልቆጥረውም።					
410.	ባጠቃላይ ከመጥፎ ይልቅ ብዙ ጥሩ ነገሮች እንዲደርሱልኝ እጠብቃለሁ።					