MATERNAL PSYCHOLOGICAL DISTRESS AND ASSOCIATED FACTORS AMONG MOTHERS WHOSE NEONATES ADMITTED TO THE NEONATAL INTENSIVE CARE UNIT OF PUBLIC HOSPITALS IN JIMMA TOWN, SOUTHWEST ETHIOPIA

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A RESEARCH THESIS TO BE SUBMITTED TO THE DEPARTMENT OF PSYCHIATRY, INSTITUTE OF HEALTH, JIMMA UNIVERSITY IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR A MASTERS OF SCIENCE DEGREE IN INTEGRATED CLINICAL AND COMMUNITY MENTAL HEALTH

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ABSTRACT

Background: *Psychological distress is a mental health problem worldwide. Nowadays, it is a mental health problem especially among mothers of neonates who are admitted to neonatal intensive care units. Despite this, there is a scarcity of studies in developing countries like Ethiopia regarding psychological distress among mothers whose neonate is admitted to the neonatal intensive care units.*

Objective: *To assess the prevalence of psychological distress and associated factors among mothers of neonates who were admitted to neonatal intensive care units of public hospitals in Jimma town, Southwest Ethiopia, 2021.*

Methods*: An institutional-based cross-sectional study was employed. After proportional allocation was done to both public hospitals in Jimma town data collection was conducted consecutively from 335 from July to October 2021. Maternal psychological distress was assessed by Hospital Anxiety and Depression Scale. Descriptive results were presented by tables and graphs. Bivariate and multivariable logistic regression analyses were done and statistical significance was declared at P-values less than 0.25 and 0.05 with 95%CI respectively.*

Result*: In this study, 335 mothers were planned to participate, and 321 were willing to participate giving a response rate of 95.8%. The overall prevalence of psychological distress was 36.4% with 95 % CI (31.15, 41.58). Younger mothers less than 25 years (adjusted odds ratio (AOR) = 2.96 95% CI: (1.20, 7.32)), primipara (AOR = 2.42 95% CI (1.34, 4.36), unplanned pregnancy (AOR = 3.71, 95% CI (1.81, 7.61)), low social support (AOR= 3.22 95% CI (1.42, 7.29)), high stress due to appearance and behaviours of infants in NICU (AOR = 3.16 95% CI (1.57, 6.36)), neonate birth weight less than 1500 grams (AOR = 3.85 95% CI (1.44, 10.29)), birth weight between 1500 to 2500 grams (AOR = 4.28 CI 95% (2.32, 7.92), neonates on oxygen therapy (AOR = 2.78, 95%CI (1.57, 4.93)), parenteral feeding (AOR = 2.41, 95% CI (1.15, 5.08)) were significantly associated with psychological distress.*

Conclusion and recommendation*: In this study, more than one-third of mothers whose neonates were admitted to neonatal intensive care units were found to have psychological distress. Mother's age less than 25 years, unplanned pregnancy, primipara, low social support, high stress due to appearance and behaviors of the babies, birth weight of the babies < 2500 grams, being on oxygen therapy at least once, and parenteral neonate feeding status was significantly associated with psychological distress. It is recommended to assess mothers in the neonatal intensive care units for psychological distress by targeting those with younger age, those who did not plan pregnancy, first mothers, those with low social support and give information about neonate illness to mothers during their infants stay in the neonatal intensive care units admission is important.*

Keywords*: Neonates, Intensive Care Unit, Mothers, Psychological Distress.*

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CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATION AND ACRONYM

AAS	Abuse Assessment Scale
AIDS	Acquired Immune Deficiency Syndrome
DASS-21	Depression Anxiety and Stress Symptom-21
EPDS	Edinburgh Postnatal Depression Scale
GHQ-30	General Health Questionnaire-30
GSI	Global Severity Index
HADS	Hospital Anxiety and Depression Scale
HIV	Human Immunodeficiency Virus
IYC	Infants and Young Children
ICN	Intensive Care Nursery
ICU	Intensive Care Unit
PSS: NICU	Parental Stress Scale: Neonate Intensive Care Unit
NICU	Neonate Intensive Care Unit
SLEQ	Stressful Life Event Questionnaires
SPSS	Statistical Package Social Science

CHAPTER ONE: INTRODUCTION

1.1 Background

In most cultures, childbirth can be associated with feelings of enthusiasm, anticipation, and joy, apart from being a major life event (1). The new born is a crucial link between mother and child care and is central to the continuum of care concept that connects mother, child, and families (2). However, not all mothers are fortunate enough to see their aspirations come true right away. Some babies frequently fail to achieve the smooth perinatal transition, due to this some of them need neonatal intensive care unit (NICU) admissions (3).

A neonatal intensive care unit (NICU), is also known as an intensive care nursery (ICN), is an intensive care unit (ICU) that specializes in the care of preterm or sick new born (4). Preterm birth is the most common reason for NICU admission, while other reasons include congenital birth defects, maternal complications during pregnancy, respiratory irregularities, and neonatal infections (5).

The sudden and unexpected admission of a new born to the NICU impairs an individual's adjustment and creates psychological distress characterized by worry, dread, trauma, and a sensation of emotionally being out of control (6). This unexpected traumatic life event of neonate admission to NICU has an impact on maternal psychological morbidities, which are often accompanied by severe discomfort, physical and psychological distress (7).

Psychological distress is defined as emotional disruption caused by stressors and demands that are difficult to manage in daily life and is mostly accompanied by mood and anxiety symptoms (8). It is a unique discomfort, emotional state encountered by an individual in response to a specific stressor, or a demand that causes damage, whether temporary or permanent, to a person (9).

Childbirth is marked as a time of transition and adaptation that can lead to an emotional crisis, as a nursing mother seeks to meet the demands of her child, the family, adjust to changes in her sleep schedule, and recover from the process and changes related to the delivery (10). Furthermore, the alternative view is that postpartum psychological distress

is a universal and inevitable correlation of a major life transition (11) among NICU mothers. Besides this, only a few studies are conducted on psychological distress among mothers during their infant admission to the NICU.

1.2 Statement of the problem

Worldwide, an estimated 15 million babies were born preterm (before 37 weeks gestation), representing 11% of all live births worldwide, ranging from roughly 5% in Western European countries to 18% in some African countries (12). From one cohort study from 2007 to 2012 the admission of new-born was increased from 64 to 77.9 per 1000 new born (13).

Globally, anxiety and depression are the third leading cause of disease burden for women between 14 and 44 years of age (14). Maternal psychological distress is the most common cause of morbidities in maternity and postnatal with up to 25% (15) and those mothers experience stress, depression which is estimated to be 10–20 % (16). A secondary analysis of the Australian longitudinal study shows that 33% of mothers have experienced postpartum psychological distress (17). Maternal psychological distress associated with mothers of neonates admitted to NICU is as high as 12% to 70% (18).

In low and middle-income countries, maternal mental distress is common, with high rates of psychological distress between 15% and 57 % screened positive for depression symptoms during pregnancy or the postpartum period (19). There is a significant burden of psychological distress in those countries and the rates of psychological distress are highest whereas it affects 16 % of women during pregnancy and 20 % in the postnatal period (20).

Maternal mental distress harms the growth, development, and treatment of infants and young children (IYC), and has a significant impact on physical, cognitive, and emotional health during critical periods of life and early childhood (14). Maternal psychological distress associated with neonate admission to NICU has a detrimental impact on their parenting practices, causing them to be more controlling and less sensitive (21), which has a poor impact on new-born neurodevelopment, including cognitive, social, emotional, languages, physical, and mental development (22). In addition, if it's not well addressed, maternal psychological distress during infant NICU hospitalization leads mothers to less competent and poor maternal-child bond (23). Additional Low levels of the physical and

emotional well-being of mothers, as well as symptoms of extreme fatigue and sleep deprivation, are also connected with NICU-related maternal distress (24). Its impact on the health of the mother and her newborn, as well as on her relationship within the family is thought to be an indicator of the severity of psychological distress (19).

Psychological distress is a non-specific problem associated with higher mortality (25), increased somatization (26), serious and heavier alcohol consumption(27), and its risk factors are related to sociodemographic factors and insufficient internal and external resources (28). Individuals with psychological distress have a lower degree of functioning, a poor social life, and negative health consequences such as an increased risk of cardiovascular disease which increases risk of physical illness like myocardial infarction and stroke (29).

Psychological distress is indeed among the most serious causes of morbidity and mortality in developing countries (30). Even though there is a link between NICU hospitalization and maternal psychological distress, there is no guideline or procedure that informs the assessment, psychological, or psychiatric treatment of mothers who have infants hospitalized in the NICU (31).

Yet, in developing countries, such studies are few. There has been some research on maternal psychological distress among mothers who have had neonate admission to NICU in Africa. However, there is very little information available in Ethiopia about postpartum psychological distress among mothers whose neonate is admitted to the NICU. As per investigator knowledge, this is the first study to determine the prevalence and factors associated with maternal psychological distress among NICU mothers neonates hospitalized in NICU in Ethiopia. Therefore, this study is conducted to fill this gap and assess the magnitude and potential factors associated with psychological distress among mothers whose neonate is admitted to the NICU of public hospitals in Jimma town.

1.3 Significance of the study

The findings from this study will provide insights into the prevalence of psychological distress and its associated factors among mothers whose neonate is admitted to the NICU. The findings have implications for the mothers, their partner's/family, and health professionals in managing maternal psychological distress.

It will guide health and education sectors as input to develop strategies for the promotion of mental health programs for NICU mothers. This, in turn, might reduce psychological distress among NICU mothers, and improve awareness of the mothers and their families regarding factors associated with psychological distress. Additionally, it also serves to provide educators, psychotherapists, and mental health professionals with information that is useful in designing interventions to effectively deal with the problem of escalating psychological distress among mothers whose neonate is admitted to the NICU.

The result from this study also helps to provide baseline data for researchers interested to conduct further investigation on psychological distress among mothers whose neonate is admitted to the NICU. Hopefully, the finding from this study may expand the existing works of literature on psychological distress among mothers whose neonate is admitted to the NICU.

CHAPTER TWO: LITERATURES

2.1 Overview

In the United States of America (USA) 26.2 billion USD a year is estimated to be an expense on neonatal intensive care (NIC) (41). In a population-based study in California, very low birth-weight (VLBW) infants accounted for 37.5%, while low birth-weight (LBW) infants made 56.6 percent of total healthcare costs for new-born (42). The study done in Jimma Medical center reported low birth weight (35.8%), new-born sepsis (28.6%), and hypothermia (26.2%) were identified to be the three most common reasons for neonatal admissions to NICU (34).

2.2 Prevalence of psychological distress among mothers of neonates admitted to NICU

In a cross-sectional study design done to assess the prevalence of stress and depression using parental Stressor Scale (PSS: NICU) and the Edinburgh Postnatal Depression Scale (EPDS) tools among 85 mothers in the early postpartum period during their stay in NICU mothers in Boston USA, 52% and 38% of NICU mothers were experienced stress and depression, respectively (43).

In a cross-sectional study done in Qatar to assess the prevalence of psychological distress and associated risk factors among women during the postpartum period among preterm mothers. 2091 mothers were assessed by the Depression Anxiety Stress Scale (DASS-21) screening tool for psychological distress, depression, anxiety, and stress, and the prevalence were 30%, 8.6%, 13.1%, and 8.7% respectively (36).

From cross-sectional study design done in China, on the prevalence of anxiety and depression in parents of hospitalized neonates and to analyze their relationship with other factors such as stress and social support, to provide evidence for targeted clinical interventions 400 fathers and 200 mothers separated in the study 30.8% of fathers and 35% of mothers had the symptom of depression (45). In their study, those mothers were assessed by self-rating anxiety scale, a self-rating depressive scale for anxiety and depression respectively.

In a cross-sectional study done among mothers that give birth at tertiary hospitals in Enugu, south-east Nigeria to assess sociodemographic correlates of postpartum psychological distress among apparently healthy mothers in two tertiary hospitals who came for post-natal follow-up within the first 14 weeks by using the hospital anxiety and depression scale (HADS). The finding from their study found that the prevalence of post-natal maternal psychological distress (anxiety and depression) was 30.1% and 33.3% respectively (30). However, their finding was done among healthy mothers that brought their children for immunization and the study period was also conducted within 6-14th weeks of the postpartum period.

In a hospital-based cross-sectional study done in Kenya to assess the prevalence of postpartum psychological distress among mothers of preterm by using DASS-21 as a screening instrument and the prevalence of psychological distress was found 27.4% (one or more depression, anxiety, and stress) and the prevalence of depression, anxiety, and stress was 17%, 21.5 and 10.4% respectively (38). This study is limited to mothers whose infant is admitted to the neonatal intensive care unit.

In a cross-sectional study done on prevalence and factors associated with psychological morbidity in 57 mothers of pre-term infants: done in Nigeria by using screening instrument of General Health Questionnaires (GHQ-30) was 36.8% and Hospital anxiety and depression inventory (HADS) scale, depression and anxiety was 19.3% and 12.3% respectively (39).

A comparative study was done in Kenya between term and preterm mothers who come to Umoja health center and Kenyatta National Hospital's Neonatal Care Unit respectively. In this study, 172 mothers have participated by using Kessler 10 to measure psychological distress. The psychological distress in this population is reported 75.6%, 24.4%, and 26.2% among preterm, term, and overall of the population. In their study mothers with preterm who were admitted to the hospital were compared among mothers who give birth terms new born in the community (40).

2.2 Factors associated with maternal psychological distress

2.2.1 Sociodemographic Factors

From a descriptive exploratory study done in the USA, most mothers were selected from a sequential cohort design assigned mother-infant dyads either to usual care or a co-regulated feeding intervention. In this cohort, 34 mothers who participated in the study were single and younger age mothers were associated with psychological distress (41).

In other cross-sectional study design among the total of 113 new mothers with very-low-birth-weight infants in their initial NICU admission were recruited from 2 urban hospitals servicing low-income minority communities factors associated with postpartum depressive symptoms in mothers with premature infants in the neonatal intensive care unit were older mother were associated with postpartum depression (42).

A cross-sectional study was done in Qatar on maternal psychological distress and associated risk factors among mothers of preterm infants during their postpartum period stated that depression, anxiety, and stress disorders were linked to socio-demographic factors such as younger ages, higher education levels, and lower monthly income was associated with psychological distress (36). In another community-based study done in Nepal on Predictors of psychological distress among postnatal mothers by using 12-general health questionaries: 9068 mothers were included in the study. No schooling, having a husband with no schooling, and lower maternal age are all factors associated with maternal psychological distress in the postpartum period (43).

2.2.2 Clinical Factors

Current obstetrics and physical illness

A cross-sectional self-report survey Australia on nature, severity, and correlates of psychological distress in 109 women admitted to a private mother-baby unit stated that factor associated with maternal psychological distress was unexpected and traumatic childbirth experiences have been increasingly associated with increased distress, as have aspects of the quality of the relationship with partner (44).

In a hospital-based comparative study conducted in the USA, tools like PSS, EPDS, STAI (state Trait Anxiety Inventory), were used to investigate the mothers' psychological distress, and 84 mothers were included in this study. This study found that current cesarean sections were associated with maternal psychological distress (27). In a similar cross-sectional study of sociodemographic and obstetric risk factors of postpartum depression in Nigerian women: the gestational age of the baby at delivery, the operation mode of delivery was highly correlated with the postpartum onset of depression symptoms (45).

A hospital-based cross-sectional study was conducted in Kenya on the prevalence of postpartum psychological distress in preterm mothers' infant feeding status of the new born, under oxygen therapy at least one day before the interview was significantly related to maternal psychological distress (38). In another comparative cross-sectional study in Nigeria among mothers, GHQ-12 was used to evaluate maternal postpartum psychological distress among mothers with preterm babies admitted to the neonatal intensive care unit in Nigeria: the health status of the new born is strongly related to the emotional distress of the mother on the postpartum period (39).

Past and recent obstetrics history

In a cross-sectional study done in Ethiopia on prevalence and factors associated with postpartum depression among mothers attending public health centers of Addis Ababa unplanned pregnancy is associated with postpartum depression (46). A hospital-based comparative study design was conducted on the psychological distress of postpartum mothers of preterm babies and associated factors among Arab women who came for antenatal care history of abortion was strongly linked to maternal psychological distress (36).

2.2.3 Psychosocial factors

A cross-sectional study done in Qatar on the prevalence of psychiatric disorders and associated risk factors in women during their postpartum period stated that maternal

psychological distress was linked to psychosocial factors such as stressful life events, lack of social support were associated with maternal psychological distress (36).

A study was done on psychological distress among mothers of young children in rural Ghana and Uganda by using general health questionaries and hospital anxiety and depression and its association with child health and nutritional status: stressful life events were significantly associated with maternal psychological distress in both countries. This study is also explained male child gender bind (desire for born male) was associated with higher distress in Ghana (47).

A comparative cross-sectional study done among a total of mothers 172, 86 terms and 86 preterm mothers participated in the study to assess postpartum anxiety and depression (psychological distress) in mothers with pre-term births in Kenya reported that postpartum mothers' experiencing ongoing intimate violence and stressful life events were associated with psychological distress (48).

2.2.4 NICU environment-related factors

An observational study done in New South Wales, Australia on stress and distress in parents of neonates admitted to the neonatal intensive care unit for cardiac surgery stress associated with the NICU stay was associated with psychological distress. Stress associated with the appearance and behaviors of the infant and physical facilities like sound and sight in the NICU had a significant association with psychological distress (48).

A comparative cross-sectional study examined the psychological distress and coping styles among mothers with preterm infants at the major hospital (Korle-Bu Teaching Hospital) in the Greater Accra Region of Ghana by using 50 terms and 100 preterm infants' mothers' physical facilities (sound and sight) were predictors of psychological distress. While appearance and behavior, parental role alteration is not associated with psychological distress (49).

2.3 Conceptual Frame-work

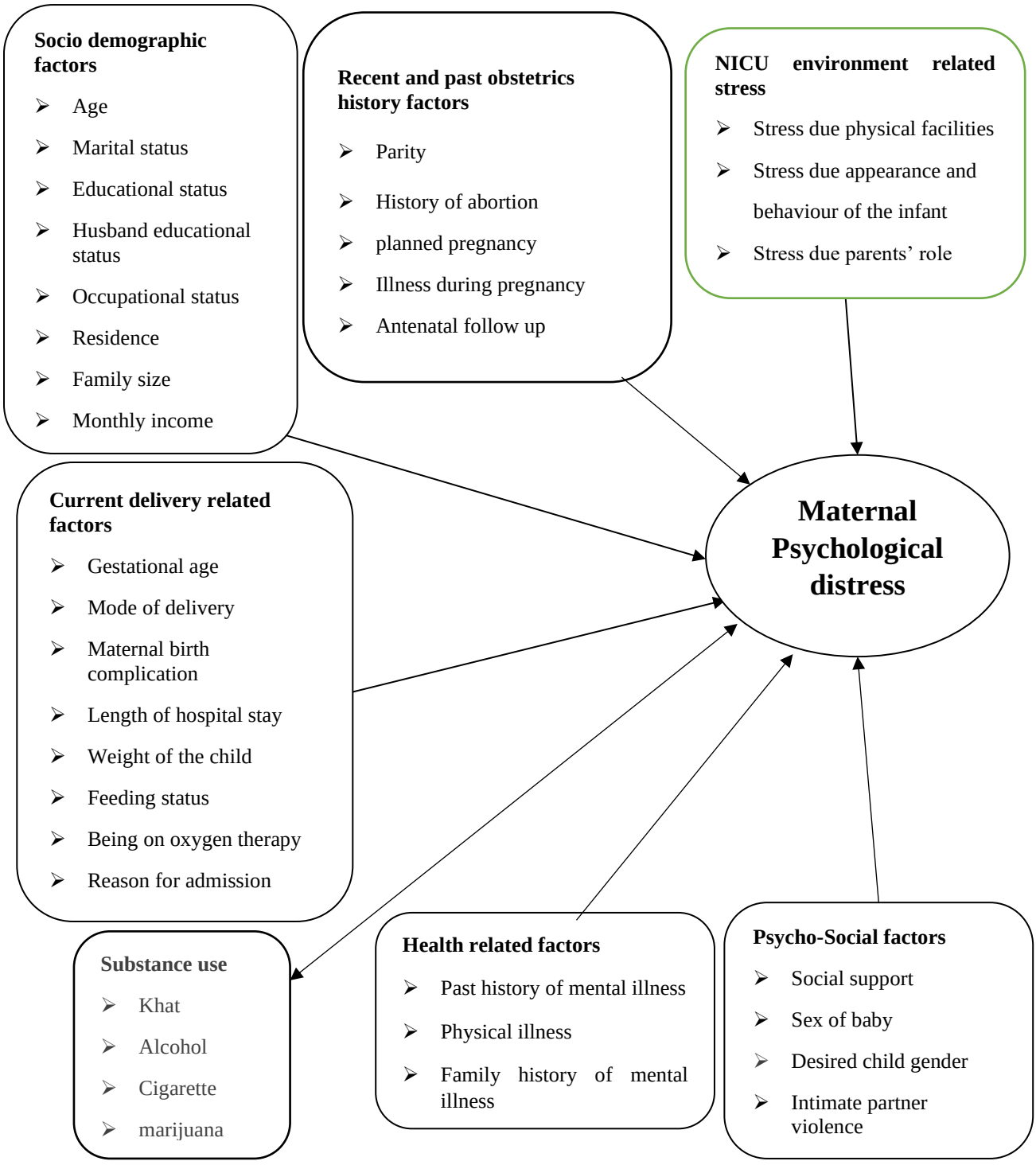

Figure 1: Conceptual framework was developed after reviewing different kinds of literature

CHAPTER THREE: OBJECTIVES

3.1 General objective

To assess the prevalence of psychological distress and its associated factors among mothers of neonates admitted to NICU of public hospitals in Jimma town, Southwest Ethiopia, 2021.

3.2 Specific Objectives

To determine the prevalence of psychological distress among mothers of neonates admitted to NICU of public hospitals in Jimma town, Southwest Ethiopia, 2021.

To identify associated factors to maternal psychological distress among mothers of neonates admitted to NICU of public hospitals in Jimma town, Southwest Ethiopia, 2021.

CHAPTER FOUR: METHODS AND MATERIALS

4.1 Study area and period

The study was conducted in public hospitals of Jimma town which is located 353 Km to the South West of Addis Ababa with geographical coordinates of approximately 7º40'N latitude and 36º 50'E longitude and an altitude of 1750-2000m above sea level. The town has a total surface area of 4,623 hectares and there are two public hospitals namely Shenen Gibe General hospital (SGGH) and Jimma university medical center (JUMC) which delivers inpatient and outpatient maternal and neonatal care (34).

JMC is one of the country's oldest government hospitals, having been founded in 1937 to serve the soldiers of the Italian occupation. After the colonial conquerors left, it was renamed "Jimma University Medical Center" and operated as a public hospital under the Ministry of Health under various names. JUMC is also one of the country's oldest teaching hospitals for undergraduate and post-graduate clinical specialty training in a variety of disciplines, including Obstetrics and Gynecology, Pediatrics, and the hospital serves complicated cases referred from 114 health centers and over 18 hospitals (none of which have an intensive care unit) in its catchment area. The NICU is one of the hospital's ICU services currently available. At the center, advanced treatments like exchange transfusions and Lumber punctures are conducted. The unit is staffed by pediatricians, pediatric residents, and neonatal nurses, and it is placed next to the maternity ward to accommodate high-risk babies (34). SGGH was a newly established hospital located on another end of the city and serves communities of the city and surrounding areas who come from district areas. The study was conducted from late July 10, 2021 to 12, October 2021.

4.2 Study design

The institutional-based cross-sectional study design was employed

4.3 Population

4.3.1 Source population

All mothers whose neonates were admitted to the neonate intensive care unit of Jimma town public hospitals

4.3.2 Study population

All selected mothers whose neonates were admitted to the NICU of Jimma town public hospitals during the data collection period

4.4 Eligibility criteria

4.4.1 Inclusion criteria

All mothers whose neonates were admitted to the NICU and whose neonates were stayed in the hospital for at least one week

4.4.2 Exclusion criteria

Mothers who were acutely ill and not able to give required information

4.5 Sample size and sampling techniques

4.5.1 Sample size determination

The sample size for this study was calculated using a formula for a single population proportion considering the following assumptions:

- Confidence interval of 95% (Z = 1.96)
- Margin of error 5% (d = 0.05)
- Population proportion of 27.4% (p =0.274) p-value was taken from a study done in Kenya (38).

$$n = \frac{\left(Z_{\alpha/2}\right)^2 \times p(1-p)}{d^2} \quad \Rightarrow \quad n = \frac{(1.96)^2 \times 0.274(1-0.274)}{0.05^2} = 305$$

By adding a 10% non-response rate 30. The final sample size was n= 305 +30 = 335

4.5.2 Sampling techniques

After reviewing the registration book, the average number of neonates admitted to the neonate intensive care unit in both hospitals were 736 (473 to JMC and 263 to SGGH) within three months of the data collection period. The required sample size was 335. Thus, the sample size was proportionally allocated to both hospitals (i.e., 215 for JMC, while 120 for SGGH), and consecutive sampling techniques was used to select the study participants based on eligible criteria until the required sample size of 335 was reached.

4.6 Data collection procedure and instrument

4.6.1 Data collection procedure

Data were collected from the NICU mothers. The pediatrician, pediatric resident, or specialized neonatal nurse has diagnosed the infant's illness. Then the infant's clinical characteristics and other factors were reviewed from the medical record card of the neonate by using Medical Record Number (MRN). Following these interviewer-administered structured questionnaires were used to collect the data from the participants by face-to-face interview. A pediatrician resident and an MSc professional were supervising the data collection procedures while two B.Sc. Psychiatry nurses and two BSc Nurses participated in data collection. The questionnaire consisted of structured questions that can be subdivided into different categories: sociodemographic, past and recent obstetrics history, HADS, Oslo 3-items social support scale, substance use, psycho-social factors, health-related, and family status, current obstetrics history, current delivery factors, and NICU environment-related stress.

4.6.2 Data collection Instrument

Socio-demographic questionnaire

A socio-demographic questionnaire was used to collect sociodemographic data such as age, marital status, religion, educational status, husband educational status, occupations, residence, family size, and monthly income.

The hospital anxiety and depression scale (HADS):

In this study, the hospital anxiety and depression scale was used to assess psychological distress. It was a questionnaire that has been used to assess anxiety, depression, and psychological distress in non-psychiatric patients, as well as psychological morbidity over the previous week (50). It has some good qualities, including brevity and ease of use, high reliability and validity, and good screening and case-finding quality. It has 14 items, each of which is assessed on a four-point Likert scale ranging from 0 to 3, with 0 and 42 as the minimum and maximum values, respectively. The overall score for psychological distress was considered rather than subscales (51) and the score cut point was >19 suggests psychological distress as suggested by Razavi et al (52). In various studies, this instrument was used to detect psychological distress among mothers of preterm infants (45). It was also validated among HIV-positive patients in Ethiopia and found to have strong consistency between items, with a Cronbach's alpha scale of 0.87 and an intra-class correlation coefficient (ICC) of 84 % (53). The Cronbach alpha was 0.85 in our study.

Oslo 3-items social support scale

Social support was measured by Oslo social support questionnaires which have three questions and its score range from 3–14 that was interpreted as 3-8 was poor support, 9-11 was moderate support, and 12-14 was strong support. To obtain the overall score, it was calculated by adding the original scores for each item (68). In this study, the Cronbach alpha was 0.83.

Parental stress scale: NICU

The PSS: NICU modified was used to assess stress relevant to the NICU setting. This scale had three subscales that are used to assess physical conditions (noises), the infant's appearance and behavior, and the parent's role and relationship. It has total items of 26 which item will be scored on a 5-point Likert scale ranging from 1 point for “not at all stressful”, 2 points for “mild stress”, 3 points for “fairly moderate stress”, and 4 points for “very stressful” and 5 points for “extreme/severe stress”. Higher scores indicated more

stress and lower score indicate low stress (69). We used tercile range to screen for the severity of stress observed during NICU visitation mothers. Those who scored in the first tercile were taken as low stress, the second tercile was taken as moderate stress and the third tercile was taken as highest stress. In this study, the Cronbach alpha was 0.88.

Abuse assessment screen scale

Intimate partner violence was measured by an abuse assessment screen scale which has five items and each item has "Yes" or "No" questions, any positive response to any questions is taken as the participant was abused by her partner or someone recent to her. This tool was mostly used in obstetrics/gynaecologic sitting and low-income countries (70). In this study, the Cronbach alpha was 0.83.

Stressful Life events questionnaires

A 13-item stressful life event self-report screening measure was used and included to assess lifetime exposure to a variety of traumatic experiences. Those questions were "Yes" or "No", and anyone with one positive response was interpreted as the mother having experienced a traumatic lifetime over her lifetime (71). In this study, the Cronbach alpha was 0.71.

For psycho-social factors, health-related factors, and substance use history and obstetrics history of the mothers, and neonatal-related questions were developed after an extensive review of available kinds of literature on a similar study.

4.7 Study variables

4.7.1 Dependent variable

- Psychological distress Yes/No

4.7.2 Independent variables

Socio-demographic factors

- Age
- Marital status

- Educational status
- Husband educational status
- Occupational status
- Residence
- Family size
- Monthly income

Previous and recent obstetrics factors

- Parity
- History of abortion
- Unplanned pregnancy
- Physical Illness during pregnancy
- Antenatal follow-up
- Counselling about birth complication

Substance use-related factors

- Khat
- Alcohol
- Tobacco
- Hashish

Psycho-Social Factor

- Social support
- Desired gender of the babies
- Intimate partner violence
- Stressful life events

Health-related factors

- Known physical illness
- Mental illness
- Family history of mental illness

NICU environment-related factors

- Stress due to physical facilities (noises)
- Stress due to appearance and behavior of the infant
- Stress due to mothers' role and relationship with their infants

Current delivery Factors

- Gestational age at delivery
- Mode of delivery
- Current maternal complication
- Length of hospital stay
- Birth weight of the infants
- Current neonatal feeding status
- Being on oxygen therapy
- Reason for admission

4.8 Operational definition

Psychological distress: a participant who was score on HADS-total above 19 (>19) had psychological distress. This tool was used to assess the psychological distress over the past week (52).

Physical illness: In this study, those who had known medical illnesses were diagnosed with health professionals like hypertension, asthma, diabetes, chronic heart disease.

History of mental illness: in this study those who were diagnosed with a mental health professional like anxiety, mood disorder, psychotic disorder.

Illness during pregnancy: Pregnancy-related physical illness like preeclampsia, hypertension.

Level of social support: For this study social support was measured using Oslo 3-item social. Support scale and a score of: -

- 3-8 was poor support
- 9-11 was moderate support and
- 12-14 was strong support (54).

NICU environment-related stress: The modified PSS: NICU were used to measure stress related to the NICU environment which higher scores indicate more stress and lower score indicate low stress (55).

Stress due to physical facilities: Stress experienced by mothers during NICU visits related to distinct materials available in the NICU to give treatment for fragile neonates generate different noises or sounds, (for example, the presence and noise of monitors and equipment, other ill babies, alarm noises) and a higher PSS score: this subscale of NICUs was linked to a high level of stress. (55).

Stress due to appearance and behaviour of the infant: Stress experienced by mothers during NICU visits owing to physiologic changes that occur on the new-born in the NICU and the usage of various materials. (e.g., tubes and apparatus on, in, or near the baby, baby's colour, movements, difficult breathing) with a higher PSS score: were related to experience a high level of stress on this subscale (55)**.**

Stress due to mothers' role and their relationship with an infant: Mothers who experienced stress as a result of changes in their relationship with their babies and baby care (e.g., being separated from their infants, being unable to feed and care for the new-born, feeling helpless to help the infant) who had a higher PSS score on this NICU subscale's were experienced high level of stress (55).

Intimate partner violence: the participants abused by intimate partner/spousal before and during pregnancy will be measured by abuse assessment screen scale. One positive answer from the items is taken as the participant is abused (56).

Stressful life events: stressful life event questionnaires were used to assess stressful life events over lifetimes. The tool has 13 items of Yes or No responses. One positive response of each individual was taken as the individual was experienced stressful life events (57).

Current substance use: Those who non-medically used at least one substance (alcohol, Khat, cigarette, and others) within the last 3 months (59).

Family monthly income: Using the world bank poverty line cut point those families who had an average monthly income of less than 2,622 ETB (1.9$/day) were taken as low income (60).

Taking 1$= 46 ETB

4.9 Data quality control

The questionaries were prepared in English then translated to Afan Oromo and Amharic. To maintain consistency then back-translated into English by language experts. The data was collected using the Afan Oromo and Amharic versions of the questionnaire. The questionnaires were pretested at Agaro primary hospital on 5% of the sample population that was not included in the main study one week before real data collection. Vague and unclear questions were updated and amended based on the pre-test results. Words like physically forcing you to have intercourse or oral or anal sex against your wishes were substituted by the word rape in stressful life situations questionaries. The principal investigator trained data collectors and supervisors for one day on the method of data collection, approach to those mothers, respecting mothers' privacy, and infection prevention procedures associated with COVID-19. The data collectors were monitored regularly, and the supervisor and principal investigator have checked the completed questionnaires daily.

4.10 Data processing and analysis

After data were checked for completeness, Epi-data management version 4.6 was used to code and enter the information, which was then exported to SPSS Version 26.0 for analysis. Tables and charts were used to provide descriptive statistics such as frequency, percentage,

mean, standard deviation, and tercile range. Multicollinearity and Hosmer-Lemeshow goodness model fitness was checked. Bivariate analysis was used to determine the relationship between each independent variable and the outcome variable. To find the association of each independent variable with the outcome variables, variables having (P 0.25) in the bivariate analysis were put into the multivariable logistic regression model. The statistical significance for multivariable was considered at a P-value <0.05 and an adjusted odds ratio with 95 % CI was calculated to determine the strength of association.

4.11 Ethical Considerations

Before the actual data collection, Jimma University Institutional Review Board (IRB) was approved by IHPGND/365/ as the title had no ethical violations and as well as permission letters from the both NICU. The goal of the aim was explained to all mothers whose new-borns were hospitalized in the NICU ward, and after they approached for an interview. To guarantee their privacy as much as possible, the interviews with study participants took place in an isolated area or in a place where others were not present in the waiting room, and the data from each participant was kept confidential. Besides, contact information (phone number) of the principal investigator was provided that could help participants to ask questions related to the study. Those mothers with high psychological distress were linked to a psychiatric clinic for further evaluation and better management. For those under 18 ages, the consent was taken from their parents or husband. All data collectors and supervisors were trained on the COVID-19 infection prevention during the time of data collection and prevention of covid-19 against study subjects.

4.12 Dissemination of results

The finding of the study will be disseminated to all relevant stakeholders through presentation and publication in a national or international peer-reviewed journal. Copies of the research will be submitted to the psychiatry department, Jimma University's research and dissemination office, and also the final report will be communicated with the NICU department of hospitals, other concerned institutions, and stakeholders for possible applications of the study findings.

CHAPTER FIVE: RESULT

5.1 Sociodemographic and family-related factors

This study included 321 mothers, out of 335 mothers who were planned to participate in the study, giving a response rate of 95.80%. The mean age of the respondents was 26.96 ± (5.71). The majority 274 (85.40%) of the respondents were married and three-fifth of the respondents 204 (61.80%) were Muslim. One-third of the respondents, 109 (34.00%) were attending secondary education, whereas 132 (41.10%) of the respondent's husbands attended secondary school. Around 167 (52.00%) were housewives. The majority of respondents 208 (68.40%) were urban residents. Three-quarters of the respondents 239 (74.50%) have fewer than five family members. The majority of the respondent's monthly income 232 (72.30%) were above the poverty line (Table 1).

Table 1: Socio-demographic and family-related characteristics of mothers whose neonate admitted to Jimma public hospitals, Southwest Ethiopia, October 2021

Variables	Categories	Frequency	Percent
Age	16-25 years	167	52.10
	25-35 years	115	35.80
	35-43 years	39	12.10
Marital status	Married	274	85.40
	Never married	24	7.50
	Separated/divorced/ widowed	23	7.20
Religion	Muslim	192	59.80
	Orthodox	59	18.40
	Protestant	42	13.10
	Catholic	8	2.50
	Wakefata	15	4.70
	Joba	5	1.50
Educational status of the participants	Unable to read and write	32	10.00
	Read and write	43	13.40
	Primary school	104	32.40
	Secondary school	109	34.00
	Above secondary school	33	10.30
Educational status of the husband	Unable to read and write	32	10.00
	Read and write	47	14.60
	Primary school	64	19.90
	Secondary school	132	41.10

	Above secondary school	46	14.30
Occupation	Government worker	64	20.00
	Merchant	76	19.60
	Housewife	167	52.00
	Private employee	27	8.40
Residency	Urban	208	64.80
	Rural	113	35.20
Family size	Less than 5 family members	239	74.50
	5 and greater family members	82	25.50
Household monthly income	Less than 2622	89	27.70
	Greater than 2623	232	72.30

5.2 Past and Recent obstetrics history of the mothers

Among the respondents, 191 (59.50) were multipara and most 274 (83.00%) of the mothers have planned their pregnancy. Some of the respondents 53 (16.10%) were experienced pregnancy-related illness during pregnancy. The majority 278 (84.20%) of the respondents had follow-up at health facilities (Table 2).

Table 2: Past and recent obstetrics history-related characteristics of mothers whose neonate admitted to Jimma public hospitals, Southwest Ethiopia, October 2021

Variables	Categories	Frequency	Percent
Parity	Primipara	130	40.50
	Multipara	191	59.50
History of previous abortion	No previous abortion	285	88.80
	Previous abortion	36	11.20
Planned pregnancy	No	63	19.60
	Yes	258	80.40
Illness during pregnancy	No	270	84.10
	Yes	51	15.90
ANC follow up	No	49	15.30
	Yes	272	84.70

5.3 Psychosocial factors and health-related characteristics of respondents

About 133 (41.40%) of respondents had medium social support. Around three-fourth 251 (78.20) of the respondents had not used khat within three months before the interview time. More than half 164 (51.10%) gave birth to female babies. Nearly two-thirds 199 (62.00%)

of the respondents have did not experienced stressful life events in their lifetimes. Nearly one-third 98 (30.50%) of mothers were vulnerable to the spouse's or someone's violence nearest to them. The majority 293 (91.30%) of respondents have no history of mental illness (Table 3).

Table 3: Psychosocial factors, substance use, and health-related characteristics mothers whose neonate was admitted to NICU ward of Jimma public hospitals, Southwest Ethiopia, October 2021

Variables	**Categories**	**Frequency**	**Percent (%)**
Social support	Poor	56	17.40
	Medium	133	41.40
	Strong	132	41.20
Sex of the new-born	Male	157	48.90
	Female	164	51.10
Numbers of new-born	One child	296	92.20
	Two and more Childs	25	7.80
Desired sex of the new-born	No	66	20.60
	Yes	255	79.40
Stressful life events	No	199	62.00
	Once	38	11.80
	>two times	84	26.20
Intimate partner violence	Not abuse	223	69.50
	Those abused	98	30.50
Current khat use	No	251	78.20
	Yes	70	21.80
Current alcohol use	No	283	88.20
	Yes	38	11.80
Current tobacco use	No	313	97.50
	Yes	8	2.50
Marijuana	No	315	98.10
	Yes	6	1.90
>1 substance use	No	197	92.50
	Yes	24	7.50
Mental illness	No	293	91.30
	Yes	28	8.70
Chronic medical illness	No	164	82.20
	Yes	57	17.80
History of mentally ill family	No	298	92.80
	Yes	23	7.20

5.4 NICU environment-related stress experienced by mothers

The most stress experienced due to NICU visitation by mothers was stress due to the appearance and behaviours of the infants with a mean score of 3.72 ± (0.91). 113 (35.20%) of the respondents have low stress due to physical facilities like sound and noises. 117 (36.40%) of the respondents have experienced high stress due to the appearance and behaviours of the neonates.

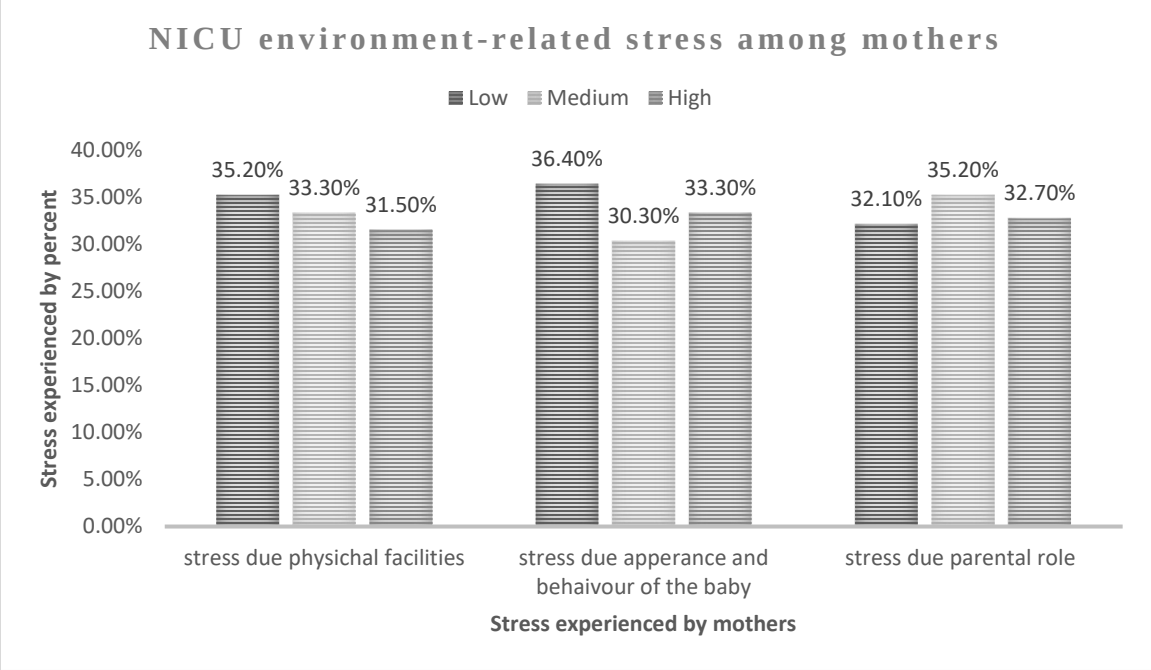

Figure 2: NICU environmental-related stress among mothers whose neonate admitted to NICU of Jimma town public hospitals, Southwest, Ethiopia, 2021

5.5 Recent and current obstetrics history of the mothers

Nearly half 149 (46.40%) of the respondents were born within term duration. One-third 198 (61.70%) of the respondents did not get any counselling about complications during delivery during ANC follow-up. The mean of hospital stay was 16 days and more than two-thirds 225 (70.10%) of the neonate were stay in the hospital for less than 16 days. About more than half 190 (59.20%) of the neonates had a birth weight of normal birth weight (greater than 2500 grams). More than half 166 (51.7%) of the neonates were on oxygen

therapy for at least one day. About two-thirds, 206 (64.2%) of the respondents were on breastfeeding. The most 86 (26.8%) reasons for admission were birth asphyxia & other complications during the perinatal duration (Table 5).

Table 4: Current birth complications during delivery among mothers whose neonate was admitted to NICU ward of Jimma public hospitals, Southwest Ethiopia, October 2021

Variables	**Categories**	**Frequency (N)**	**Percent (%)**
Gestational age in weeks	Gestational age less than 32 weeks	76	23.70
	Gestational age 32 to 37 weeks	96	29.90
	Gestational age greater than 37 weeks	149	46.40
Mode of delivery	Vaginal	169	52.60
	Cesarean section	117	36.40
	Assisted vaginal delivery	35	10.90
Current maternal birth complications	No	214	66.70
	Yes	107	33.30
Counselling about birth complications	No	198	61.70
	Yes	123	38.30
Hospital stay length	less than 16 days	225	70.10
	16 and greater than 16 days	96	29.90
Birth weight	Less than 1500 grams	27	8.40
	Between 1500 - 2500 grams	104	32.40
	greater than 2500 grams	190	59.20
Current weight	less than 1500 grams	42	13.10
	between 1500 to 2500 grams	112	34.90
	greater than 2500 grams	167	52.00
On oxygen therapy	No	155	48.30
	Yes	166	51.70
Feeding status of the babies	Breastfeeding	203	63.20
	Formula feeding	36	11.90
	Parenteral feeding	50	15.30
	Multiple responses	32	10.60
	Birth asphyxia & other perinatal complications	86	26.80

Reason for admission of the neonate	The preterm birth complication and low birth weight	53	16.50
	Neonatal sepsis & Infections	80	24.90
	More than one reason for admission	63	19.60
	Other than the above neonatal condition	39	12.10

5.6 Prevalence of Psychological distress

The overall prevalence of psychological distress among NICU mothers in this study was 117 (36.4%) with 95% CI (31.16, 41.74).

5.7 Factors associated with maternal psychological distress

Bivariate logistic regression analysis

Bivariate analysis was done to see factors associated with psychological distress. Hence age, residency, family size, monthly income, parity, pregnancy plan, social support, follow-up at health facilities, intimate partner violence, current khat use, having a mental illness, stress due to appearance and behaviors of babies, stress due to the parental role, mode of delivery, maternal birth complications, birth weight of the babies, being on oxygen therapy of the babies, and feeding status of the babies were found to be associated with psychological distress and entered to multivariate analysis (Table 5).

Table 5: Bivariate analysis factors associated with psychological distress in mothers whose neonates admitted to NICU of Jimma town public hospitals, Southwest Ethiopia, 2021

Variables	**Categories**	**Psychological distress**		**COR (95% CI)**	**P-value**
		Yes N (%)	No N (%)		
Age	16-25 years	79 (47.30)	88 (52.70)	2.60 (1.19, 5.68)	.016*
	26 -35 years	28 (24.30)	87 (75.70)	0.93 (0.40, 2.15)	.871
	36-44 years	10 (25.60)	29 (74.40)	1	1
Marital status	Married	98 (35.80)	176 (64.20)	1	1
	Single	9 (37.50)	15 (62.50)	1.08 (0.45, 2.55)	.865
	Separated/divorced/widowed	10 (43.50)	13 (56.50)	1.38 (0.58, 3.27)	.462

Educational status	No formal education	31 (41.30)	44 (58.70)	1.31 (0.77, 2.22)	.316
	Formal education	86 (35.0)	160 (65.00)	1	1
Educational status of the husband	No formal education	25 (31.60)	54 (68.40)	0.75 (0.44, 1.30)	.308
	Formal education	92 (38.00)	150 (62.00)	1	1
Occupational status	Government worker	21 (32.80)	43 (67.20)	1	1
	Merchant	25 (39.70)	38 (60.30)	1.35 (0.65, 2.78)	.421
	Housewife	59 (35.30)	108 (64.70)	1.12 (0.61, 2.06)	.719
	Private workers	12 (44.40)	15 (55.60)	1.64 (0.65, 4.11)	.294
Residency	Urban	71 (34.10)	137 (65.90)	1	1
	Rural	46 (40.70)	67 (59.30)	1.32 (0.83, 2.12)	.243*
Family size	2-4 family	95 (39.70)	147 (60.30)	1	1
	5 and >5	22 (26.80)	60 (73.20)	0.56 (0.32, 0,97)	.037*
Income in birr	Less than 2622	44 (49.40)	45 (50.60)	2.13 (1.29, 3.51)	.010*
	Greater than 2623	73 (31.50)	159 (68.50)	1	1
Parity	Primipara	61 (46.90)	69 (53.10)	2.13 (1.34, 3.34)	.001*
	Multipara	56 (29.30)	135 (70.70)	1	1
History of abortion	No	106 (37.20)	179 (62.80)	1	1
	Yes	11 (30.60)	25 (69.40)	0.74 (0.35, 1.57)	.437
Planned pregnancy	No	36 (57.10)	27 (42.90)	2.91 (1.66, 5.12)	000*
	Yes	81 (31.40)	177 (68.60)	1	1
Illness during pregnancy	No	101 (37.40)	169 (62.60)	1	1
	Yes	16 (31.40)	35 (68.60)	0.77 (0.40, 1.45)	.412
Follow up	No	13 (26.50)	36 (73.50)	1	1
	Yes	104 (38.20)	168 (61.80)	1.71 (0.67, 3.38)	.120*
Social support	Low	30 (53.60)	26 (46.40)	2.65 (1.39, 5.05)	.003*
	Moderate	47 (35.30)	86 (64.70)	1.13 (0.75, 2.10)	.383
	Strong	40 (30.30)	92 (69.70)	1	1
Number of new born	One child	110 (37.20)	186 (62.80)	1	1
	Two and more	7 (28.00)	18 (72.0)	0.66 (0.27, 1.62)	.364
Sex of child	Male	54 (34.40)	103 (65.40)	1	1
	Female	63 (38.40)	101 (61.60)	1.19 (0.75, 1.88)	.455
Desired sex of chid	No	28 (42.40)	38 (57.60)	1.37 (0.79, 2.39)	.259
	Yes	89 (34.90)	166 (65.10)	1	1
Stressful life events	No	67 (33.70)	132 (66.30)	1	1
	Once	16 (42.10)	22 (57.90)	1.43 (0.71, 2.91)	.319
	> once	34 (40.50)	50 (59.50)	1.34 (0.79, 2.27)	.275
Intimate partner violence	No	70 (31.40)	153 (68.60)	1	1
	Yes	47 (48.00)	51 (52.00)	2.01 (1.24, 3.28)	.005*

khat use	No	87 (34.70)	164 (65.30)	1	1
	Yes	30 (42.90)	40 (57.10)	1.41 (0.82, 2.43)	.209*
Alcohol use	No	101 (35.70)	182 (64.30)	1	1
	Yes	16 (42.10)	22 (57.90)	1.16 (0.58, 2.32)	.680
Multiple substance use	No	106 (35.70)	191 (64.30)	1	1
	Yes	13 (54.20)	11 (45.80)	1.52 (0.66, 3.52)	.323
Chronic medical illness	No	94 (35.60)	170 (64.40)	1	1
	Yes	23 (40.40)	34 (59.60)	1.22 (0.68, 2.20)	.500
Past history of mental illness	No	110 (37.50)	183 (62.50)	1	1
	Yes	7 (25.00)	21 (75.00)	0.55 (0.23, 1.35)	.193*
Family history of mental illness	No	108 (36.20)	190 (63.80)	1	1
	Yes	9 (39.10)	14 (60.90)	1.13 (0.47, 2.70)	.782
Stress due to Physical facilities	Lowest	42 (37.20)	71 (62.80)	1	1
	Moderate	37 (34.60)	70 (65.40)	0.89 (.51, 1.55)	.689
	Highest	38 (37.60)	63 (62.40)	1.02 (0.59, 1.78)	.945
Stress due to appearance and behavior	Lowest	38 (32.50)	74 (67.50)	1	1
	Moderate	27 (27.80)	70 (72.20)	0.80 (0.44, 1.44)	.462
	Highest	52 (48.60)	55 (51.40)	1.96 (1.14, 3.38)	.014*
Stress due to the parental role	Lowest	34 (33.00)	69 (67.00)	1	1
	Moderate	46 (40.70)	67 (59.30)	1.39 (0.80, 2.43)	.243*
	Highest	37 (35.20)	68 (64.80)	1.10 (0.62, 1.96)	.735
Gestational age	< 32 weeks	30 (38.50)	46 (61.50)	1.33 (0.75, 2.36)	.328
	32 –37 weeks	38 (39.60)	58 (60.40)	1.34 (0.78, 2.28)	.285
	>37 weeks	49 (32.90)	100 (67.10)	1	1
Mode of delivery	Vaginal	55 (32.50)	114 (67.50)	1	1
	Caesarean section	51 (43.60)	66 (56.40)	1.60 (0.98, 2.61)	.058*
	Instrumental	11 (31.40)	24 (68.60)	0.95 (0.43, 2.08)	.898
Current maternal complication	No	68 (31.80)	146 (68.20)	1	1
	Yes	49 (45.80)	58 (54.20)	1.81 (1.13, 2.92)	.014*
Counselling	No	68 (34.30)	130 (65.70)	0.79 (0.50, 1.26)	.320
	Yes	49 (39.80)	74 (60.20)	1	1
Hospital stay duration	<16 days	80 (35.60)	145 (64.40)	1	1
	>16 days	37 (38.50)	59 (61.50)	1.14 (0.69, 1.86)	.611
Birth weight in grams	<1500	11 (40.70)	16 (59.30)	1.92 (0.84, 4.43)	.123*
	1500 – 2500	56 (53.80)	48 (46.20)	3.27 (1.98, 5.40)	.000*
	>2500	50 (26.30)	140 (73.70)	1	1
	<1500	18 (42.90)	24 (57.10)	1.49 (0.74, 2.96)	.260

Current weight in grams	1500 -2500	43 (38.40)	69 (61.60)	1.23 (0.75, 2.03)	.406
	>2500	56 (33.50)	111 (66.50)	1	1
Being on oxygen therapy	No	40 (25.80)	115 (74.20)	1	1
	Yes	77 (46.40)	89 (53.60)	2.49 (1.55, 3.99)	.000*
Feeding status	Breast feeding	72 (35.50)	131 (64.50)	1	1
	Formula feeding	11 (30.60)	25 (69.40)	0.80 (0.37, 1.72)	.569
	Parenteral feeding	28 (56.00)	22 (44.0)	2.33 (1.09, 3.97)	.009*
	Multiple responses	6 (18.80)	26 (81.20)	0.42 (0.16, 1.07)	.068*
Reason for admission	Birth asphyxia & other perinatal complications	34 (39.50)	52 (60.50)	1	1
	The preterm birth complication and low birth weight	18 (34.00)	35 (66.00)	0.79 (0.38, 1.61)	.510
	Neonatal sepsis & Infections	29 (36.30)	51 (63.70)	0.87 (46, 1.63)	.663
	More than one reason for admission	23 (36.50)	40 (63.50)	0.88 (0.45, 1.72)	.707
	Other than the above neonatal condition	13 (33.30)	26 (66.70)	0.76 (0.34, 1.69)	.508

* Factors that have an association at p-value <0.25 1= reference category

Multivariable logistic regression analysis

Multivariable logistic regression analyses had revealed that younger mothers less than 25 years, being primipara, unplanned pregnancy, low social support, being severely stressed by appearance and behavior of the babies, low birth weight of the babies, being on oxygen therapy, and parenteral feeding of the neonate was significantly associated with psychological distress. Being younger age (less than 25 years) was about three times more likely to have psychological distress than those participants greater than 35 ages AOR = 2.96 95% CI (1.20, 7.32). Likewise, primipara mothers were two-half times more likely to have psychological distress with an AOR of 2.42 95% CI (1.34, 4.36) than multipara. Mothers who did not plan their pregnancy has nearly four times more likely to develop psychological distress AOR = 3.71 95% CI (1.81, 7.61).

Additionally, mothers who report having low social support were three times more likely to have psychological distress than those who had good social support with AOR= 3.22 95% CI (1.42, 7.29). Mothers who reported higher stress during their NICU visit to their infant's appearance and behaviors were three times more likely to develop psychological distress than those with low stress with AOR = 3.16 95% CI (1.57, 6.36). Mothers with whose birth weight of the neonate was less than 1500 grams and 1500 to 2500 grams were both four times more likely to develop psychological distress than mothers whose neonate was currently greater than 2500 grams with AOR = 3.85 CI 95% (1.44, 10.29) and 4.28 CI 95% (2.32, 7.92) respectively. Likely mothers whose neonates were over oxygen therapy at least once were three times more likely to have psychological distress than those who did not with an AOR of 2.78 with a CI of 95% (1.57, 4.93). Mothers whose neonates were on parenteral feeding were two-half times more likely to have psychological distress than breastfeeding with AOR = 2.41 95% CI (1.15, 5.05) (Table 6).

Table 6: Multivariable logistic regression analysis current maternal, neonate, and NICU environment-related characteristics factors predicted psychological distress in mothers whose neonates were admitted to NICU of public hospitals in Jimma town, southwest Ethiopia, 2021

Variables	Categories	Psychological distress		AOR (95%CI)	P-value
		Yes N (%)	No N (%)		
Age	16-25	79 (47.30)	88 (52.70)	2.96 (1.20, 7.32)	.019**
	26 -35	28 (24.30)	87 (75.70)	1.20 (0.45, 3.15)	.718
	36-44	10 (25.60)	29 (74.40)	1	1
Parity	Primipara	61 (46.90)	69 (53.10)	2.42 (1.34, 4.36)	.003**
	Multipara	56 (29.30)	135 (70.70)	1	1
Planned pregnancy	No	36 (57.10)	27 (42.90)	3.71 (1.81, 7.61)	.000**
	Yes	81 (31.40)	177 (68.60)	1	1
Social support	Low	30 (53.60)	26 (46.40)	3.22 (1.42, 7.29)	005**
	Medium	47 (35.30)	86 (64.70)	1.63 (0.85, 2.10)	.137
	Strong	40 (30.30)	92 (69.70)	1	1
Stress due to appearance and	Lowest	24 (27.60)	63 (72.40)	1	1
	Moderate	33 (38.80)	52 (61.20)	0.83 (0.40, 1.72)	.615
	Highest	27 (34.60)	51 (65.40)	3.16 (1.57, 6.36)	.001**

behaviors of babies					
Current weight in grams	<1500	11 (40.70)	16 (59.30)	3.85 (1.44, 10.29)	.007**
	1500 – 2500	56 (53.80)	48 (46.20)	4.28 (2.32, 7.92)	.000**
	>2500	50 (26.30)	140 (73.70)	1	1
On oxygen therapy	No	40 (25.80)	115 (74.20)	1	1
	Yes	77 (46.40)	89 (53,60)	2.78 (1.57, 4.93)	.000**
Feeding status	Breast feeding	72 (35.50)	131 (64.50)	1	1
	Formula feeding	11 (30.60)	25 (69.40)	0.75 (0.29, 1.91)	.549
	Parenteral feeding	28 (56.00)	22 (44.00)	2.41 (1.15, 5.08)	.020**
	Multiple response	6 (18.80)	26 (81.20)	0.36 (0.11, 1.17)	.089

** Factors that have an association at p-value <0.05 1= reference categories

CHAPTER SIX: DISCUSSION

In this study, the overall prevalence of psychological distress among mothers was determined to be 36.40%, 95% CI (31.15, 41.58) which was consistent with the findings of studies conducted in Nigeria, China, and USA which was 36.80%, 35.00%, and 38.00% respectively (35,37,39).

This finding is higher than the finding reported from Kenya by Mutua et. al, Kenya by Alice, Nigeria, and Qatar with the prevalence rate of 26.20%, 27.40%, 27.30%, and 30.00% respectively (36,38,40,61). This variation could be explained by the use of different sample sizes, study settings, demographics, and study populations. A study done in Kenya by Mutua et. al was done among 86 mothers who came for follow-up and 86 mothers whose neonates were admitted to NICU as a comparative group. They used Kessler 10 for screening psychological distress. In another similar setting in Kenya by Alice among preterm mothers, 135 were screened by DASS-21 with unknown cut-point which might underreport psychological distress. In the Nigerian study, those mothers were included only preterm who is stable and 60 postpartum mothers participated in the study while the higher probability of morbidity and mortality is high in our study which leads to psychological distress. In Qatar, the study was in outpatient mothers screened by DASS-21 who came for child immunization which is different from our study while our study was among inpatient mothers. Another possible explanation is that mothers in Qatar were different in sociodemographic were advanced age which their mean age was 32.65 while in our study the mean age was 27 years which is associated with psychological distress.

However, this study is lower than the studies done in Kenya and the USA with the prevalence of 75.6% and 64% respectively (18,40). The possible explanation for this difference might be due to the variation in the instruments and cut points used. In the USA study participants who scored above the 75th percentile on any of those parental stress scale (PSS), EPDS, State Anxiety Inventory (STAI) screening tools for the very preterm group were found a higher risk for psychological distress. The other reason might be sample size they used was 45 mothers of preterm neonates as a comparative while our

studies include 321 participants which their study might overestimate the prevalence of psychological distress. Furthermore, the Kenya study was included only 86 mothers of preterm neonates who stayed for a long period in the NICU to be assessed by Kessler 10 while in our study we include all mothers of neonates admitted to NICU who stay more than seven days in the hospital.

Many factors could attribute to the prevalence and associated factors among NICU mothers. Age is one of the important factors contributing to psychological distress (41–43). In this finding, the odds of having psychological distress among respondents who are aged less than 25 were three times higher as compared to those of those greater than 35 years which is consistent with studies conducted in Kenya, Qatar, and Boston USA (36,38,62). This might be because young mothers lack emotional maturity and coping skills. Furthermore, mothers of a younger age may have less experience and knowledge of how to deal with difficult events such as admission to the NICU.

In this study, unplanned pregnancy was revealed to be an independent predictor of psychological distress among respondents. The odds of having psychological distress among respondents with unplanned pregnancies were four times higher than respondents who planned their pregnancy. This work is supported by research conducted in Kenya, Qatar, and England (36,38,63). This might be due to having unplanned pregnancy itself might cause psychological distress further if neonates admitted to NICU it might exacerbate existing psychological distress. Furthermore, when socioeconomic burdens like increasing financial responsibilities were increased it was prone to more distress in the case of unplanned pregnancy. Additionally, psychological readiness for increasing financial responsibilities, and being motherhood were impaired in the context of admission of neonates to NICU.

Being the primipara mother was associated with maternal psychological distress in this study. Our study showed that primipara respondents had 2.5 times the odds of having depression than those of multipara. This is supported by a study conducted in the Norway and USA (64,65). This could be explained by lack of parenthood experience and fear of

becoming a mother might lead mothers to psychological distress. The other reason might be primipara mothers were have no experience dealing with specific stressful life events like an admission of a neonate to NICU which further leads mothers to psychological distress.

Poor social support was found to be strongly associated with psychological distress among NICU mothers in this study. In our study, the odds of having poor social support were three times more likely than those who have good social support which is consistent with a study conducted in Australia (66). Furthermore, another study conducted in the same country (Australia) (44) found that high social support is a protective factor for maternal psychological distress. This might be due to low social support leading mothers to a lack of competence which furthermore leads to psychological distress (67). The other possible explanation for this is most mothers stop their work during delivery which decreases their sense of competence within the NICU community. Admission of a neonate to NICU may need more financial care and more emotional support from another person. Unable to get enough social support from others, unable to communicate their emotions to others might cause a great deal of distress for those mothers.

In this study high stress due to the appearance and behaviors of infants was associated with maternal psychological distress. The odds of having psychological distress among respondents with high stress due to appearance and behavior are three times more likely than respondents with low stress. This study is supported by a study done in the USA (68). This might be in our study more than half (53.6%) of the infants were born prematurely (<37 weeks) infant while their color is different from term babies as they usually have apneic spells which may mothers not understand. This might lead the mothers to worry about the appearance of the babies (69). Another possible reason might be most mothers were separated from their infants, seeing different surgical areas, needles pierced on the skin of the, and fearful for their infant's survival, with only limited opportunities to contact may lead them to psychological distress (70).

In our study birth weight of the babies was significantly associated with psychological distressing. Those with low birth weights less than 1500 grams and between 1500 and 2500 were 3 and 4 times more likely to develop psychological distress when compared with those greater than 2500 grams respectively. This is in line with a study done in Nigeria (39). This might be because most mothers were believed low birth weight is associated with poor outcomes during neonates NICU admission. Additionally, low birth weight has been linked to maternal psychological morbidity in the third trimester of pregnancy, especially among women from low-income countries (71) which might be precipitated during infant admission to NICU.

Finding from this study showed being over oxygen therapy at least once was a predictor of maternal psychological distress. The odds of having psychological distress among respondents with those at least one day on oxygen therapy was three times more likely than respondents who did not experience any oxygen therapy. This is in line with a study done in Kenya (38) among preterm mothers. This might be being on oxygen therapy of the neonate indicate the severity of the illness among most mothers. This might be because most mothers have fear of losing babies lead the mothers to psychological distress. The other explanation is that most mothers can’t hold their infant during NICU visitation when the infant is on oxygen therapy and fear of losing babies among mothers might lead them to psychological distress.

This study identified a parenteral feeding of the neonates was associated with maternal psychological distress which is consistent with a study done in Kenya (38). The odds of having psychological distress among respondents with those on the parenteral feeding were 2.5 times more likely than respondents on breastfeeding. This might be due to NICU mothers' thoughts as their infant is suffering from a serious illness while the infant is on parenteral nutrition. Another explanation is that mothers who breastfed their children had less psychological distress. Breastfeeding improves a mother's mental health by stimulating the nervous system and down-regulating the hypothalamic, pituitary, and adrenal axis

circadian rhythms (72). Furthermore, breastfeeding increases strong mother-child bonding (23) while failing to do this was associated with psychological distress.

Limitation of the study

The potential limitations of this study are: Some of the instruments like stressful life events screening, abuse assessment used in this study required recall of past events, which could lead to recall bias. The majority of the study's variables were based on mothers' responses, which differed from mother to mother, with only self-report like family history of mental illness, substance use, and medical illness, resulting in social desirability bias. Social desirability bias may be caused by underreporting of sensitive subjects such as intimate partner violence and traumatic life events. We attempted to mitigate this by training interviewers to explain the purpose and significance of their participation in the study, interviewing them in isolated areas/in a place away from other people in the waiting areas to maintain their privacy, and informing them that their responses were confidential.

Some of the instrument used in this research was not validated in our context. We did Cronbach for those tools to mitigate this problem. It is difficult to generalize results to all NICU mothers since we use consecutive (nonprobability) sampling techniques.

CHAPTER SEVEN: CONCLUSION AND RECOMMENDATION

7.1. Conclusion

The findings of this study showed that more than one-third of the study respondents had psychological distress and factors like being age less than 25 years, unplanned pregnancy, being primipara, low social support, NICU environment high stress due to appearance and behavior of the babies, current weight of the babies, being on oxygen therapy at least once, and parenteral feeding of the neonates were found to be significantly associated with psychological distress among NICU mothers.

7.2. Recommendations

Based on the findings of this study the following recommendations were forwarded:

Recommendation to the psychiatry department

- It is better to strengthen liaison psychiatry between psychiatry and gynecology departments to pick easily those vulnerable for psychological distress.

Recommendation to NICU of JUMC and SGGH

- It is better if NICU staff target younger age, those who didn't plan pregnancy, first mothers, those with low social support.
- It is important to give health care teams (nurses, physicians, and other health teams) in Jimma town public hospitals' NICU training on how to detect early signs of psychological disturbance among mothers in NICU.
- Screening NICU mothers for mental health and engaging them with a potential source of financial, social, and psychiatric assistance through nurses and NICU staff is recommended.

For Jimma town health administrations

- It is recommended to design different strategies to give mental health awareness to postpartum mothers and its consequences on the development of the child.

- It is important to strengthen social support towards those who have poor social support in the community by arranging different social interactions between mothers after NICU discharge in the community is recommended.

For the minister of health

- It is very important if the minister of health to develop strategies and treatment guidelines among NICU mothers which help to pick signs and symptoms of psychological distress.

For researcher

- More research should be done on postpartum psychological distress among NICU mothers and follow-up mother-infant outcomes.
- More longitudinal studies are recommended to understand causality and effect factors associated with the psychological distress of NICU mothers in our country.
- Including important variables like past obstetrics history, birth spacing, the number of children in the house for multipara mothers and other independent variables which affect single mothers like as acknowledgment of the baby by fathers and support of the father of the baby is very important.

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ANNEXES QUESTIONNAIRE

APPENDICES

Jimma University Faculty of Medical Science

Information sheet

Title of the research project – psychological distress and associated factors among mothers whose neonate admitted to neonatal intensive care unit of Jimma town public hospitals, Jimma, Southwest Ethiopia.

Name of the principal investigator: - Habtamu Kebebe

Name of the organization- Jimma University

Name of the sponsor – Mettu University

The objective of the research project - To assess maternal psychological distress and associated factors among mothers whose neonate admitted to neonatal intensive care unit of Jimma town public hospitals, 2021

Procedure: We invite you to participate in this project. If you are willing to participate in this project, you need to understand and sign the agreement form. Then, you will be interviewed by the data collectors. You do not need to tell your name or to give your telephone number to the data collector and all your responses and the results obtained will be kept confidential by using a coding system whereby no one will have access to your response.
Harm - No harm will be inflicted because you participated in this study.

Confidentiality - The information provided will not be used for any purpose other than meeting the objective of the research.

Benefit - If you participate in this research project, there may not be a direct benefit to you but your participation is likely to help us to meet the research objective. Ultimately, this will help us to improve the quality of services provided to patients with bipolar disorder in this country.
Incentives: You will not be provided any incentives or payment to take part in this project.
Voluntary participation and withdrawal - Your decision to participate in this study are completely voluntary. If you decide to not participate in this study, it will not affect the care, services, or benefits to which you are entitled. If you decide to participate in this study, you may withdraw from your participation at any time without penalty.

Contact person - This research project will be reviewed and approved by the ethical committee of Jimma University. If you have any question or doubt regarding this study, you can contact the following individual:
Mr. Habtamu Kebebe Phone number: +251915990786 Email: habtkepsych2008@gmail.com

Dr. Bezaye Alemu phone number: +251 93 401 3738 Email: bezalemu.ba@gmail.com

Mr. Shimelis Girma phone number: 251 91 172 1438 Email: shemalisgirma@gmail.com

Your consent - I voluntarily agree to participate in this research program
Yes No
I understand that I will be given a copy of this signed consent form.

Signature of participant _____ Date _____

Name and signature of supervisor: _____Date_____

Name and signature of data collector: : _____Date_____

Parent or Husband Consent Letter for UNDER 18 years

Dear Parent or Husband: This letter provides information about a research study that will be conducted in Jimma town public hospitals by an investigator from Jimma University. The study will examine mothers of neonates in Jimma town public hospitals to understand psychological distress and its associated factors. I'm Habtamu Kebebe currently doing my master's degree in Integrated Clinical and Community Mental health at Jimma University. This study is being conducted in partial fulfillment of the requirements for a Master of Science in integrated clinical and community mental health and its titled as **"psychological distress and associated factors among mothers whose neonates admitted to Jimma town public hospitals.**

Why Your Daughter/wife Should Participate: There is a great need for educators and researchers to understand psychological distress and its associated factors among NICU mothers. The information that will be collected from your daughter/husband may help to increase our overall knowledge about psychological distress and its associated factors among NICU mothers.

Please Note: Your decision to allow your daughter/wife to participate in this research study must be completely voluntary. You are free to allow your daughter/wife to participate in this study or to withdraw her at any time. Your daughter/wife's decision to participate, not to participate, or to withdraw participation at any point during the study will in no way affect your daughter/wife.

Confidentiality of daughter/wife **Responses:** Your child's privacy and research records will be kept confidential to the extent of the law. Your daughter/wife's completed surveys will be assigned a code number to protect the confidentiality of her responses. Please note that although your daughter/wife 's specific responses on the surveys will not be shared with others.

What will be done With Your Child's Responses: the information from this study is used to inform educators, psychologists, and psychiatrists about the magnitude of psychological distress and its associated factors among NICU mothers. The results of this study may be published; however, the data obtained from your daughter/wife will be combined with data from other people in the publication. The published results will not include your daughter/wife's name or any other information that would in any way personally identify your child.

Contact person - This research project will be reviewed and approved by the ethical committee of Jimma University. If you have any questions or doubt regarding this study, you can contact the following individual:
Mr. Habtamu Kebebe Phone number: +251915990786 Email: habtkepsych2008@gmail.com

Dr. Bezaye Alemu phone number: +251 93 401 3738 Email: bezalemu.ba@gmail.com

Mr. Shimelis Girma phone number: 251 91 172 1438 Email: shemalisgirma@gmail.com

Consent for daughter/wife's to Take Part in this Research Study I freely give my permission to let my daughter/wife's take part in this study. I understand that this is research. I have received a copy of this letter and consent form for my records.

Age of daughter/wife's _____

Signature of parent/Husband's_____

Date_____

Annexes I. English version questionnaire
Part l: Questions related to the socio-demographic characteristics of the patient

No	Questions on socio-demographic	Responses	Remark
100	Age	_____	
101	Marital status	1. Married 2. Never married 3. Divorced /Widowed/ Separated	
102	Religion	1. Muslim 2. Orthodox 3. Protestant 4. Catholic 5. Wakefata 6. other	
103	Educational status	1. can't read and write 2. read and write 3. primary school 4. secondary and above	
104	Husband educational status	1. can't read and write 2. read and write 3. primary school 4. secondary and above	
105	Occupational status	1. Gov/ worker 2. Merchant 3. Housewife 4. Private workers	
106	Residency	1. Urban 2. Rural	
107	Family size in the house	_____	
108	Monthly income	_____	

PART II: Question to assess recent and past obstetrics history

No	Past obstetrics history questions	Response	Remark
200	Would you give birth before	1. Yes, 2. No	
201	Is there a previous history of abortion?	1. Yes, 2. No	
202	Was this pregnancy planned?	1. Yes, 2. No	
203	Is there a history of illness during pregnancy?	1. Yes 2. No	
204	Do you have an antenatal follow-up at a health institution during your current pregnancy?	1. Yes 2. No	

Part III: Questions will be used to assess the psychological distress by using the hospital anxiety and depression rating scale (HADS). Read each item and underline the reply which comes closest to how you have been feeling in the past week. Don't take too long over your replies: your immediate reaction to each item will probably be more accurate than a long thought response.

No	Questions	0	1	2	3	Remark
300	I feel tense or 'wound up'.	Not at all	From time to time, occasionally	A lot of the time	Most of the time	
301	I still enjoy the things I used to enjoy:	Definitely as much	Not quite so much	Only a little	Hardly at all	
302	I get a sort of frightened feeling as if something awful is about to happen:	Not at all	A little, but it doesn't worry me	Yes, but not too badly	Very definitely and quite badly	
303	I can laugh and see the funny side of things:	As much as I always could	Not quite so much now	Not so much now	Not at all	
304	Worrying thoughts go through my mind:	Only occasionally	From time to time but not too often	A lot of the time	A great deal of the time	
305	I feel cheerful:	Most of the time	Sometimes	Not often	Not at all	
306	I can sit at ease and feel relaxed:	Definitely	Usually	Not often	Not at all	
307	1 feel as if I am slowed down:	Not at all	Sometimes	Very often	Nearly all the time	
308	I get a sort of frightened feeling like 'butterflies' in the stomach:	Not at all	Occasionally	Quite often	Very often	
309	I have lost interest in my appearance:	I take just as much care as ever	I may not take quite as much care	I don't take so much care as I should	Definitely	
310	I feel restless as if I have to be on the move:	Not at all	Not very much	Quite a lot	Very much indeed	
311	I look forward with enjoyment to things:	As much as ever I did	Rather less than I used to	Definitely less than I used to	Hardly at all	

312	I get sudden feelings of panic:	Not at all	Not very often	Quite often	Very often indeed	
313	I can enjoy a good book or radio or TV program:	Often	Sometimes	Not often	Very seldom	

Part IV: Social support (Oslo Social Support Questionnaires (Oslo-3). The following questions ask about how participants experience his/her social relationship. Please, encircle the option that represents the participant's experience.

No	Oslo social support questions	Response	Remark
400	How many people are so close to you that you can count on them if you have serious personal problems? (Choose one option)	4) More than 5	
		3) 3-5	
		2) 1 or 2	
		1) None	
401	How much concern do people show in what you are doing? (Choose one option)	5) A lot of concern and interest	
		4) Some concern and interest	
		3) Uncertain	
		2) Little concern and interest	
		1) No concern and interest	
402	How easy is it to get practical help from are you get family or relatives if you should need them? (Choose one option)	5) Very easy	
		4) Easy	
		3) medium	
		2) Not easy	
		1) Very difficult	

Part V. Substance use assessment questionaries adopted from literature
Current substance use within last three months

No.	Questions on substance use	Response	Remark
500	Have you ever used substances in the past 3 months?	1. Yes 2. No	
501	If your response to Question 600 is "yes", which substance you used?	1. Khat 2. Alcohol 3. Cigarette 4. If other, specify _____	

Part VIII: questions used to assess the psycho-social status, family status, and health-related factors

No.	Questions	Response	Remark
Questionaries related to the health status of the patient			
600	Do you have any known medical problems that are diagnosed with health professionals?	1. Yes 2. No	

601	Do you have any known mental illness diagnosed with health professionals?	1. Ye 2. No	
602	Is there a family history of mental illness in the family?	1. Yes 2. No	
Questions related to the sex of the children (gender male bond)			
603	What is your child's current sex?	1. Male 2. Female 2. Both	
604	Number of new-borns	_____	
605	Do you get the desired child's sex?	1. Yes **2.** No	
606	Have you ever born a son?	1. Yes 2. No	
Assessing stressful events in life by using Stressful Life Events Screening Questionnaire			
607	Have you ever had a life-threatening illness?	1. Yes 2. No	
608	Were you ever in a life-threatening accident?	1. Yes 2. No	
609	Was physical force or a weapon ever used against you in a robbery or mugging?	1. Yes 2. No	
610	Has an immediate family member, romantic partner, or very close friend died as a result of accident, homicide, or suicide?	1. Yes 2. No	
611	When you were a child or more recently, did anyone (parent, other family members, romantic partner, stranger, or someone else) ever succeed in physically forcing you to have intercourse or oral or anal sex against your wishes (raped) or when you were in some way helpless?	1. Yes 2. No	
612	Other than experiences described in item 611, has anyone ever used physical force or threat to TRY to make you have intercourse, oral or anal sex, (raped) against your wishes or when you were in some way helpless?	1. Yes 2. No	
613	Other than experiences mentioned in items 611 -612, has anyone ever actually touched private parts of your body or made you touch theirs against your wishes, or when you were in some way helpless?	1. Yes 2. No	
614	When you were a child, did a parent, caregiver, or another person ever slap you repeatedly, beat or otherwise attack or harm you?	1. Yes 2. No	
615	Other than the experiences mentioned in item 709, have you ever been kicked, beaten, slapped around, or otherwise physically harmed by a romantic partner, date, sibling, family member, stranger, or someone else?	1. Yes 2. No	
616	Other than the experiences already covered, has anyone ever threatened you with a weapon like a knife or gun?	1. Yes 2. No	
617	Have you ever been present when another person was killed, seriously injured, or sexually or physically assaulted?	1. Yes 2. No	

618	Have you ever been in any other situation where you were seriously injured or your life was in danger (e.g., involved in military combat or living in a war zone)?	1. Yes 2. No	
619	Have you ever been in any other situation that was extremely frightening or horrifying that has not been covered above?	1. Yes 2. No	
	Question related to intimate partner violence (Abuse assessment screen scale)		
620	Are you presently emotionally or physically abused by your partner or someone important to you?	1. Yes 2No	
621	Are you presently being hit, slapped, kicked, or otherwise physically hurt by your partner or someone important to you?	1, Yes 2. No	
622	Are you presently being forced to have sexual activities?	1. Yes 2. No	
623	Are you afraid of your partner or any one of the following (circle if applicable): (husband), (ex-husband), (boyfriend), stranger.	1. Yes 2. No	
624	(If pregnant) Have you been hit, slapped, kicked, or otherwise physically hurt by your partner or someone important to you during pregnancy?	1. Yes 2. No	

PSS: NICU used to measure NICU environment-related stress and it is rated from Score "1" refers to non-stressing, "2" a bit stressing, "3" moderately stressing, "4" very stressing, and "5" extremely stressing. We would like you to indicate how stressed are you, if you didn't experience you can answer 1. By stressful means experience makes you feel upset, anxious, or tense.
Below are the different experiences of NICU environment sight and sounds

623	The presence of monitors and equipment	1. 2. 3. 4. 5.	
624	The constant noise of monitors and equipment	1. 2. 3. 4. 5.	
625	The sudden noise of the monitor's alarm	1. 2. 3. 4. 5.	
626	The other sick babies in the room	1. 2. 3. 4. 5.	
627	The large number of people working in the unit	1. 2. 3. 4. 5	
628	See a machine (respirator) breath for my baby	1. 2. 3. 4. 5.	
Describe the appearance and behavior of your babies while you are visiting.			
629	Tubes and equipment on or near my baby	1. 2. 3. 4. 5.	
631	Bruised areas, cuts or injuries on my baby	1. 2. 3. 4. 5.	
632	My baby's abnormal colour (e.g., pale or yellowish)	1. 2. 3. 4. 5.	
633	My baby's unusual or abnormal breathing	1. 2. 3. 4. 5.	
634	my baby's small size	1. 2. 3. 4. 5.	
635	My baby's wrinkled appearance	1. 2. 3. 4. 5.	
636	See needles and tubes in my baby	1. 2. 3. 4. 5.	
637	My baby is being fed by vein or tube	1. 2. 3. 4. 5.	
638	When my baby felt pain	1. 2. 3. 4. 5.	
639	when my baby looked sad	1. 2. 3. 4. 5.	
640	My baby's acid and fragile appearance	1. 2. 3. 4. 5.	
641	Restless and restless movements of my baby	1. 2. 3. 4. 5.	

642	My baby not being able to cry like other babies	1. 2. 3. 4. 5.	
How do you feel about your relationship with baby's and your parental role?			
643	To be separated from my baby	1. 2. 3. 4. 5.	
644	Do not feed my baby myself	1. 2. 3. 4. 5.	
645	Not being able to take care of my baby myself (for example, changing diapers, Give a shower)	1. 2. 3. 4. 5.	
646	can't hold my baby when I want	1. 2. 3. 4. 5.	
647	Feeling helpless and unable to protect my baby from pain and painful procedures	1. 2. 3. 4. 5.	
648	Feeling unable to help my baby during this time	1. 2. 3. 4. 5.	
649	Not having time to be alone like my baby	1. 2. 3. 4. 5.	

Part VII: Questions to assess current delivery-related factors?

No	Current delivery factors	Response	Remark
700	Gestation at times of delivery in weeks	----------	
701	What is the current mode of delivery?	1. Vaginal 2. Instrumental delivery 3. Caesarean section	
702	Do you have experienced maternal complications after delivery?	1. Yes 2. No	
703	Are you get any counselling about the readiness for birth complications?	1. Yes 2. No	

Part VIII: Questions related to neonate

Card Review

No.	Questions to assess babies' clinical factors	Response	Remark
800	Duration of stay in the hospital in weeks	_____	
801	Weight of baby during birth in grams		
802	Current weight in grams		
803	Is he/ she over oxygen therapy?	1. Yes 2. No	
804	What is the feeding status of the neonate currently?	1. Breastfeeding 2. Formula milk 3. Parenteral feeding 4. Multiple responses	
805	Reason for admission	_____ _____ _____	

Annexes II. Amharic version questionaries

እንደ ምን አደሩ/ወሉ?

ስሜ----------እበለሎ፡፡ ይህ የአዒምሮ ጥነት ስሆን ይህ ቅጽ ስላ ጥነቱ ታፈላግነትን፣ ጥቅሙና ጉደቱን እንድሁም ስለ ተሰተፊዉ መረጃ ሙሉ ለሙሉ ምሥጥራዊነቱ የተጠበቀ መሆኑን የስረዳል፡፡

ሀ) **ጥቅም**፣- ይህ የአዒምሮ ጥነት በጂማ ዩኒቨርስት ሜድከል ሴንተር የተዛበ ዉልደት በሚዎልዱት እነቶች ለይ የሚደርስ የስነ-ሌቦና መዛባትና ተያየገር ነገሮች ለይ የቶክርል፡፡

ለ) **ክኒወኔ**፤ እነቶች ቅጹን ይሞለሉ፡፡ ትክክክለኛ የልሆነ መልስ የለም፡፡

ሐ) **የጥነቱ ጉደት**፤ የለም

መ) **ጊዜ**፤ ጥየቄዉን ለመረደት ትንሽ ደቅቀ ይዎስደል

ሠ) **የጥነቱ ጥቅም**፤ ጥነቱ የስነ አዒምሮ አግልግሎት በተቆመችን ለመሸሻል ይረደል ቢሌን ኢነስበሌን፡፡

ረ) **ክፍያ**፤ ዬለሁም

በ) **ያመረጀ ሚስጥረዊነት**፤ የተገኘ መረጃ መልሥ ምስጥራውነቱን የተጠበቀ ነዉ፡፡ መረጃዉ ዎዳ ኮምፕታር ከገባ ቦሀላ በ ምስጥር የተከላከለና ከሌሎች መለየት አይቸልም፡፡ የኒል መረጃ ከመንም ገረ አይከፋልም፡፡

ስለዝ ጥነት ግንዘቤ ከአገኘከ ጥነቱ ላይ እንድት ሰተፍ ፍቀደኝነትን አጠይቀሎ፡፡ በዝ ጥነት የመሰተፍ ዉሳኔ፤ ያላመሰተፍ ወይም በፉለጉት ጊዜ መቆረጥ ይቸለሉ፡፡ በመሀል ቢየቆርጡ ይቸለሉ፡፡ ለጥነቱ የሚሰጡት መልስ ምስጥረዊነቱ የተጠበቀ ነዉ፡፡

እንድበራረሊሽ/ከ ወይም ጥየቄ ካለለክ/ሽ በፈለክ/ሽ ሣዓት መጠያቅ ይቸለል፡፡ ጥያቄ ከለለክ/ሽ ከታች በለ አድራሽ መጣየቅ ይቸለል፡፡

አድረሀሽ

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ፊቀድኝነትን መስጣት

ጥነቱ ዉስጥ የመሰተፍ ታፈለግነት ተረድቸሎ፤ ለማሰተፍ ፊቀደኛ ኔኝ፡፡

የጥነቱ ተሳታፍ ስም **ፊርማዉ** **ቀን**

_____ _____ _____

ጥነቱን ዬሚየኬሄድ ሰዉ ስም ፊርማዉ ቀን

ክፍል አንድ፣ የጥነቱ ተሰተፍዎች መህበረዊ ስነህዝብ እነ ኤኮኖሚ ጉደዮች መጠይቅ			
ተ/ቁ	ጥየቄዎች	አማራጭ መሌሶች	አስተያየት
100	ዕዬሜ	____	
101	የገቢቸ ሁኔታ	ı. የገበች 2. የላገበች 3. አግብታ የፈታች 4. በሎወ የሞተበት 5ታለየይቶ ዬምኖር	
102	ሃይመኖት	1. ሙስልም 2. ኦርቶዶክስ 3. ፖሮቴስታንት 4፣ ከቶሊክ 5. ወቄፈታ 6. ሌላ	
103	የትምህርት ደራጃሽ	1. ማንበብ እና መጻፍ አይችልም 2. ማንበብ እና መጻፍ ይችላል 3. አንደኛ ደረጃ ተምርዎል 4. ሁሌተኛ ደረጃ 5. ከዚያ በለይ ተምርዎል	
104	የበለቤትሽ ትምህርት ሁኔታ	1. ማንበብ እና መጻፍ አይችልም 2. ማንበብ እና መጻፍ ይችላል 3. አንደኛ ደረጃ ተምርዎል 4. ሁሌተኛ ደረጃ 5. ከዚያ በለይ ተምርዎል	
105	ሥራ	1. የመንግስት ሠረታኛ 2. ነገዴ 3፣ የቤት እመቤት 4. የጊሊ ስራ	
106	መኖርያ ቦታ	1. ካታመ 2. ገጠር	
107	የቤታሰብ ብዛት	----------	
108	የዎር ገቢ	----------	

ክፍል ሁሌት፡ ከዝ በፍት ስለ ነበራሽ ዎልድና ስላአሁኑ እርግዝነ የሚጠይቅ ጥያቄዎች

ቁ.	ጥያቄዎች	አማራጭ መሌሶች	አስተያየት
200	ከዝ በፍት ዎልዴሸል	ı. አዎ 2. አልዎላድኩም	
201	ከዚህ በፊት ፅንስ ወረዶቢሸል የቀል	1.አዎ 2. አያቅም	
202	ይህ እርግዝና የታቀደ ነበር?	1. አዎ 2. አይደሌም	
203	በእርግዝረና ግዜ ህመም ገጥሞሽ ነበር	1. አዎ 2. አለገጠሜኝም	
204	በአሁን እርግዝና ወቅት በጤና ተቋም ውስጥ የቅድመ ወሊድ ክትትል ነበረሽ?	1.አዎ 2. አይደሌም	

ክፍል III፡ ጥያቄዎች የሆስፒታል ጭንቀትን እና የመንፈስ ጭንቀትን (HADS) በመጠቀም የስነልቦና ጭንቀትን ለመገምገም ይጠቅማሉ። እያንዳንዱን ንጥል አንብብ እና ባለፈው ሳምንት ውስጥ ምን እንደተሰማህ በጣም ቅርብ የሆነውን ምላሹን አስምር። በምላሾችዎ ላይ ብዙ ጊዜ አይውሰዱ፡ ለእያንዳንዱ ንጥል የእርስዎ ፈጣን ምላሽ ምናልባት ከረዥም ጊዜ የአስተሳሰብ ምላሽ የበለጠ ትክክል ይሆናል።

		0	**1**	**2**	**3**
300	ውጥረት ወይም 'ቁስለኛ' ይሰማኛል.	አይደለም	ከጊዜ ወደ ጊዜ	አልፎ አልፎ	ብዙ ጊዜ
301	የምደሰትባቸው ነገሮች	አሁንም እደሰታለሁ፡	በእርግጠኝነት	ብዙም አይደለም	ትንሽ ብቻ በጭንቅ
302	አንድ አስከፊ ነገር ሊፈጠር እንደሆነ አይነት የፍርሃት ስሜት ይሰማኛል፡ በፍጹም	አዎ	ግን በጣም መጥፎ አይደለም	በጣም በእርግጠኝነት	በእርግጠኝነት እና በጣም መጥፎ

	ትንሽ ፣ ግን አያስጨንቀኝም።				
303	መሳቅ ችያለሁ እና የነገሮችን አስቂኝ ገጽታ ማየት እችላለሁ:	ሁልጊዜም የማልችለውን ያህል	አሁን በጣም ብዙ አይደለም	አሁን አይደለም	በጭራሽ
304	የሚያስጨንቁ ሀሳቦች በአእምሮዬ ውስጥ ይሄዳሉ፡	አልፎ አልፎ ብቻ	ከጊዜ ወደ ጊዜ	ግን ብዙ ጊዜ	አይደለም ብዙ ጊዜ
305	ደስታ ይሰማኛል፡	ብዙ ጊዜ	አንዳንዴ	ብዙ ጊዜ አይደለም	በጭራሽ
306	በተረጋጋ ሁኔታ ተቀምጬ መዝናናት እችላለሁ፡	በእርግጠኝነት	ብዙ ጊዜ	አይደለም	በጭራሽ
307	የዘገየሁ ያህል ይሰማኛል፡	በጭራሽ	አንዳንዴ	በጣም ብዙ ጊዜ	ሁልጊዜ ማለት ይቻላል
308	እንደ አንድ ዓይነት የፍርሃት ስሜት ይሰማኛል በሆድ ውስጥ ያሉ 'ቢራቢሮዎች':	በጭራሽ	አይደለም	ብዙ ጊዜ	በጣም ብዙ ጊዜ
309	ስለ መልኬ ፍላጎቴን አጣሁ	ልክ እንደ ቀድሞው	መጠን ጥንቃቄ አደርጋለሁ	ብዙም ጥንቃቄ አላደርግም ይሆናል	የሚገባኝን ያህል ጥንቃቄ አላደርግም።
310	በመንቀሳቀስ ላይ መሆን እንዳለብኝ ያህል እረፍት ማጣት ይሰማኛል፡	በጭራሽ	በጣም ብዙ አይደለም	በጣም ብዙ	በእርግጥም
311	ነገሮችን በደስታ እጓጓለሁ፡	እንደቀድሞው	ሁሉ ያደረኩት	ነገር ቢኖር	ቀድሞ ካደረኩት ያነሰ ነው
312	ድንገተኛ የፍርሃት ስሜት ይሰማኛል፡	በጭራሽ	ብዙ ጊዜ አይደለም	ብዙ ጊዜ	በጣም ብዙ ጊዜ
313	ጥሩ መጽሐፍ ወይም ሬዲዮ መደሰት እችላለሁ ወይም የቲቪ ፕሮግራም	ብዙ ጊዜ	አንዳንዴ	ብዙ ጊዜ አይደለም	በጣም አልፎ አልፎ

ክፍል አራት፡ የማህበራዊ ግንኙነት እና የግሌ ተሞክሮዎን የሚመለከት ጥያቄዎች

ተ.ቁ	የማህበራዊ ግንኙነት እና የግላ ተሞክሮዎን ይመሆከታላ	አማራጭ መሌሶች	አስተያየት
400	ምን ያህላ ሠው አዯጋ (ችግር) በሚያጋጥሞት ጊዜ በቅርብ የችግርዎ ተካፉይ ለሆኑላዎት ይችሉላ?	4. ከ 5 በሉይ 3. ከ 3-5 2. 1 ወይም 2 1. ምንም	
401	ምን ያህላ ሠው ስሆ እርስዎ ግዳ ይሆዋላ?	5.ብዙ4.ጥቂት 3. አርግጠኛ አይዯሆሁም 2. በጣም ትንሽ 1. ምንም	
402	ከቅርብ ጎረቤትዎ በተጨባጭ እርዱታ የማግኘት እዳላዎ ምን ያህላ ነው?	5.በጣም ቀላል 4. ቀላል 3. መጠነኛ 2. ከባድ 1. በጣም ከባድ	

ክፍል አሚስት፡ አደንዘዥ ዕፅ መጠቀም ገር የተያያዘ መጠይቅ

ቁ.	ጥየቄዎች	አማራጭ መሌሶች	አስተያየት
500	ሊሆፊት 3 ወራት ዉስት ንጥረ ነገሮችን ተጠቅመው የቀለ?	1. አዉ 2. የሇም	
501	መሌስዎ አዎ ከሆነ፣ የተኛዉ ንጥረ ነገር ተጠቅሚሌ	1. ጫት 3. አሌኮል 2.ሲጋራ 4. ላሊ _____	

ክፍል ስዲስት፡ ስለ ቤተሰብ ሁኔታ የሚጠይቅ ጥየቄ

ተ.ቁ.	ጥየቄዎች	አማራጭ መሌሶች	አስተያየት

ከሕመምተኛው የጤና ሁኔታ ጋር የተያያዙ ጥያቄዎች			
600	በጤና ባለሙያዎች የተረጋገጠ የታወቀ የህክምና ችግር ይኖርዎታል?	1. አዎ 2. ያለቢኝም	
601	በጤነ በላሞያ የተራገገጣ የአዕምሮ ህመም አለብሽ	1. አዎ 2. ያለቢኝም	
602	ከቤተሰብ ዉስጥ የአዕምሮ ህመም የአለበት ቤታሰብ አሌ	1. አዎ 2የለም	
ከልጆች ጾታ ጋር የተያያዙ ጥያቄዎች (gender male bond)			
603	በአሁኑ ዎሊዲሽ ስንት ልጅ ዎልዴሸል?		
604	የአሁኑ የልጆዎት ፆታ ምንድነው?	1. አዎ 2. አይዴለሁም 3፣ ሁሌቱም	
605	በአሁኑ ዎሊድ ስንት ልጅ ዎልዴሸል ?	----------	
606	በአሁን ዎሊድ የልጆተ ጾታ እንደ ፈለጉት አግንቶወል?	1. አዎ 2. የለም	
607	እስከ አሁን ወንድ ልጅ ወልደሽ ታውቃለሽ?	1. አዎ 2. የለም	
አስጨናቂ የሕይወት ክስተቶች ማጣሪያ መጠይቅን (Stressful Life Events Screening Questionnaire) በመጠቀም አስጨናቂ የሕይወት ክስተቶችን መገምገሚያ ጥየቄ			
608	ለሕይወት አስጊ የሆነ በሽታ ኢጋጥሞዎት ያውቃል?	1. አዎ 2. የለም	
609	ለሕይወት አስጊ የሆነ አደጋ ኢጋጥሞዎት ያውቃል?	1. አዎ 2. የለም	
610	አካላዊ ኃይል ወይም በመሣሪያ አስፈራርቶ ስርቆት ወይም በቡጢ ሊፈሙ ሞኪሮ የቀሉ?	1. አዎ 2. የለም	
611	አንድ የቅርብ የቤተሰብ አባል ፣ የፍቅር ኢጋር ወይም በጣም የቅርብ ጓደኛ በአደጋ ፣ በሰው መግደል ወይም ራስን በማጥፋት ምክንያት ሞቷልን?	1. አዎ 2. የለም	
612	በልጅነትዎ ወይም በቅርብ ጊዜዎ ማንም ሰው (ወላጅ ፣ ሌላ የቤተሰብ አባል ፣የፍቅር ኢጋር ፣ እንግዳ ወይም ሌላ ሰው) በልለበት ወይም አቅመቢስ በነበሩበት ጊዜ በአካል እንዲኖርዎ በማስገደድ ወሲባዊ ግንኙነት ወሲባዊ ግንኙነት ከፊለገቶ ዉጭ ታገዶ የቀሉ	1. አዎ 2. የለም	
613	በተ.ቁ 612 ላይ ከተገለጹት ልምዶች ውጭ ፣ ያለ ፍላጎትዎ ወይም በሆነ መንገድ አቅመቢስ በነበሩበት ጊዜ የግብረ ሥጋ ግንኙነት እንዲፈጽሙ ፣ (ሊደፈርሽ) ማንም ሰው አካላዊ ኃይል ወይም ዛቻ ተጠቅሞ ያውቃልን?	1. አዎ 2. የለም	
614	ከ612-613 ንጥሎች ውስጥ ከተጠቀሱት ልምዶች ውጭ ፣ በአካል በግልፅ በመንካት ወይም ያለፍላጎትዎ የእነሱን እንዲነኩ ያደረገ ፣ ወይም በሆነ መንገድ አቅመቢስ በሆነ ጊዜ ማንም ይኖር ይሆን?	1. አዎ 2. የለም	
615	በልጅነትዎ ጊዜ ወላጅ ፣ ተንከባካቢ ወይም ሌላ ሰው ደጋግሞ በጥፊ ይመታዎት ፣ በድብደባ ወይም በሌላ መንገድ ጥቃት ደርሶብዎት ወይም ጉዳት ያደርግብዎት ያውቃል?	1. አዎ 2. የለም	
616	በንጥል 8 ከተጠቀሱት ልምዶች ውጭ በፍቅረ ኢጋር ፣ ወንድም ወይም እህት ፣ የቤተሰብ አባል ፣ እንግዳ ሰው ወይም ሌላ ሰው ተመታሽ ፣ ተደብድቢሽ ፣ በጥፊ ተመታሽ ወይም በሌላ መልኩ የአካል ጉዳት ደርሶብሽ ያውቃል?	1. አዎ 2. የለም	
617	ከተሸፈኑ ልምዶች ሌላ ፣ ማንም ሰው እንደ ቢላዋ ወይም ሽጉጥ በመሳሪያ ያስፈራራዎት የሚየቅ ሰው አለ?	1. አዎ 2. የለም	
618	ሌላ ሰው ሲገደል ፣ ከባድ ጉዳት ሲደርስበት ወይም በጾታ ወይም አካላዊ ጥቃት ሲደርስበት አይቶ ያውቃሉ?	1. አዎ 2. የለም	
619	ከባድ ጉዳት በደረሰበት ወይም ሕይወትዎ አደጋ ላይ በነበረበት በማንኛውም ሁኔታ ውስጥ አጋጥመው ያውቃሉ (ለምሳሌ ፣	1. አዎ 2. የለም	

	በወታደራዊ ውጊያ ውስጥ የተሳተፉ ወይም በጦርነት ቀጠና ውስጥ የሚኖሩ)?		
620	ከዚህ በላይ ያልተሸፈነ እጅግ አስፈሪ ወይም አስፈሪ በሆነ ሌላ ሁኔታ ውስጥ ኢጋጥመውዎት ያውቃል?	1. አዎ 2. የለም	
የጠበቀ የባልደረባ ጥቃት (Abuse assessment screen scale)			
621	በአሁኑ ጊዜ የትዳር አገሮ ወይም በሌላ ሰው ለእርስዎ አስፈላጊ የሆነ ሰዉ የሚዘልፍሽ ወይም በአካል ይጎዱሽል?	1. አዎ 2. የለም	
622	በአሁኑ ጊዜ የትዳር አጋርሽ ወይም ለእርስዎ አስፈላጊ የሆነ ሰው አንችን የሚጎዱ ፣ የሚመቱ ፣ የሚገፈታሩሽ ወይም በሌላ መንገድ በአካል የምጎዱሽ አሉ?	1. አዎ 2. የለም	
623	በአሁኑ ጊዜ የግብረ ሥጋ ግንኙነት እንዲፈጽሙ ይገደዳሉ?	1. አዎ 2. የለም	
621	የትዳር አጋርዎን ወይም ከሚከተሉት ማንኛውንም ሰው (አስፈላጊ ከሆነ ይክበቡ) ያስፈራዎታል-(ባል) ፣ (የቀድሞ ባል) ፣ (የወንድ ጓደኛ) ፣ እንግዳ ።	1. አዎ 2. የለም	
622	(ነፍሰ ጡር ከሆኑ) በእርግዝና ወቅት የትዳር አጋርሽ ወይም ለእርስዎ አስፈላጊ በሆነ ሰው እርስዎ ተደብድበዋል ፣ በጥፊ ታመዎል ፣ ወይም በሌላ መንገድ አካላዊ ጉዳት ደርሶብዎታል?	1. አዎ 2. የለም	

PSS: NICU ከ NICU አከባቢ ጋር የተዛመደ ውጥረትን ለመለካት ጥቅም ላይ የዋለ ሲሆን ከ ‹1› አስጨናቂ ያልሆነን ፣ “2” ትንሽ አስጨናቂ ፣ “3” መጠነኛ ጭንቀት ፣ “4” በጣም አስጨናቂ እና “5” እጅግ በጣም ከፍተኛ ነው ። አስጨናቂ. ምን ያህል ጭንቀት እንዳለብዎ እንዲያመለክቱ እንፈልጋለን ፣ ካልተለማመዱ እርስዎ መልስ መስጠት ይችላሉ።። **ጭንቀት ማለት በልምድ ብስጭት ፣ ጭንቀት ወይም ውጥረት መለት ነዉ ።።**		
በ631CU አካባቢ ከእይታ እና ከተለያዩ ድምፆች ገር ያተየዙ ጥያቄዎች		
623	ተቆጣጣሪዎች እና መሳሪያዎች መኖራቸው ያስጨንቅሻል?	1. 2. 3. 4. 5.
624	የቁጥጥር እና ሌሎች መሳሪያዎች የማያቋርጥ ጫጫታ ያስጨንቅሻል?	1. 2. 3. 4. 5.
625	ድንገተኛ የቁጥጥር ጩኸት የማንቂያ ደውል ያስጨንቅሻል?	1. 2. 3. 4. 5.
626	በክፍሉ ውስጥ ያሉት ሌሎች የታመሙ ሕፃናት ያስጨንቅሻል?	1. 2. 3. 4. 5.
627	በክፍል ውስጥ የሚሰሩ ብዙ ሰዎች ያስጨንቅሻል?	1. 2. 3. 4. 5
628	ልጅሽ በማሽን (የመተንፈሻ መሣሪያ) ስትንፋስ ስትመለከች ያስጨንቅሻል?	1. 2. 3. 4. 5.
ልጅሽ በሚነበኙበት ጊዜ የልጂሽ ገጽታ እና ባህሪ ይግለጹ		
629	በሕፃን ልጂ ላይ ወይም አቅራቢያ ያሉ ቱቦዎች እና መሣሪያዎች ስትማለከች ያስጨንቅሻል?	1. 2. 3. 4. 5.
631	ልጅሽ ላይ የተጎዱ አካባቢዎች ፣ ቁስሎች ወይም ጉዳቶች ስትማለከች ያስጨንቅሻል?	1. 2. 3. 4. 5.
632	የህፃንሽ ያልተለመደ ቀለም (ለምሳሌ ፈዛዛ ወይም ቢጫ) ስትማለከች ያስጨንቅሻል?	1. 2. 3. 4. 5.
633	የልጅሽ ያልተለመደ ወይም ያልተለመደ አተነናፋስ ስትማለከች ያስጨንቅሻል?	1. 2. 3. 4. 5.
634	የልጅሽ ትንሽ መጠን መሆኑን ስትማለከች ያስጨንቅሻል?	1. 2. 3. 4. 5.
635	የልጅሽ የተሸበሸበ መልክ ስትማለከች ያስጨንቅሻል?	1. 2. 3. 4. 5.

636	በልጅሽ ውስጥ መርፌዎችን እና ቱቧዎችን ስትማለከች ያስጨንቅሻል?	1. 2. 3. 4. 5.	
637	ልጅሽ በደም ሥር ወይም በቱቦ እየተመገበ ስትማለከች ያስጨንቅሻል?	1. 2. 3. 4. 5.	
638	ልጅሽን ህመም ሲሰማው ስትማለከች ያስጨንቅሻል?	1. 2. 3. 4. 5.	
639	ልጅሽ ያዘና ሲመስሊሽ /ስትማለከች ያስጨንቅሻል?	1. 2. 3. 4. 5.	
640	የልጅሽ የተበላሸ ገጽታ ስትማለከች የስጫኒቅሽል	1. 2. 3. 4. 5.	
641	የልጅሽ እረፍት እና እረፍት የለሽ እንቅስቃሴዎች ስትማለከች ያስጨንቅሻል?	1. 2. 3. 4. 5.	
642	ልጅሽ እንደሌሎች ሕፃናት ማልቀስ አላመቸሉ ያስጨንቅሻል?	1. 2. 3. 4. 5.	
ከህጻን እና የወላጅነት ሚናዎ ጋር ስላለው ግንኙነት ምን ይሰማዎታል			
643	ከልጅሽ ጋር መለያየት ያስጨንቅሻል?	1. 2. 3. 4. 5.	
644	ልጅሽን በራሲሽ አለመማገቢሽ ያስጨንቅሻል?	1. 2. 3. 4. 5.	
645	ልጅሽን መንከባከብ አለመቻሊሽ (ለምሳሌ ፣ ዳይፐር መቀየር ፣ ገላዎን መጠብ) አላመቸሊሽ ያስጨንቅሻል?	1. 2. 3. 4. 5.	
646	ስትፈልግ ልጅሽን መያዝ አላመቸልሽ ያስጨንቅሻል?	1. 2. 3. 4. 5.	
647	ልጅሽን ከህመም እና ከአሰቃቂ ሂደቶች መጠበቅ አለመቸሊሽ ያስጨንቅሻል?	1. 2. 3. 4. 5.	
648	በዚህ ጊዜ ልጅሽን መርዳት በላማቸሊሽ ትጫነቀሌሽ?	1. 2. 3. 4. 5.	
649	ከልጅሽ ገር ብቸሽን ለመሆን ጊዜ ማጣትሽ ያስጨንቅሻል?	1. 2. 3. 4. 5.	

ክፍል ስሚንት፡ የአሁኑን ዎሊድ የሚመለከት መጠየቅ

ተ.ቁ.	**ጥየቄዎች**	**አማራጭ መሌሶች**	**አስተያየት**
700	በስንት ዎር ነበር ዬዎላድሽ		
701	ልጂሽን እነዬት ዎለድሽ?	1. በመሀጸን 2. በመሰራያ ታግሶ 3. በ ዖፕረየሶን	
702	በዎልድ ጊዜ የገጠማት ችግር አለ	1. አዎ 2. የለም	
703	በዎልድ ግዜ ልገጥምሽ ለሚችል የጤነ ችግረ ምክር አግኙቴሽል	1. አዎ 2. አለጋኛሁም	

ክፍል ዜጠኝ፡ ከህጻን ገር የተየያዘ ጥየቄ

ተ.ቁ	**ጥየቄዎች**	**መልስ**	**አስተያየት**
800	የሆስፒታል ቆይታ (ቀን)	--------	
801	ስዎለድ የነበረዉ ክብደት (ገራም)	--------	
802	አሁን የለዉ ክብደት (ግራም)	--------	
803	በለፎ ስሚንት በመታንፈሽ መሽን ስረ ነበር?	1. አዎ 2. የለም	
804	የአራስ ልጅ የመመገብ ሁኔታ በአሁኑ ጊዜ ምንድነው?	1. ጡት ማጥባት 2. ዎተት 3. በደምስር የሚሰጥ 4. ከአንድ በለይ መልስ	
805	ሆስብታል የታኛበት ምክንያት	_____	

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Annexes III. Afan Oromo version questionnaires
Annex 3: unkaa waliigaltee

Akkaam bultaan/ oltaan? Maqaan koo_____jedhaama. Haar'aa kan isiin barbaadeef qorannoo tokko gaggeessufi. Mata dureen qoraanichaas 'Jeeqama sammuu fi wantoota isaan walqabataan irratti Kan xiyyeefateedha. ("Psychological **distress and its associated factors among mothers whose neonate admitted to Jimma town public hospitals"**). Qoraannon kun waa'ee Fayyaa sammuu haadhooli wajjiin walqabaate irraatti gaggeefaama. Unkaan kun barbaachiisummaa, fayiida fi midhaa akkaasumaas oddeefanno isiin nuf kenniitan kamu kan icciitidhan qabaamu ta'uu kan hubaachiisudha. Qorannochi Kan geggefamuuf ulaagaawwan barnoota digrii lammaffaaf barbachisaan keessaa tokko waan ta'eefi.

Yeroo amma kana fedhiin qoraattooni wantoota Jeequmsa sammuu waliin wal qabatan hubachuuf fedha guddaa qabu. Odeeffannoon isiin irraa funanamu hubannoof beekumsa walii galaa nuti waa'ee jeequmsa sammuu fi wantoota isaa waliin qabatan irratti qabnu waan dabaluuf. Odeeffanoon qorannoo kanaan argamuu barsiisootaaf, ogeessota Xinsammuuf akkasumaas saaykataristoota waa'ee hammamtaa Jeequmsa sammuu fi waantoota jeequmsa sammuutiin wal qabatan kan hubachisuudha. Firiin qorannoo kanaas joornaloota garagaraa irratti maxxansamuu danda'a.

A. **Faayidaa:** qoraannoon kun hadhooli rakkoon fayyaa da'uumsa wajjiin walqabaate isaan qunnaame irraa ka'uun rakkoo xinsaammu(jeeqamaa sammuu) isaan irraa ga'uu qoraachuf gargaara. Rakkoon xinsammuu kun kan isaan irraa ga'ee yoo ta'ee garaa kutaa yaala sammuutti isiin ergiina.

B. **Adeemsa**: Haadhoolin unkaa kana ani guutu.

C. **Midhaa qoraanno:** midhaa hooma hin qabu

D. **Hirmaannaan qorannocha maal barbaada**: yoo isin heeyyamaama taatan af-gaaffii daqiiqaa muraasa keessatti ni rawwaatama.

E. **Faayidaa qorraanno kana**: Hubaanno rakkoo fayyaa sammuu waliin wal qabaate guddiisuf ni gargaara

F. **Kafaalti**: hinqabu

G. **Iccitii odeeffannoo eeguun walqabatee**: yeroo odeeffannoon funanamuutis ta'e booda iccitiin oddeeffanno keessanni guutumaan gutuutti kan egaameedha. Maqaan keessan hin

bareeffamu, odeeffannoon keessaan icciitidhan kan haadhooli biraa waliin waliitti makaame koodiin kennameefi olka'aama. Oddeefanno dhunfaa keessan nama biraa waliin hin qodaamu.

Gaaffii qorannoo kanaan wal qabatu yoo qabattan, lakkoofsa bilbilaa kana gadii fayaadamuun gafaachu dandeessu.
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Dr. Bezaaye Alamuu lakkoofsa bilbiila: +251 93 401 3738 Email: bezalemu.ba@gmai.com

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Af-gaaffiin dhiimmoota garagaraa kanneen akka odeeffannoo walii gala, gaaffilee 'Jeeqama sammuun wal qabaatan, haala da'uumsa yeroo darbee waliin wal qabaatan, gammaachu yookiin boohartii yeraa da'uumsa waliin wal qabaatan, haala maatii kee, gargaarsa hawaassumma waliin walqabataani fi gaaffiwwan wantoota araada Nama qabsiisaniin wal qabata of keessatti hammaata. Af gaaffii kanaa deebii barbaaddan keennu dandeessu, deebiiwwan kee iccitiin Kan eegamedha. Akkasumaas yoo fedhii keessan hin taane yeroo fedhii keessannitti addaa kuutu yookiin dhiisuu dandeessu. Icciiitin odeeeffanno keessani kan egaameedha.

Qorannoo kanatti hirmachuuf wantoota barbachisan hubadheera. Fedha kiyyaanis itti hirmaachuuf waliigaleera.
Mallaatto nama hitmaatu___ _____ Guyyaa _____

Maqaa fi mallaatto nama to'aatu _____ Guyyaa_____

Maqaa fi mallaatto nama unka guuchisuu: _____ Guyyaa_____

Lakk.	Gaaffilee	Deebii	Yaada
100	Umrii		
101	Ga'eela	1. Kan heerumtee 2.Kan hin heerumne 3, Kan hiikte /Kan irraa du'ee/ Kan waliin hin jiraane	
102	Amantii	1. Muslim 2. Ortoodoksi 3, Proteestanti 4. Katooliki 5.Waqeefaata 6. Kan bira	
103	Sadarkaa barnootaa kee	1. Kan dubbisuuf barreessuu hin dandeenye 2. Kan dubbisuu fi barreessuu dandaa'esu 3. sadarka tokkoffaa 4. sadarkaa lammaffaa fi isaa ol	
104	Sadarkaa barnootaa abbaa warraa kee	1. Kan dubbisuuf barreessuu hin dandeenye 2. Kan dubbisuu fi barreessuu dandaa'u 3. sadarka tokkoffaa 4. sadarkaa lammaffaa fi isaa ol	
105	Gita hojii kee	1. Hojjaataa mootumma 2. Daldalaa 3. Haandha mana 4.Hojii dhuunfa	
106	Iddoo jireenya	**1.** Magaaala 2. Badiiyaa	

107	Baay'innaa maatii	_____	
108	Gaali kan ji'aa		

Kutaa lammaaffa: Gaafilee haala da'uumsa yeroo dabree irraatti xiyyeefataan

Lakk.	Gaaffiwaan	Deebii	Yaada
200	Kan duraa da'iima godhaate beekta?	1. Yeroo jalqaabaf 2. Eyyeen da'een beeka	
201	Kanaa duraa ulfii siraa baa'ee beeka?	1. Eyyeen 2. Lakkii	
202	Ulfii ammaa kun ittii karoorfameeti?	1. Eyyeen 2. lakkii	
203	Yeroo ulfaa ammaa kanaa irraatti rakkoon fayyaa si mudaate jira?	1. Eyyeen 2. lakkii	
204	Mana yaalatti hordooffi yeroo ulfaa gootet jirta?	1. Eyyeen 2. lakkii	

Kutaa sadaffa: Gaafilee jeeqamaa sammuu (cinqaamu fi gaddaa cimaa) waliin wal qabaatan. Xinsammuun nama rakkoo garaa garaatin akkaa wal qabaatu ni amaanamaa. Haa ta'uuti haakimnii waa'ee kanaa yoo beeke isiin gargaaru danda'aa. Haalaa torbee darbee yaadachuun gaaffi oggeessi isiin gafaatu kan deebi jalqaaba sammuutti isiin dhufee deebisuuf yaalaa.

Lakk.	**Gaaffiwwaan**	**0**	**1**	**2**	**3**
300	Dhiphaachu yookiin cinqaamun isiinitti dhagaahamaa?	Nattii hin dhagaahamu	Darbe darbee	Yeroo baay'ee	Sirriitti yeroo baayee
301	Wantootni kanaa duraa sii gammaachisaan ammaa irraatti isiin gammaachisuu?	Ammaas akkuuma duriitti na gammaachisuu	Akkaa durii irraa xinnoo hir'aate jira	Xinnoo xinnoo naa gammaachisaa	Hoomtu naa hin gammaachiisu
302	Sodaan wantii haamman nattii dhufuuf jettee yaada?	Lakkii nattii hin dhagaahamu	Xinnoo nattii dhagaahamaa	Nattii dhagaahamaa	Sirriitti natti dhagaahamaa
303	Kolfuufi wantoota nama gammaachisuu ilaalu ni dandeessa?	Yeroo hundaa nan dandaa'a	Akkaa durii ta'uus baatu nan dandaa'a	Xinnoo nan dandaa'a	Hooma hin dandaa'u
304	Yaadni yeroo baayee dhiphiina namattii	Yeroo tokko tokkoo	Yeroo baay'ee tauu	Yeroo baayee	Baay'ee baay'ee natti deeddebi'aa

	kakaasan sammuutti sii dedeebi'aa?		baatus darbe darbee		
305	Isiin gamaadodhaa?	Yeroo baayee gamaadadhaa	Baayees ta'uu baatu gamaadadhaa	Gamaada miti	Hooma gammaachu hin qabu
306	Haala mijaata fi tasgaabbi qabu keessa ta'uu ni dandeessa?	Eyyeen nan dandaa'a	Yeroo baayee nan dandaa'a	Yeroo baayee hin dandaa'u	Hooma hin dandaa'u
307	Yeroo hojjii hojjaattan saffiisni keessan gadii wan hir'aate isiinitti fakkaata?	Hooma hin hir'aane	Darbee darbee	Yeroo baayee	Baayee baayee hir'aate natti fakkaata
308	Naannoo garaa keetti riffaachu fi jeqaamu sittii dhagaahamaa?	Hoomtu natti hin dhagaahamu	Darbe darbee	Yeroo baayee	Baayee baayee natti dhagaahaama
309	Haalaa uffaanna keessannif iddoo kennu dhistaani?	Akkuuma durittaan uffaadha	Iddoo xinnoon kennaaf	Hangaa barbaachiisu keenna hin jiru	Hooma kennaa hin jiru
310	Akkaa iddoo tokko deemuuf kataani sinniiti fakkaate tasgaabauuf ni rakkaatu?	Lakkii hin rakkaadhu	Baayee hin rakkaadhu	Yeroo baay'ee na rakkiisa	Baay'ee baay'ee na rakkiisa
311	Yeroo dhufuu gammaachun ni egduu?	Eyyeen akkuuma duriittan gammaachunaan ega	Haanga duriis ta'uu baatus nan egaa	Haanga duriiti gadiiti gadiittan egaa	Hooma gammaachun hin eguu
312	Akkaa tasa riffaachu, dhiphaachun sittii dhagaahaama?	Hooma nattii hin dhagaahamu	Darbe darbee nattii dhagaahama	Baayee natti dhagaahama	Baayee baayee natti dhagaahama
313	Sagaanta Tv yookiin raadiyootti ni gamaadu?	Eyyeen yeroo baayee nan gamaada	Eyyeen xinnoo hir'aatus nan gamaada	Darbee darbee	Baayee darbee darbee

Kutaa arfaaffa. Gaaffilee kanneen armaan gadii sadan degersa hawwasummaa kee waliin kan wal qabataniidha. Filannoo sii waliin deemuu filaadha.

Lakk	Gaaffiiwan	Deebii	Yaada
400	Namoota meeqatu baayee sitti dhiyaata kan gaafa rakkoo cimaa siif birmaachuu danda‘an? Rakkoolee dhuunfaa(tokko filadhu)	1, hin jiru 2. tokko ykn lama 3, sadi hanga shanii 4. shanii ol	
401	Wantoota ati hojeecha jirtuuf namootni xiyyeeffannoo akkamii kennu (tokko filadhu)?	5, xiyyeefannoo fi fedhii baayee 4, xiyyeefannoo fi fedhii muraasa 3. hin beeku 2.xiyyeefannoo fi fedhii xiqqoo 1. xiyyeefannoo fi fedhii hin qaban	
402	Hangam Deggersa olloota kee irraa argachuu dandeessa yoo barbade?	5. baay‘ee salphaa dha 4. salphaa dha 3. hin danda‘ama 2. ni cima 1. baay‘ee cima	

Kutaa shanaffa: gaafilee araadaan waliin wal qabaatan

Lakk.	Gaaffiwaan	Deebii	Yaada
500	Ji‘oottan sadan darban keessa wantoota araada nama qabsiisan fayaadamtee beektaa?	1. eeyyee 2. lakkii	
501	Deebiin kee eeyyee yoo ta‘e maal fayyadamta?	1. caatii 2.siijaraa 3. Alkoolii 4. kan biroo _____	

Kutaa jahaffa: gaafilee waa’ee maatii irraatti xiyeefaate

Lakk.	Gaffiilee	Deebii	Yaada
Gaffiilee Fayyaa hadhooli waliin wal qabaataan			
600	Dhukkuubi qama keessa ogeessa fayyaan beekame yeroo ammaa qabdu jira?	1. Eeyyee 2. Lakkii	
601	Ati dhukkuuba sammuu oggeessa fayyaan beekame qabda?	1. Eeyyee 2. Lakkii	
602	Maatii keessan keessaa namni dhukkuuba sammuu ogeessan beekaamu qabu jira?	1. Eeyyee 2. Lakkii	
Gaffiile saala da’iima waliin wal qabaatan (male gender bind)			
603	Ammaa da’iima meeqa deesse?	----------	

604	Saalaa da'iima keeti?	1. Dhiira 2. Durbaa 3, Lachu	
605	Saala da'iimaa keeti gamaadde jirta?	1. Eeyyee 2. Lakkii	
606	Dhiira deesse beekta?	1. Eeyyee 2. Lakkii	
Gaffiile rakkoo jireenya cimaa waliin wal qabaatan (**Stressful Life Events Screening Questionnaire)**			
607	Dhukkuubni lubbuu keetif hamaa ta'ee sii qunnaamee beeka?	1. Eeyyeen 2. Lakkii	
608	Balaan lubbuu keetif hamaa ta'ee sii qunnaame beeka?	1. Eeyyeen 2. Lakkii	
609	Sii samuuf yookiin haatuf Meesha waraana yookiin humnaa sirraatti fayaadamaani beeku?	1. Eeyyeen 2. Lakkii	
610	Maati sittii dhiyoo yookiin jalaalle kee yookiin hiriiyan sittii dhihoo balaa taasan, namni ajjeesse yookiin of ajjeesse beeka?	1. Eeyyeen 2. Lakkii	
611	Da'iimummaa keeti yookiin yeroo dhihootti iddoo ati ofiirra ittiisu hin dandeenyeeti (maatiidhan, nama sittii dhihaatun yookiin firaan yookiin jalaalle keen, nama biraatin) otoo atii hin barbaadi humnaan gudeedamtee beektaa?	1. Eeyyeen 2. Lakkii	
612	Gaffii 612 alatti namni sii sodaachiisun yeroo atii humna hin qabneetti sii gudeeduf yaalee beekaa?	1. Eeyyeen 2. Lakkii	
613	Gaffii 612-613 alattii yeroo ati humna hin qabneett namni fedhii kee malee qama kee yookiin kan isaa dirqaaman sii tuqe yookiin tuksiise beekaa?	1. Eeyyeen 2. Lakkii	
614	Yeroo atii da'iima turteetti, matiin kee, namni sii guddiisu yookiin namni bira, irraa deddeebin sii kabaale, sii rukkuute yookiin sii midhee beeka?	1. Eeyyeen 2. Lakkii	
615	Gaffii kanaa olii alaatti matiin kee, jalaallen, kessuumman yookiin namni ati ittii dhiyaatu sii rukkuute, dhiite yookiin si kabaalee beeka?	1. Eeyyeen 2. Lakkii	
616	Gaffiin kana oliitti tuqaamanin alattii namni meeshaa akkaa qawweetin yookiin albeetin sii sodaachiise beeka?	1. Eeyyeen 2. Lakkii	

617	Yeroo namni ajjeefaamu, midhaa cimaan irraa gahu, arraabsaamu yookiin rukkutaamu argiite beekta?	1. Eeyyeen 2. Lakkii	
618	Jireenya kee keessaatti wanti lubbuu keetiif sodaachiisu ykn midhaa qamaa cimaan sirraa gahu jiraatte beekta? (fknyf waraana ciima yookiin naannoo waraana cimaa keessa jiraate beekta?)	1. Eeyyeen 2. Lakkii	
619	Gaffiiwwan gafaatamteen allaatti haalli baay'ee nama sodaachiisu yookiin garmaale ulfaata ta'ee sii qunnaame beeka?	3. Eeyyeen 4. Lakkii	
Gaafiilee hacuuca nama sitti dhiyaatu ilaalaatu (Abuse assessment screen scale)			
621	Abbaa warraa kee yookiin namni siif baayee barbaachisu yaadan yookiin qaaman sii midhe beeku jira?	1. Eeyyee 2. Lakkii	
622	Abbaan warraa kee yookiin namni siif baayee barbaachisu si kabaale, si dhitee, si ciniine yookiin midhaa qama sirraa gesiisee beeku jiraa?	1. Eeyyee 2. Lakkii	
623	Bara darbee keessa walqunaamtii saalaf dirqiisifaamte beektaa?	1. Eeyyee 2. Lakkii	
624	Abbaa warraa kee yookiin namni atii sodaatu jiraa? Ittii marsii barbaachisa tanaan. Hiriiya kee ishee duri, abbaa warraa kee duraani, abbaa warraa kee.	1. Eeyyee 2. Lakkii	
625	Yeroo ulfaa tateetti abbaan warraa kee yookiin namni siif baayee sii barbaachisu si kabaala, si dhitee, si ciniine yookiin midhaa qama sirraan gesiisee beeku jiraa?	1. Eeyyee 2. Lakkii	

PSS: NICU'n dhiphiinna naannoo NICU wajjiin wal qabaatan safaaruf gargaara. Dhiphiinna jechuun mudaanno sii arsuu, sii cinquu yookiin sii dhiphiisuudha. Kanaaf yeroo da'iimaa kee ilaaluuf dhuftuutti hangaam akka dhiphaate 1. Lakkii nan dhiphiisu 2. Xinnoo na dhiphiisa 3. Jiddigaleessan na dhiphiisa 4. Baayee na dhiphiisa 5. Baayee baayee na dhiphiisa **jeechun deebii sii ibsuu filaadhu.**

Gaffiiwwaan sagaalee fi wantoota naannoo NICU wajjiin walqabaatani argaamaniidha.

626	Meeshaale fi wantootni to'aannaf barbaachisaan jiraachun si dhiphiisa?	1. 2. 3. 4. 5.	
627	Sagaale dhabaataa meeshaale fi sagaale wantoota to'aannaf barbaachisaani jiraachun si dhiphiisa?	1. 2. 3. 4. 5.	
628	Sagaaleen tasaa to'aannaa da'iimanif oluu jiraachun si dhiphiisaa?	1. 2. 3. 4. 5.	
629	Da'iima kee cinaa da'iimtii bira kan dhukkuubsatu jiraachun si dhiphiisa?	1. 2. 3. 4. 5.	
630	Namootni baayeen hojjiif achii jiraachun isaani dhiphiisa?	1. 2. 3. 4. 5	
631	Da'iimti kee meeshan hargaanun ishee sii dhiphiisa?	1. 2. 3. 4. 5.	
Yeroo da'iimaa kee ilaaluf deemtu ammaalli fi bifaa isaaa akkaamitti akkaa argaattte ibsii			
632	Meeshan yookiin ujjuumoon cinaa yookin da'iima kee irraa jiraachun si dhiphiisaa?	1. 2. 3. 4. 5.	
633	Madaan, iddoon muraame da'iima kee irraatti argun sii dhiphiisaa?	1. 2. 3. 4. 5.	
634	Biftii mucaa keeti jijjiiramun (fkn boora taun) si dhiphiisaa?	1. 2. 3. 4. 5.	
635	Haalli hargaansu sirrii hin tane mucaa kee irraati arguun si dhiphiisaa?	1. 2. 3. 4. 5.	
636	Ulfaatinni da'iima kee xinnoo ta'uun si dhiphiisaa?	1. 2. 3. 4. 5.	
637	Qaamni da'iima keeti waliitti kottoonfachuun sii dhiphiisaa?	1. 2. 3. 4. 5.	
638	Da'iima kee irraati lilmoo fi ujjuumo arguun sii dhiphiisaa?	1. 2. 3. 4. 5.	
639	Da'iimti kee hiddaa dhigaan soraachun si dhiphiisaa?	1. 2. 3. 4. 5.	
640	Gaafa da'iimti kee dhukkuubbin itti dhagaahamu sii dhiphiisaa?	1. 2. 3. 4. 5.	
641	Gaafa da'iimtii kee gaaddu si dhiphiisaa?	1. 2. 3. 4. 5.	
642	Bifaa sirrii hin tane ykn kan hin baraatamnee arguun si dhiphiisaa (fnkf boora, ?	1. 2. 3. 4. 5.	

643	Da'iimti kee boqoonna dhaabuun, yeroo hundaa sochoo'un sii dhiphiisaa?	1. 2. 3. 4. 5.	
644	Da'iimtii kee akkaa da'iiman biraa bohuu dhabuun si dhiphiisaa?	1. 2. 3. 4. 5.	
Yeroo da'iima kee yeroo wal argiitu walittii dhufeenyi keefi da'iima ketii maal fakkaata akkaa haadha da'iimatti?			
645	Da'iima kee irraa addaa baahun si dhiphiisaa?	1. 2. 3. 4. 5.	
646	Da'iima kee soraachiisu dhabuun si dhiphiisaa?	1. 2. 3. 4. 5.	
647	Da'iima keef kunuunsa gochuu dhabuun si dhiphiisaa (fknyf uffata jijjiiru, dhiquu?	1. 2. 3. 4. 5.	
648	Yeroo barbaadeeti da'iima kee baachu dhaabun si dhiphiisaa?	1. 2. 3. 4. 5.	
649	Da'iimaa kee dhukkuubbi fi wantoota dhiphiisan irraa baraaru dhaabun si dhiphiisaa?	1. 2. 3. 4. 5.	
650	Yeroo kanaati da'iima kee gargaaru dhaabun si dhiphiisaa?	1. 2. 3. 4. 5.	
651	Da'iima kee waliin kophaa ta'uu dhaabun si dhiphiisaa?	1. 2. 3. 4. 5.	

Kutaa torbaaffa: Gaafiiwan ittii anaan haala daa'umsaa fi yeroo ulfaa waliin wal qabaata

Lakk.	Gaafiwaan	Deebii	Yaada
700	Da'uumsi kee torbee meeqa boode ture?	1. Eyyeen 2. Lakkii	
701	Yeroo da'uumsa akkaamitti deesse?	1. Karaa umaamaan/karaa qamaa walhoormaatan 2. Meeshan gargaaramtee 3. Baqaaqsaani yaalun	
702	Yeroo da'uumsa raakkon fayyaa walxaxaa sii mudaateraa?	1. Eyyeen 2. Lakkii	
703	Yeroo da'uumsa rakkoo fayyaa walxaaxa ta'ee sii qunnaamu dandaa'uf gorsaa argaatteeta?	1. Eyyeen 2. Lakkii	

Kutaa kurnaaffa: gaafiilee haala da'iima waliin wal qabaate

Lakk.	Gaafiilee	Yaadaa	Yaada
800	Hospiitaala keessaa hangaam turtaan?	_____	

801	Ulfaatiina da'iimaa yeroo dhaalatu hangaam ture		
802	Ulfaatiina da'iimaa yeroo ammaa		
803	Torbe darbee da'iimtii kee meeshaa hafuura bafaachisuu (oxygen) jala jiraa ture?	1. Eeyyeen 2. Lakkii	
804	Da'iima kee maalin soraacha jira?	1. Harmaa hadhaa 2. Lilmoon soraacha jira 3. Aannaan dhugaa jira 4. kan biraa	
805	Sabaabbi da'iimti hospitaala ciseef	_____ _____	

DECLARATION

I, the undersigned, declare that this thesis is my original work, where my work is indebted to the work of others, it has not been accepted or presented for a degree in this or any other university, and that all sources of materials used for the thesis have been fully acknowledged.

Name: Habtamu Kebebe Assefa (BSC)

Signature: _____

Name of the institution: Jimma University

Date of submission: _____

This thesis has been submitted for examination with my approval as a university advisor

Name and Signature of the first advisor

BEZAYE ALEMU (MD, ASSISTANT PROFESSOR, PSYCHIATRIST)
Signature _____ Date_____

Name and Signature of the second advisor

SHIMELIS GIRMA (MSC, PH.D. FELLOW)
Signature _____ Date_____

APPROVAL SHEET

The undersigned examining committee certify that the thesis presented by Habtame kebebe entitled PSYCHOLOGICAL DISTRESS AND ASSOCIATED FACTORS AMONG MOTHERS WHOSE NEONATES ADMITTED TO THE NEONATAL INTENSIVE CARE UNIT OF PUBLIC HOSPITALS IN JIMMA TOWN, SOUTHWEST ETHIOPIA, 2021, submitted to Jimma University Institute of Health Department of Psychiatry in partial fulfilment of the requirement for master degree in integrated clinical and community mental health, compiles with the regulation of university and meet the accepted standards with respect to originality and quality.

Place of submission: Department of Psychiatry Institute of health

Jimma University

Date of submission_____

Student name: Habtamu Kebebe signature _____ date _____

Research advisor _____

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2. _____ Signature _____ date _____

External examiner

_____ Signature _____ date _____

Internal examiner

_____ Signature _____ date _____