THE FEASIBILITY AND EFFECT OF SUPPORTIVE COUNSELING ON THE PSYCHOLOGICAL WELLBEING OF MOTHERS IN THE NEONATAL WARDS OF THE UNIVERSITY COLLEGE HOSPITAL, IBADAN

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DECLARATION

I hereby declare that this research project is my original work and that it has not been submitted in part or whole to any other institution for the attainment of a degree or diploma.

Where other sources of information have been used, the authors were duly acknowledged and listed in the references.

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CERTIFICATION

I hereby certify that this research project was written by Dr. Olufemi O. Oyekunle, a student of Centre for Child and Adolescent Mental Health, University College Hospital, University of Ibadan and has been reviewed and approved.

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DEDICATION

This research project is dedicated first and most importantly to God Almighty who saw me through the sleepless night and completion of the program.

To my wife Ofure and my children Ifeoluwa and Oluwadara for their support, care, and love they have shown me during all this years and throughout the period of this program

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KEY TO ABBREVIATIONS (ACRONYMS)

ATVV: Auditory-tactile-visual-vestibular (ATVV) intervention

EPDS: Edinburg postnatal depression scale

HIV: Human immunodeficiency virus

IES-R: Impact event scale Revised

KMC: Kangaroo mother care

LAMIC: Low and Middle- income Countries

LV: Listening Visit

NICU: Neonatal intensive care unit

PERCS: Program to Enhance Relational and Communication Skills

PSS: NICU: Parental stressor scale: Neonatal intensive care Unit

PERCS-NICU: Program to Enhance Relational and Communication Skills-Neonatal Intensive

               Care Unit (PERCS-NICU)

SCBU: Special Care Baby unit

WHO: World Health Organization

Abstract

Background: Current evidence indicates that admission of a baby into the neonatal care unit after delivery can predispose a woman to different kinds of psychological distress. The psychological distress that occurs during this period might be transient or can last for a longer time depending on the type of interventions given to them. Among mothers in the neonatal unit, the mental health challenges they could encounter include postpartum blues, depression, anxiety, post-traumatic stress disorder, adjustment disorder and parent-infant interaction problems. Psychological interventions have been shown to be effective in improving the mental health of mothers in the neonatal care unit. However, there is a paucity of studies assessing the feasibility of these type of in interventions amongst mothers in the neonatal care in Nigeria.

Methodology: This was a quasi-experimental study design involving an intervention group as well as a control group at University College Hospital. The 20 mothers in the intervention group received 2 sessions of supportive counseling a week apart while the 20 mothers in the control received no intervention apart from the regular care of their baby. The outcome measures, Parental Stressor Scale: Neonatal Intensive Care Unit (PSS: NICU), Edinburg Post Natal Depression Scale (EPDS) and Impact Event Scale-Revised (IES-R) were administered by a blinded assessor to both groups at baseline and immediately after the second session (1 week after baseline). A Client Satisfaction Questionnaire was also administered separately to the intervention group after obtaining the post-intervention outcome measures. Data was analyzed using Statistical Package for Social Sciences (SPSS 22). Sociodemographic variables were presented using frequency tables. Difference in sociodemographic characteristics between the intervention group and control group was examined using t-test for continuous variables and chi-square for categorical variables. Difference in mean scores between groups at baseline and at post intervention were examined with

student t test. The treatment effect was determined with Analysis of covariance (ANCOVA) to compare mean post intervention outcomes between the groups while controlling for baseline scores and other confounders.

Results: The intervention group and the control group were well matched on socioeconomic and background medical factors. Within-group analysis at baseline and post-intervention for intervention group showed a statistically significant reduction in mean scores of EPDS (p<0.001), IES-R (p< 0.001) and PSS: NICU (p < 0.001). Similarly, within-group analysis at baseline and post-intervention for the control group showed a statistically significant reduction in the EPDS score (p=0.004), IES-R score (p=0.008) and PSS: NICU (p=0.018). However, after controlling for baseline scores with ANCOVA, significant intervention effect was identified for only EPDS and IESR but not for PSS: NICU. The treatment effect sizes Cohen's d was 2.0 for EPDS and 0.7 for IES-R respectively. All the mothers were either satisfied (70%) or very satisfied (30%) with the intervention using the client satisfaction questionnaire (CSQ). Further qualitative feedback looking at the greatest worries of mothers in the neonatal care unit showed that the mothers were also stressed by other practical difficulties such as the physical navigation of the activity of the Hospital environment including having to climb several flights of stairs and financial difficulties.

Conclusion: This supportive counseling intervention for mothers in the neonatal unit showed a significant treatment effect by reducing their depressive and post-traumatic stress symptoms with large to moderate effect sizes. If these findings are confirmed by larger Randomized Controlled Trials, the type of brief psychological intervention programs like the current study should be offered to mothers in neonatal units in Nigeria to help reduce their depressive and post-traumatic symptoms. Training or Organization of the workshop for neonatal care health workers will also

assist in scaling up services for maternal mental health.

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CHAPTER ONE

INTRODUCTION

1.1.Background

The World Health Organization defines maternal mental health as ''a state of well-being in which a mother realizes her own abilities, can cope with the normal stresses of life, can work productively and fruitfully and is able to make a contribution to her community(World Health Organization, 2004)'(Herrman H, 2007). Accomplishing this optimal functioning can be difficult based on the sociocultural norms in the society. Common mental disorders such as anxiety and depression are the third leading causes of the disease burden globally for women between 14 and 44 years of age (Mayosi et al 2009).

Depression affects approximately 19% of all postpartum women and mounting evidence indicates an increased risk for mothers of preterm infants, with prevalence estimates ranging from 28% to 67%(Siewert, Cline and Segre, 2015). Depression being the most common form of emotional distress during and after pregnancy is a public health priority associated with high occurrence and poor child development (Fisher J *et al* 2012). About 1 in 5 women are being diagnosed with depression in low and middle-income countries with the prevalence of postpartum depression estimated to be between 15-57%(Lund *et al.*, 2014). Common examples of emotional and psychological distress presenting in a post-partum woman are anxiety, depression, post-traumatic stress symptoms, and post-traumatic stress disorder.

 In developed countries, postnatal depression has been associated with low socio-economic status, unemployment, violence, crime, HIV status, poor health care, poor emotional and practical support from partners, social isolation, and interpersonal disputes(Lund *et al.*, 2014)

In Nigeria, several studies have been done in pregnant and postpartum women. The prevalence of postpartum depression ranges between 15–28 % (Okewole *et al.*, 2016). Another study done in the southwestern part of Nigeria looking at the psychosocial risk factors in the development of postnatal depression reported that the prevalence of depression was 14.6% which was similar to the rate in developed countries. (Adewuya *et al* 2005).

A meta-analysis that looked at the predictors of postnatal depression reported a 13 % prevalence. The study identified 13 predictors which are prenatal depression, childcare stress, life stress, prenatal anxiety, low social support, maternity blues, low marital satisfaction, history of depression, and difficulty infant temperament. In addition, four new predictors which were low self-esteem, single marital status, low socioeconomic status, and unplanned/unwanted pregnancy were found (Beck, 2001). Although the prevalence of postnatal depression was similar across countries, predictors of postnatal depression in a study in Nigeria identified preterm delivery, hospital admissions during pregnancy, female sex of the baby, instrumental delivery and cesarean section as the common risk factors (Adewuya et al, 2005).

A major indication for admission into the neonatal unit is perinatal asphyxia. Other indications include very low birth weight, neonatal jaundice, neonatal septicemia among others. Hence, coping with this experience can be a source of distress to the caregiver. The sense of powerlessness and impairment mothers encounter in the NICU could alter the parental role which could further increase anxiety, depression, helplessness, frustration, guilt, and anger in them (Ionio *et al.*, 2016). The effect of maternal mental health on infant growth has been well documented in studies done in developed countries (Patel V et al, 2004)(Black *et al*, 2009).

Apart from the stressful conditions mothers face during the admission of a preterm infant in the neonatal unit, a major gap is the inability of healthcare practitioners to recognize the emotional stress caregivers encounter and their failure to provide crucial support and problem-solving skills required to support the mother and infant at this stage of development. (Purdy et al, 2015).

In recognition of this associated psychological distress which mothers with babies in the neonatal care unit face, the need for early identification of these symptoms and early intervention is important. In the US, a study done looking at effects of a co-regulated feeding intervention for 34 mothers and hospitalized preterm infants in a level-III neonatal intensive care unit (NICU),their findings revealed that maternal depressive symptoms and role stress, were associated with less use of developmentally supportive feeding behaviors that is minimizing tactile stimulation, providing steady touch to contain or stabilize the infant, and regulating milk flow, thus supporting that maternal psychological well-being while infants are learning to feed orally may be an appropriate target for interventions to support mother-infant early feeding interactions(Park *et al.*, 2016). Furthermore, another study looking at lactational counseling of mothers with very low birth weight infants reported an increase in initiation of lactation after intervention without a simultaneous increase in maternal stress and anxiety levels. (Sisk *et al.*, 2006). This further corroborates the effect of the intervention on mothers in the neonatal care unit. In Italy, a longitudinal study comparing 21 couples of preterm infants with 21 couples of full-term infants investigating their levels of trauma-related symptoms, negative states of mind and feelings of stress related to the NICU perception, they concluded that preterm infants' external characteristics and signals associated with prematurity and severity of medical status could be a further stressor especially for mothers and could have a long-term effect on the quality of the parent-infant interaction in future hence suggesting a family-centered intervention to strengthen parental early-involvement in the

care of the baby. (Ionio *et al.*, 2016).In a quasi-experimental trial looking at the effect of infant massage on the state anxiety in mothers of preterm infants, they found a significant difference in the overall mean score of maternal state anxiety between the two groups providing evidence that infant massage has an effect on the state anxiety of mothers. (Afand *et al.*, 2017). Als et al in an experimental study on infants compared ten infants who were sung to and held for 15min with infants who were held only. He concluded that there was a statistically significant increase in infant heart rate during the Singing-and-holding phase as compared to the Holding-alone phase highlighting the role of music therapy viz a viz infant-directed singing and its role in the developmental care of infants in the NICU(Alesya, 2001)

In low and middle-income countries like Nigeria, little is known about the needs of mothers in the neonatal unit and even less is known about interventions done for mothers in this group in Nigeria. Interventions can improve maternal and child mental health in low and middle-income countries. They can be instrumental in making policies and formulating hospital-based protocols which will further improve the maternal and child mental health of the country.

1.2 Justification and relevance of the study in Nigeria

It is clear that premature birth which is common amongst infants in the neonatal unit predisposes mothers to psychological distress. (Mousavi *et al.*, 2016).There is good evidence to suggest that the psychological distress occurring during this period could lead to depression, anxiety, post-traumatic stress disorder or psychosis. (Holditch-Davis *et al.*, 2014).There is also clear evidence that maternal well-being is improved with psychological support such as basic information and communication as well as emotional support (Family care center and Kangaroo care) in the Neonatal intensive care unit (NICU). (Park *et al.*, 2016) Despite all that literature has reported, there is a paucity of intervention studies in low and middle- income countries for this category of

individuals. This study hereby aims to generate information on supporting mothers of babies in the neonatal unit through psychological intervention. If the intervention is effective, it will enable early detection and early intervention of mothers in the neonatal unit which invariably helps mothers to cope with the stress during this period and improves the health of the infant in a long term.

AIMS AND OBJECTIVES

The general aim of this research was to determine the feasibility and effect of supportive counseling on the psychological well-being of mothers with neonates in the neonatal care unit.

1.3 Specific objectives

The specific objectives were to:

- Compare baseline sociodemographic and clinical correlates between mothers in the intervention group and control group.
- Carry out supportive counseling for mothers in the intervention group.
- Evaluate the effect of supportive counseling on the psychological well-being of mothers with neonate in the neonatal care unit.
- Determine the level of satisfaction with supportive counseling among mothers in the intervention group.

1.4 Null hypothesis

There will be no difference in the post-intervention outcome measures (i.e. maternal stress, post-traumatic stress, and depressive symptoms) between mothers who received supportive counseling (Intervention) and mothers who did not receive supportive counseling (control group).

1.5 Primary outcome

Reduction in measures of maternal stress (i.e. parental stressor and post-traumatic stress symptoms) evidenced by a reduction in the mean Edinburg postnatal depression scale score, Parental Stressor Scale (PSS: NICU) scores, and Impact Event Scale-Revised (IES-R) in the Neonatal Care Unit after supportive counseling intervention.

1.6 Secondary outcome measure

Level of satisfaction of participants in the intervention group with the programme.

CHAPTER TWO

LITERATURE REVIEW

2.1 Postpartum period

The postpartum period is often referred to as the time after delivery when maternal physiological changes related to pregnancy return to the nonpregnant state. The is because the postpartum period begins upon delivery of the infant. However, the end is less well defined but is often considered the six to eight weeks after delivery because of the effects of pregnancy on many systems have largely returned to the pre-pregnancy state. However, most organ systems do not return to baseline within this period which is why some have described women as postpartum for as long as 12 months after delivery(Pamela Berens, 2018)

The increased vulnerability to depression has been explained by several Neurobiological, genetic and psychosocial. (Okewole *et al.*, 2016).The trauma of the obstetric process itself could lead mothers to develop post-traumatic stress disorder symptoms of avoidance, hyperarousal, and intrusion (Ionio *et al.*, 2016).

2.2 Global burden of mental illness in the postpartum period

Depression and anxiety are the third leading causes of disease burden worldwide for women between 14 and 44years of age. (Mayosi et al, 2009).The prevalence of depression amongst peripartum mothers in low- and middle-income countries (LAMICs) is estimated to be between 15% and 57%(Lund *et al.*, 2014). In Africa, the prevalence of depressive symptoms in pregnancy in the past 2 decades was about 10% with anxiety and depressive symptoms commonly seen during this period and likewise peripartum period (Fatoye *et al, 2004)*. Similarly, another study done in southwestern Nigeria revealed that hospital admissions during pregnancy, female sex of the baby, preterm delivery, instrumental delivery, cesarean section and being single were major predictive factors to mental illness in the postpartum period (Adewuya *et al*, 2005)

Postpartum depression is a public health priority associated with high prevalence and poor child development. In developed countries, the value of total lifetime costs of maternal depression has been estimated to be over 100,000 US$ per woman with the condition, with the bulk of the costs related to adverse effects on children. (Fisher et al, 2012)

Apart from the stressful encounter of delivery, admission into the NICU can be a financial stressor. The financial burden of NICU admission can be a significant problem for the family unit (Bicking and Moore, 2012). Caregivers face challenges ranging from concerns about the health and survival of the baby to the complexity of medical care and technology employed in the neonatal ward. The appearance and behavioral response of the infant cause stress in parents and the challenges of the parental role increase their stress because their baby is taken care of by the medical staff in a strange environment. (Mousavi *et al.*, 2016).Despite previous investigation and research, information regarding the needs of caregiver's particular mothers in the NICU has varied widely. Hence proper documentation of their needs and how these change in various conditions and regions is important.

2.3 Stressful life events in the post-partum period

In developed countries, the prevalence of emotional distress in pregnancy was found to be about 10% during pregnancy (Evans J et al, 2001). In a systematic review carried out in India, the overall pooled estimate of the prevalence of postpartum depression in Indian mothers was 22% (Upadhyay *et al.*, 2017). Another study in 2013 revealed that parents usually feel powerless and helpless when their babies are admitted in the neonatal unit; therefore, they may be more stressed and vulnerable to emotional difficulties than parents of full-term babies (Ionio *et al.*, 2016)

 In Nigeria, the prevalence of depression among postpartum women was about 14.6 % which was similar to studies in other African countries. (Adewuya et al, 2005). Another study done in the

Southwestern part of Nigeria revealed that of all the emotional and psychological distress encountered during pregnancy, anxiety, and depression was significantly higher amongst pregnant women as compared to their control counterparts who were not pregnant. (Fatoye et al, 2004) .

In a longitudinal study to determine the predictors of maternal distress, post-traumatic stress symptoms remained stable throughout the neonatal unit hospitalization while other aspects of distress declined (Greene *et al.*, 2015). Research has identified that trauma of preterm admission into the neonatal unit could lead parents to develop post-traumatic stress disorder symptoms of avoidance, hyperarousal, and intrusion which will prevent parents from having a normative transition to parenthood damaging the new relationship between them and their baby (Ionio *et al.*, 2016)

2.4. Factors leading to the need for Neonatal Intensive Care

In the past, premature and ill infants were born and cared for at home and either lived or died without medical intervention. The infant incubator was later developed along with other equipment such as blood pressure monitor, pulse oximeter, oxygen hood, and the ventilator (Boulevard et al, 2012).

The incubator which is used to maintain environmental conditions suitable for newborns, as well as preterm and ill full-term babies, provides other functions:

- Oxygenation through oxygen supplementation or mechanical ventilators
- Measurement of temperature, respiration, cardiac function, oxygenation, and brain activity
- Maintenance of fluid balance by providing fluid and keeping a high air humidity to prevent loss from skin and respiratory evaporation. (Boulevard et al, 2012)

The neonatal intensive care unit (NICU) is specialized for taking care of ill or very premature babies born before 37 completed weeks. Admission of babies in this group is often unavoidable (Gangi et al 2013). In developed countries, newborns typically die from unpreventable causes, such as congenital abnormalities, whereas the majority of infants in developing countries die from preventable conditions, including infections, birth asphyxia, and prematurity(Robert *et al.*, 2015)

The NICU is dramatically different from the womb(Symington A, 2006). According to Als et al who proposed a theory called Synactive theory, He suggested that the neurodevelopmental subsystem interaction between the neonate's internal functioning, the environment, and the caregivers were the foundation of the neonatal developmental process. Hence, if a lack of equilibrium occurs within one subsystem, all other subsystems are affected. (Symington A, 2006) Furthermore, Als et al introduced the concept of developmental care, a strategy to address the environmental issues of the NICU in order to reduce preterm infants' stress. It includes control of external stimuli, centering nursery care procedures in time, and containing infants in a manner similar to what they experienced during the intrauterine period(De Bernardo *et al.*, 2017)

Babies admitted in the NICU are largely preterm babies or babies if the term might have suffered some degree of birth asphyxia during labor. In most cases, premature birth is the unexpected result of medical complications for the mother, which makes necessary the immediate interruption of pregnancy, often in emergency situations, in order to avoid serious threats to the baby's and mother's health. (Ionio *et al.*, 2016) .

Preterm birth is an unexpected event leading to a lot of parental psychological distress that is anxiety, depression and post-traumatic stress symptoms in caregivers particularly the mothers. (Ionio *et al.*, 2016) Hence there is a need for supportive counseling and any form of psychological intervention in this group of caregivers. In a systematic review done in Iran, parents whose

children were admitted in the neonatal unit were seen to have considered all forms of support: emotional, informational, and instrumental support as being a necessity in the management of their babies in the neonatal unit. (Mousavi *et al.*, 2016)

In the NICU, premature infants and their underdeveloped brains are exposed to negative sensory inputs, such as variations in temperature; touch; vestibular, gustatory, and olfactory sensations; noise; light; oxygen; and nutrients(De Bernardo *et al.*, 2017). Very low birth weight (VLBW) children are almost 50% more likely than children born at full-term to need special education, even in the absence of major neurocognitive disability. (Zelkowitz *et al.*, 2011).A similar finding was reported in a case-control study in Nigeria that found Infants of depressed mothers had statistically significant poorer growth than infants of non-depressed mothers at the 3rd month(Adewuya et al, 2008)

2.4a Risk factors for babies admitted in the neonatal unit

Several risk factors are responsible for admission into the neonatal unit which can be categorized as sociodemographic, pregnancy-related, delivery-related, and baby-related variables

Researchers have tried to find out the association between maternal mental health and possible child mental health consequences. Current empirical evidence has associated parental sensitivity and maternal psychological distress to be the two most important psychosocial factors influencing the development of very low birth weight children (Zelkowitz *et al.*, 2011). However, it was also reported that premature babies are difficult interaction partners hence making them less responsive to social stimulation and as a result making the caregiver find it difficult to behave in a sensitive manner to them. (Singer et al, 2003).

In Sub-Saharan Africa, the prevalence rates of child stunting and maternal depression were estimated at 16.1 and 27.8 % respectively in Northern Ghana. Mothers with depression, when compared with those without depression, tended to be younger, be currently unmarried, belong to the poorest household wealth tercile, and were more likely to have low birth weight babies (Wemakor and Mensah, 2016).In Nigeria, Adewuya et al in a case-control study reported that the Infants of depressed mothers had statistically significant poorer growth than infants of non-depressed mothers at the 3rd month (Adewuya *et al*, 2008).

2.4bMothers of babies needing neonatal intensive care unit

Mothers in the neonatal unit often face several challenges from the time they are informed of the neonatal unit to the time they face the environmental stressors in the unit. The most common emotional distress women in this condition have is depression. They also experience anxiety and stress-related conditions. Parents whose children are admitted to the neonatal intensive have difficulties coping with this experience(Russell *et al.*, 2014). Research has shown that common stressors for mothers after admission into the neonatal unit is the sight of seeing babies on mechanical ventilators and hearing the sound of the monitors (Valizadeh *et al.*, 2016).In a study done to ascertain the experience of mothers by measuring the preterm parental distress while in the NICU, the presence in the data of the six major sources of stress where indicated in the Preterm Parental Distress Model (Holditch-Davis and Miles, 2000).More specifically, delivery of a preterm infant is considered a violation of mothers' "reproductive story," or cognitive schema about pregnancy, childbirth, and parenthood that results in depressive, anxious and post-partum traumatic stress symptomatology(Greene *et al.*, 2015)

2.4c Levels of care in the Neonatal care unit

The concept of levels of care was first proposed in 1976 in the United States(Ann R.Stark, Lillian Blackmon *et al.*, 2004). According to American Paediatric Association. There are four distinct levels of neonatal care.

Level I (Basic): They have the capability to provide neonatal resuscitation for every delivery, evaluate and provide post-natal care to healthy newborn infants, stabilize and provide care for infants born at 35 -37 weeks or ill infants less than 35 weeks. (Ann *et al.*, 2004) .

Level II (Special care nursery): In addition to providing level I Care, they also provide care for infants born greater than 32 weeks with birth weight greater than 1500gm who have physiologic immaturity or those who are moderately ill with problems that are expected to resolve rapidly and are not anticipated to need sub-specialty services.

- They also provide care for infants who are feeding or convalescence after intensive care.

- They provide mechanical ventilation or continuous positive airway pressure for infants born before 32 weeks gestation or weighing less than 1500gm until transferred to a neonatal intensive care facility.

- They are required to have a pediatric hospitalist, neonatologist, neonatal nurse practitioner in addition to level 1 healthcare provision (Boulevard, Elk, and Village, 2012)

Level III: **(Neonatal intensive care unit)**: In addition to level II care, they provide sustained life support, comprehensive care for infants less than 32 weeks gestation or infants weighing less than 1500g.They also provide comprehensive care for all infants with critical conditions. They provide a full range of respiratory support and advanced imaging with interpretation e.g. Computed tomography, MRI, echocardiography (Boulevard, Elk, and Village, 2012)

Level IV (Regional NICU): They have all the capabilities of level I, II, III with level IV functions. They are located in institutions with capabilities to provide surgical repair of complex congenital or acquired conditions. They maintain a full range of pediatric medical subspecialist, pediatric surgical and anesthesiologist (Boulevard, Elk, and Village, 2012)

2.5 Interventions for parental stress in the NICU and efficacy of interventions.

Supportive counseling or therapy includes listening sympathetically as well as comforting, advising, encouraging, and providing reassurance. In supportive counseling, the therapist provides an emotional outlet, the chance for patients to express themselves and be themselves. Group counseling has been a useful intervention in developing countries which is cheaper and more accessible to a larger audience than individual therapy. (Hamzehgardeshi *et al.*, 2017)

Interventions in maternal and child mental health have looked at various areas including parent's knowledge, perceived perception of the special unit, service care in the neonatal units, the financial or economic burden of admitting an infant in the unit and the psychological conditions that occur during this period. Most of the interventions are carried out by nurses in the neonatal unit. It was found that when parents are given an explanation about the reason why monitors are used, the meaning of alarms, and when the monitor's alarms are adjusted to appropriate limits, their stress and anxiety will be decreased. (Altimier and Phillips, 2016)

The World Health Organization in its executive summary report on improving preterm birth outcomes strongly recommends the Kangaroo mother care for preterm babies(World Health Organization, 2015) which has proven to be effective infant growth and development. In developed countries, an empirically supported nurse-delivered intervention "Listening Visits "was used an evidence-based nurse-delivered depression treatment, which provided NICU mothers with an effective and accessible treatment option. Listening Visits (LV) is an empirically supported nurse-

delivered intervention that focuses on relationship building and exploration of a mother's problems through active reflective listening and collaborative problem-solving. An LV open trial in the NICU has been conducted to evaluate the effectiveness of this intervention for mothers of hospitalized infants. Results indicated that Listening Visit was associated with a reduction in both maternal depressive and anxiety symptoms(Siewert et al, 2015).

Subsequently, another intervention identified a model of care called the "Neonatal Integrative Developmental Care Model" which utilizes neuroprotective interventions as strategies to support optimal synaptic neural connections, promote normal neurological, physical, and emotional development and prevent disabilities. The Neonatal Integrative Developmental Care Model, which summarizes seven core measures which are depicted as overlapping petals of a lotus. These are: Healing environment, Partnering with families , Positioning & handling, Safeguarding sleep ,Minimizing stress and pain, Protecting skin , Optimizing nutrition (Altimier and Phillips, 2016) The mother/child dyad is the center of the lotus surrounded closely by symbols representing various aspects of the healing environment, highlighting the physical, extra-uterine environment in which the infant now lives, the significance of the developing infant's sensory system, and the influence of people (patient, family, and staff) who help to create a healing environment for hospitalized infants and their families (Altimier and Phillips, 2016). The Neonatal Integrative Developmental Care Model utilizes neuroprotective interventions as strategies to support optimal synaptic neural connections, promote normal neurological, physical, and emotional development and prevent disabilities(Altimier and Phillips, 2016). Another innovative research done by Stewart and his colleagues amongst infants with the use of music therapy for infants in the neonatal unit in the United States with the use of living, infant-directed singing as a noninvasive natural form of infant regulation which has an effect on the physiological response of infants. The study identified

a significant change in the sleep-wake state correlating with behavioral characteristics of the infant at the end of the intervention. (Stewart and Schneider, 2000).

Although studies have examined the effects of different psychological interventions focused on preterm infants, very few studies have examined the effects of this interventions on maternal emotional distress (anxiety, depressive symptoms, post-traumatic stress symptoms, parenting stress) or parenting. Holdith Davis et al reported an improvement in the emotional state of the mother using the auditory-tactile-visual-vestibular (ATVV) intervention and Kangaroo Mother Care (KC) and likewise in the mother-infant relationship as compared to the control group. (Holditch-Davis *et al.*, 2014). A recent systematic review of intervention programs aimed at enhancing the cognitive development of children born preterm indicates that interventions that focused on the parent-child relationship were more effective than interventions focused only on infant stimulation or parent support (Zelkowitz *et al.*, 2011). Another study done in a neonatal unit looking at the psychological distress in mothers of preterm infants from admission into the special care baby unit found a high prevalence of depression, anxiety and post-traumatic stress levels to be very high throughout the period of stay in the special care baby unit. These conditions were observed to be determined by the health state of the infant. (Greene *et al.*, 2015).This can explain why the traumatic stress levels are high throughout the period of admission in the neonatal unit.

Training of the staff in workshops has been used in developed countries as a form of intervention. A good example is the Program to Enhance Relationally and Communication Skills-Neonatal Intensive Care Unit (PERCS-NICU). This program consists of 10 to 15 workshops for interdisciplinary health-care providers. Facilitators included a neonatologist, a psychosocial professional and a family faculty member. The PERCS-NICU program was shown to improve

communication and relational skills, increase confidence and reduce anxiety for NICU providers (Hall *et al.*, 2015)

2.6 Challenges in integrating maternal mental health into maternal and child health programs

Many factors have been identified as a challenge to integrating mental health programs into maternal and child health of the pregnant woman from preconception to puerperium(Lassi *et al.*, 2014). Globally, a major barrier is social exclusion and negative attitudes attached to mental illness. Subsequently, low and middle-income countries suffer from resource allocation, lack of human resource, and weak health systems. (Rahman *et al.*, 2013)

Barriers can vary from human resource barrier, the health-seeking behavior of caregiver, social support, and quality of health care delivered in the region. A good example of a human resource barrier will be burnout syndrome amongst nurses in the NICU. High rates of burnout among nurses, in general, are associated with many adverse effects on patient care, including an increase in health-care-associated infections, a decrease in recognition and reporting of errors, an increase in patient mortality and a decrease in patient-reported satisfaction. (Hall *et al.*, 2015).In a qualitative study by Russel and colleagues 2014, looking at the parent's view on satisfaction of care of their preterm baby in the neonatal unit, they identified parent involvement; including looking after their own baby, the challenges of expressing breast milk, and easy access to their baby; staff competence and efficiency; including communication, experience and confidence, information and explanation; and interpersonal relationships with staff; including sensitive and emotional support, reassurance and encouragement(Russell *et al.*, 2014). Hospitals whose nurses have high rates of burnout are more likely to experience increased rates of employee tardiness and absenteeism, as well as high rates of nursing turnover. Compassion fatigue has been described as a unique form of

burnout; the two conditions have overlapping symptoms, including physical, emotional and work-related symptoms.

Another major barrier that has been reported in the western world is the communication system relating to parents of preterm infants(Chan *et al.*, 2016). Research has shown that the provision of continuous and appropriate information to parents about the condition of their infant helps to ensure that the parents become more active partners in taking care of their infants(Mousavi *et al.*, 2016). Often times, the staff working in the hospital can also contribute immensely to this challenge. Creating time for staff to attend educational programs is challenging given long shifts, busy patient assignments, and staff fatigue. Cost may also be a factor, both in creating and delivering educational programs, as well as in compensating staff for their time. Nonetheless, the NICU culture must realize the importance of psychoeducation concurrent with medical education. Staff education should be offered frequently, and continuing education credits should be awarded to attendees. Ongoing education of staff should be fully integrated into a variety of platforms including case conferences, morbidity, and mortality meetings

Another source of concern in the management of maternal mental health is an appropriate psychometric instrument which will assess the current mental conditions they are experiencing. In Nigeria, common psychometric instruments that have been used include Zung depression inventory(Fatoye *et al*, 2004), Edinburg postnatal depression inventory (Adewuya *et al, 2005)*, Patient health questionnaire(Okewole *et al.*, 2016), State-trait anxiety rating scale (Fatoye *et al*, 2004),It is however worthy of note that there is no instrument that is perfect in terms of psychometric properties however for the purpose of this study Edinburg Post-natal depression(EPDS) scale, Impact Event Scale Revised (IES-R) and Modified version of Parental Stressor Scale (PSS: NICU) will be used.

Word count: 3453

CHAPTER THREE

METHODOLOGY

3.1 Study Location

The study was carried out at the two neonatal units of the University College Hospital (UCH), Ibadan known as Special Care Baby Unit (SCBU) and C1 [2nd] ward of the Department of Paediatrics, UCH Ibadan, Nigeria. It is a level II Neonatal Care Centre. Ibadan is the capital of Oyo state located in the southwest zone of Nigeria. The UCH serves as the referral centre to all

primary and secondary health facilities located in Oyo state and even other states in the southwest and other zones. The SCBU ward admits any baby whose mother delivered in the University College Hospital within 24 to 48 hours of life either booked or unbooked while the C1[2nd] ward admits newborns delivered from outside facilities. Each ward accommodates 20 babies at full capacity with each mother in a cubicle. Indications for babies to be admitted to the NICU include very low birth weight, fetal macrosomia, neonatal jaundice, and neonatal septicemia. The average duration of admission for babies is about 2 weeks depending on the severity and type of illness the baby was diagnosed with. There is a side room where mothers can relax, eat and her often given health talk by neonatal nurses or public health nurses which can contain five to seven mothers per time. Mothers have different activities such as 2 hourly breastfeeding depending on the weight of the baby as well as Kangaroo Mother Care which is done twice daily at the minimum.

3.2 Study Design

The study was a quasi-experimental study with an intervention group as well as a control group.

3.3 Study Population

The study population were mothers whose babies were admitted into the neonatal wards of University College Hospital, Ibadan during the period of study.

3.4 Sample size determination

The required sample size for the study was calculated using the formulae

$n = 2F(\sigma/d)^2$

Where:

σ = represents the standard deviation for the outcome measure;

F = 7.85, assuming 80% power and 0.05 level of significance (Wade, 1999);

d = difference expected between the intervention and control group after the intervention.

Assuming the intervention will produce a reduction of one standard deviation in maternal stress as measured by Parental Stressor Scale (PSS: NICU) in the intervention group compared with the control group, then the sample size would be:

$2 \times 7.85 \ (1/1)^2 = $ 16 in each group or 32 in the two groups

The sample size was increased to 20 in each group, bringing the total number to 40, in order to account for possible attrition in the course of the study using an estimated attrition rate of 25%. This sample of 20 vs 20 has been used successfully in similar feasibility studies done in Nigeria (Bello-Mojeed *et al.*, 2016)(Abdulmalik *et al.*, 2016).

3.4a Inclusion criteria

1. Mothers above 18years of age

2. Admission into the neonatal ward within the previous 24 to 48hours

3.4b Exclusion criteria

1. Mothers who refused to participate in the study.

2. Mothers who were not medically stable or had medical complication post-delivery.

3.5 Sampling technique

A consecutive sampling technique (non-probability) was used to interview mothers in intervention group as well as control group till the sample size is complete. Mothers whose babies were admitted to the SCBU were allocated to the "intervention group" while mothers with babies in C1^{2nd} Ward were allocated to the "control group". This was done to prevent contamination between the intervention group as well as the control group.
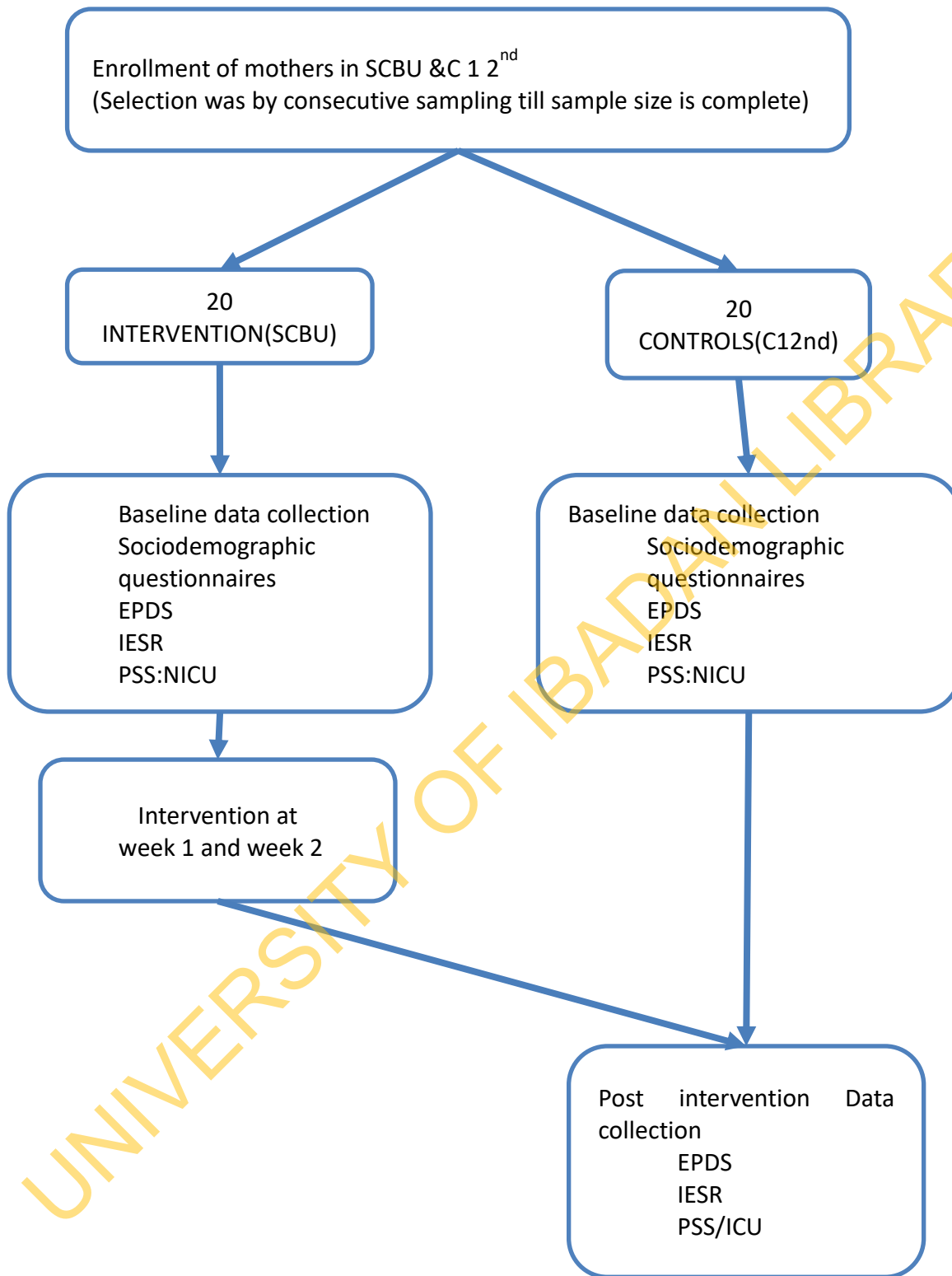
Figure 1: Flowchart of the study protocol

3.6 Study Instrument

3.6.a Sociodemographic questionnaire (Appendix I)

This was adapted from the sociodemographic questionnaire previously used in this environment. (Omigbodun et al, 2008). Based on a previous study in Nigeria (Fatoye *et al* 2004), additional items were included such as occupation of spouse, level of education of spouse, number of husband's wives, position of patient among husband's wives and socio-economic status, parity, gender of living children, last confinement, previous abortions, mode of previous deliveries. Family ownership of valued possessions such as mobile phone, color television, computer, car and the personal house was added as a surrogate for socioeconomic status (Rutstein and Johnson, 2004). Open-ended questions about mother's concerns and worries while the baby is in the SCBU was also added.

3.6.b Impact of Event Scale-Revised. (Appendix II)

This scale investigates trauma-related symptoms that characterize parents immediately after a potentially traumatic event which in this study will be birth of a child who has difficulties requiring admission to neonatal care unit (Weiss, D. S., & Marmar, 1997). This was used to assess the post-traumatic stress levels of participants in both intervention and control group at baseline and after one week. It is composed of 22 items divided into 3 clusters rated on a 5-point Likert scale ranging from 0 (not at all) to 4 (extremely) that measure the presence of posttraumatic stress symptomatology. Eight items regarding symptoms of avoidance (parents' avoidance of feelings, situations, memories; e.g. "I tried not to think about it"), 7 items regarding symptoms of intrusion (flashbacks, nightmares, images; e.g. "I had dreams about it"), and 7 items regarding symptoms of hyperarousal (fear, irritability, hypervigilance, and difficulties in concentration; e.g. "I felt irritable

and angry") (Ionia *et al.*, 2016). It has also been validated in several parts of the World (Beck *et al.*, 2008). The scoring ranges from 0 to 88, while scores exceeding 24 will depict post-traumatic stress symptoms and scores exceeding 37 clearly depicts post-traumatic stress disorder with susceptibility to immune suppression(Weiss & Marmar, 1997)

3.6.c Client Satisfaction Questionnaire (Appendix III)

This consisted of 8 questions modified from the Client satisfaction questionnaire used by Attkisson and Greenfield, 2004 . Each question is scored on a scale of 1 to 4 giving a total score of between 8 and 32. It is scored on a Likert scale ranging from excellent to poor, with excellent getting a score of 4 and poor gets a score of 1. A modified version which includes three open-ended questions asking about what participants liked or did not like about the intervention and possible suggestions was used (Bella-Awusah et al, 2016). This was administered to the intervention group immediately after the last group counseling session and post-intervention interview have been concluded.

3.6.d Edinburg Postnatal Depression Scale (Appendix IV)

This is a 10 item self-report scale to detect mothers who were depressed following childbirth(Cox *et al*, 1987). It was developed to assist health professionals in detecting mothers suffering from postpartum depression (PPD); a distressing disorder more prolonged and can occur from the first week after delivery of a baby.

The scale consists of 10 short statements that measure the level of depression in the postpartum period. A mother checks off one of four possible answers that are closest to how she has felt during the past week. Most mothers easily complete the scale in less than five minutes. Responses are scored 0, 1, 2 and 3 based on the seriousness of the symptom. Items 3, 5 to 10 are reverse scored

(i.e., 3, 2, 1, and 0). The total score is found by adding together the scores for each of the 10 items. (Adewuya *et al.*, 2006)

A cut-off score of 10 on the EPDS was found to be the best for screening for both major and minor depression (sensitivity = 0.867, specificity = 0.915, Diagnostic Likelihood Ratio for a positive result = 10.200). When screening for major depression only, a cut-off of 12 was found to be the most appropriate (sensitivity = 1.000, specificity = 0.961, Diagnostic Likelihood Ratio for a positive result = 25.641). The EPDS is a valid and useful instrument in screening for depression in late pregnancy among Nigerian women. (Adewuya *et al.*, 2006). In this study, a cutoff score of 10 was used for screening for both major and minor depression.

3.6.f Modified Parental Stressor Scale (PSS: NICU): Appendix V

This adapted scale was adopted from the initial instrument developed by Miles and Funk (1983) and designed to measure the parents' perception of stressors within the SCBU. It consists of a 6-short item questionnaire from an initial 34 item scale based on the "Sight and Sounds of the Unit" subscale of the PSS: NICU (Steedman, 2007). The 6-item scale consisting of four sub-scales that measure stress related to 1) Seeing many monitors and equipment 2) Hearing the noises made by monitors and equipment 3) Seeing the sick babies 4) Hearing sudden alarm noises 5) Seeing large numbers of nurses and doctors 6) Seeing babies using a ventilator/machine to breathe. This will be used in assessing the stress levels of mothers in the neonatal unit. Each item is rated on a 4-point Likert scale (where 1 meant not worried, 2 meant a bit worried,3 meant very worried,4 meant frightened.) The minimum score is 6 while the maximum score is 24.

3.7 Study procedure

The introduction was done at the beginning of each interview with the aim and objectives of the project explained. After they agreed to participate in the study, participants were screened at baseline with Edinburg Postnatal Depression Scale (**Appendix IV**), Impact Event Scale-Revised (**Appendix II**) and Parental Stressor Scale (PSS: NICU) **Appendix V.**

Group therapy sessions took place in a specifically designated room beside the neonatal ward that can accommodate five women per session.

First session: The mothers in the intervention group introduced themselves and rules were set before the commencement of the group counseling session. This took place in a side room in the NICU with a total of five mothers in a group. They were then educated on the equipment in the neonatal care unit, personal hygiene and the role of good sleep. They were also taught about the implications of stress on their mental health and how this affects the growth of the baby as well. The mothers were allowed to express their major concerns in the neonatal care unit. They were also counseled on the need to think more of positive things rather than having negative thoughts about their baby's outcome. This was achieved by asking them to "count their blessings". The time frame for each supportive counseling session was approximately 45 minutes to 1 hour. At the end of the session, they were advised to practice all that they had learned regularly.

Second session: About a week later, mothers in the intervention group then received the second session which was individual counseling session. This session was to reinforced all that they had learned in the first session and how practical the information was. It was also an opportunity to answer any questions that the mothers had. The instruments were re-administered immediately after the second session.

3.8 The intervention

To ensure therapeutic alliance and effective communication with mothers in the neonatal unit, a neonatal nurse was involved in allocating into intervention group and control group before the investigator commenced the supportive counseling intervention. A research assistant was employed for the purpose of this study and had a 2-hour training on administration of instruments used. She was also blinded to the intervention group to prevent bias during the post intervention outcome assessment. A group counseling approach was used for the mothers immediately after the initial baseline assessment. The location was in the side room of Special Care Baby Unit so that the mothers are not too far from their babies. The time frame for each counseling session was approximately 45 minutes.

The intervention used for this study was designed by the first and second supervisors. It was a protocol for delivery of supportive counseling/supportive psychotherapy for mothers in the neonatal ward which was adapted from previous studies in related areas (Chourasia *et al.*, 2013), (Siewert, Cline and Segre, 2015) (Bella-Awusah *et al.*, 2014). The aim of this manual was for it to be user-friendly, problem-focused, replicable and acceptable to mothers in this condition. (Kong, Chung, and Lok, 2014).

The aim of this intervention was to reduce the maternal stress levels as well as the psychological distress of mothers present within the NICU. The original manuals were subjected to various changes in order to adapt it to mothers in the neonatal unit.

1) Group format was chosen because it is cheaper and more accessible than individual counseling in Nigeria. Group therapy would also enable the mothers to share their experiences and support each other. This was used in the first counseling session.

However, the last session was brief and hence made use of individual counseling technique.

2) The number of sessions was restricted to 2 sessions with a session every week to fit with the average time babies are admitted to the neonatal wards.

3) Emphasis was laid more on positive self-talk, problem-solving techniques and self-care hygiene rather than complex cognitive interventions(Valizadeh *et al.*, 2016).

4) In view of the existence of high religious coping in our environment, religious components were incorporated. (Bella-Awusah *et al.*, 2014).

5) No written homework is given but the personal practice of post-session activities was emphasized.

The first session of counseling was carried out by the researcher after the infant's admission and the mother was fit to be interviewed. Mothers in the intervention group had an average of 45 minutes counseling session. The first session offered an understanding of the neonatal environment, functions of the incubator and other equipment, staff of the NICU, procedures (e.g. venipuncture), characteristics of premature infants (e.g. appearance, behaviour and physical signs), common medical terminology in the NICU, possible fears and worries of parents during their infant's hospitalization and problem-solving techniques, and methods of participation in infant care (e.g. kangaroo mother care). Individual concerns and worries that the participants may have were listened to and participants were encouraged to use positive self –talk. The second session was an individual counseling a week after the first one and was used to reinforce the previous information given, address mothers' worries and concerns, teach them relaxation techniques such as deep slow breathing exercises and conduct problem-solving sessions for specific issues.

Participants who were found to be severely depressed, psychotic or suicidal was referred to the psychiatrist in the hospital for specialist assessment and intervention.

3.9 Data Analysis

The data was cleaned and coded appropriately and entered into a computer. Data entry and analysis were done using the Statistical Package for Social Sciences version (SPSS 22). Sociodemographic variables were presented using frequency tables. Data from Edinburg Postnatal Depression Scores, Impact Event Score-Revised, Parental Stressor Scale: NICU scores were presented using means and standard deviations. The difference in sociodemographic characteristics between the experimental group and control groups at baseline were examined using the Student t-test for quantitative variables and chi-square test for categorical variables. Differences in mean depression, post-traumatic stress symptoms, and PSS: NICU scores between groups at baseline and post-intervention were examined using the Student t-test. The treatment effect was determined initially by comparing the baseline and post-intervention scores on the outcome measures (EPDS, IES-R, PSS: NICU) for both groups using paired t-test. Analysis of covariance (ANCOVA) test was used to compare mean post-intervention depression, post-traumatic stress symptoms and parental stressor scale between the groups while controlling for baseline scores and other confounding factors.

The effect size intervention was calculated by subtracting the mean score of the control group from the mean score of the experimental group (at post-test) and dividing the result by the pooled standard deviations of the two groups. Level of significance was set at 0.05 two tailed. Mathematically, the effect size is known as the Cohen's d = (Me -Mc)/SDec.

The conventional rule is to consider a Cohen's d of 0.2 as small, 0.5 as a medium, and greater than or equal to 0.8 as large(Kelley and Preacher, 2012)

3.9a Translation of protocol to local language

The questionnaires and informed consent were translated to the Yoruba language the popular language of the population to be interviewed. The instruments back translation was performed using a different mental health professional who was very proficient in Yoruba, to confirm the fidelity of the translation.

An expert panel consisting of a consultant neonatologist, neonatal nurse, child psychiatrist was constituted to assess the validity of the instrument. The expert panel at 2 different settings evaluated the content of the modified parental stressor scale(PSS) and found it to be culturally appropriate hence no other modification was made.

3.9b Ethical Considerations

This was obtained from the University of Ibadan/University College Hospital Institutional Review Board.

The study followed the following ethical principles:

Confidentiality of Data

All responses were coded and anonymized. Study numbers were strictly used for data entry and analyses. Participants and their caregivers were assured that all information obtained would be kept in strict confidence.

Beneficence

There was no monetary benefit for participating in the study although gifts were given to babies at the end of the post-intervention. However, the study provided an avenue to provide psychological support for each participant, and to provide them with more information about their health.

Non-Maleficence

The research did not involve any potential for physical, psychological or any other form of harm to the participants, except the time taken for the participation, which may have been a source of inconvenience.

Voluntariness

Informed consent was obtained from the participants. Participants were given the right to decline participation in the study or withdraw from the study at any time, knowing they would still have full access to care for any medical needs they had during or after the study period

CHAPTER FOUR

RESULTS

This chapter presents the results of this study, evaluating the effectiveness of a group based supportive counseling intervention on mothers whose babies were admitted into each of the neonatal wards at the University College Hospital, Ibadan. The chapter is divided into four sections. In section one, the sociodemographic characteristics of the intervention group as well as the control group are presented. Section two compares the baseline maternal outcome measures with outcome measures after one week in both intervention and control group. Section four describes the effect of supportive counseling on the intervention group. Section five describes the participants' perceptions of the intervention program and suggestions for improvement.

4.1 Sociodemographic characteristics of the study participants (Table 4.1)

The mean age of mothers in the intervention group was 31.55 (SD 5.88) years while it was 28.70(4.60) years in the control group. The intervention group was slightly older with 70.0% of them being 30years and above as compared to 55.0% in the control group although this was not statistically significant (p= 0.327). The majority (50.0%) of mothers in the intervention group were referred to U.C.H from the private hospitals while 8(40 %) were from government hospitals, for example, Adeoyo Maternity Teaching Hospital. and the remaining 2(10.0%) were referred from mission homes. On the Contrary, the majority (55.0%) of the referrals in the control group were from government hospitals and the remaining referrals were from private hospitals (25.0%) and mission homes (20.0%). However, these differences were not statistically significant. A total of twelve (60.0%) mothers in the intervention group were Christians compared with eleven (55.0%) mothers in the control group but this was not statistically significant.

A total of eleven (55.0%) mothers in the intervention group were educated up to secondary school compared with fourteen (70.0%) of the mothers in the control group who had above secondary school education. However, these differences were not statistically significant. Majority of the mothers in the intervention and control groups were traders 8(40.0%) and 7(35.0%) respectively.

Table 4.1: Sociodemographic variables of study participants

Variable	Intervention Group n (%)	Control Group n (%)	X (P- value)
Age of Mothers			
<30 years	6 (30.0)	9 (45.0)	0.960(0.33)
≥30 years	14 (70.0)	11 (55.0)	
Source of Referral			
Public Hospital	8 (40.0)	11 (55.0)	2.854(0.24)
Private Hospital	10 (50.0)	5 (25.0)	
Others	2 (10.0)	4 (20.0)	
Religion			
Islam	8 (40.0)	9 (45.0)	0.102(0.75)
Christianity	12 (60.0)	11 (55.0)	
Family Type			
Monogamous	19 (95.0)	19 (95.0)	0.000(1.00)
Polygamous	1 (5.0)	1 (5.0)	
Years of Marriage			
2 years & below	6 (30.0)	9 (45.0)	0.960(0.33)
Greater than 2 years	14 (70.0)	11 (55.0)	
Mother's Level of Education			
Secondary & below	11 (55.0)	6 (30.0)	2.558(0.11)
More than Secondary	9 (45.0)	14 (70.0)	
Mother's Occupation			
Artisan	5 (25.0)	7 (35.0)	7.407(0.06)
Civil Servant	0 (0.0)	4 (20.0)	
Trader	8 (40.0)	5 (25.0)	
Others	7 (35.0)	4 (20.0)	
Spouse level of Education			
Secondary & below	7 (35.0)	6 (30.0)	0.114(0.75)
More than Secondary	13 (65.0)	14 (70.0)	
Spouse Occupation			
Artisan	6 (30.0)	6 (30.0)	0.234(0.97)
Civil Servant	5 (25.0)	5 (25.0)	
Trader	3 (15.0)	4 (20.0)	
Others	6 (30.0)	5 (25.0)	

The wealth index rating scale (used as a proxy for socioeconomic status), showed a mean score for the intervention group of 5.15(SD 3.05) compared with 4.95(SD 2.86) for the control group which was not statistically significant. The mean age of mothers at their first pregnancy in the intervention group was 26.2years (SD 5.32) while the mean age of first pregnancy was 25.0years (SD 4.27) in the control group respectively which were not statistically significant.

The mean age at the time of antenatal booking for this pregnancy in intervention and control group was 30.7 years (S.D 6.05) and 27.9 years (4.60)   which were not significantly different as shown in Table 4.2

4.2 Clinical variables between intervention and control group

Majority of the mothers in the intervention group (85%) had medical conditions such as fatigue, vomiting, poor sleep and poor appetite during pregnancy while 40% of the mothers in the control group had medical conditions in pregnancy as well. The difference was statistically significant (p=0.038)

About 45% of mothers in the intervention group have reported having a miscarriage in the past while just 15% of the control group had miscarriage in the past. There was also a significant difference when comparing history of previous miscarriage between the intervention group and control group (p=0.038)

Table 4.2 Comparison of clinical variables between intervention and control group

Variable	Intervention n (%)	Control n (%)	Chi-Square	P-value
Age at first pregnancy 20yrs and below	4(20)	4(20)	0.000	1.000
Greater than 20yrs	16(80)	16(80)		
Mental health conditions in during pregnancy Yes	3(15)	5(25)	0.625	0.429
No	17(85)	15(75)		
Medical conditions in pregnancy Yes	17(85)	8(40)	8.640	**0.003***
No	3(15)	12(60)		
Previous abortion Yes	9(45)	3(15)	4.286	**0.038***
No	11(55)	17(85)		
Mode of delivery vaginal	13(65)	14(70)	0.114	0.736
Abdominal(caesarian)	7(35)	6(30)		
Age at first pregnancy (mean, SD)	26.20(5.32)	25(4.27)	1.200	0.436
Age at booking clinic (mean, SD)	30.70(6.05)	27.90(4.60)	2.800	0.107

*Significance at p ≤ 0.05

Table 4.3 showed that the Intervention group showed statistically significant reductions in all three outcome variables (EPDS, IERS, and PSS: NICU) at post-intervention compared with their baseline scores.

Table 4.3 Comparison of the baseline and post-intervention outcome variables (EPDS, IERS, and PSS: NICU) for Intervention group alone using paired t-test.

Variables	Mean score	Mean difference	SD	SEM	t-test	p- value
Intervention Group						
EPDS Baseline	8.20	- 6.15	6.86	1.53	4.942	**<0.001***
EPDS post-intervention	2.05		2.82	0.63		
Intervention Group						
IESR Baseline	32.45	-17.15	17.6	3.90	5.091	**<0.001**
IESR post-intervention	15.30		9.21	2.06		
Intervention Group						
PSS: NICU Baseline	16.30	-7.3	5.78	1.29	6.677	**<0.001**
PSS: NICU post-intervention	9.00		3.76	0.84		

*Significance at p <0.05.

Table 4.4 showed that the control group also showed statistically significant reductions in all the three outcome variables (EPDS, IERS, and PSS: NICU) at the post-intervention assessment compared with their baseline scores.

Table 4.4 Comparison of baseline and post-intervention outcome variables (EPDS, IERS, and PSS: NICU) for Control group alone using paired t-test

Variable	Mean score	Mean difference	SD	SEM	t-test	p-value
Control Group						
EPDS Baseline	11.80	-4.8	5.50	1.23	3.281	**0.004** *
EPDS post-intervention	7.00		5.26	1.18		
Control Group						
IESR Baseline	34.85	-10.8	13.12	2.94	2.951	0.008
IESR post intervention	24.05		12.90	2.89		
Control Group						
PSS: NICU Baseline	12.50	-2.9	5.83	1.30	2.581	**0.018** *
PSS:NICU:post intervention	9.60		3.55	0.79		

*Significance at p ≤ 0.05.

Table 4.5 showed that at baseline, the only outcome measure that differed significantly between the Intervention and control groups was the Parental Stressor Scale: NICU.

Table 4.5 Comparison of baseline scores on outcome variables (EPDS, IERS, and PSS: NICU) between the intervention and control groups

Variable	Treatment group N=20	Control group N=20	t- test(df)	P value
EPDS BASELINE (mean, SD)	8.20(6.86)	11.8(5.50)	1.831(38)	0.075
IESR BASELINE (mean, SD)	32.45(17.46)	34.85(13.12	0.491(38)	0.626
PSS: NICU BASELINE (mean, SD)	16.30(5.78)	12.50(5.83)	2.071(38)	0.045

Table 4.6 shows that post-intervention, the intervention group achieved more statistically significant reductions in EPDS and IESR scores compared with the control group. However, the post-intervention PSS: NICU scores were not statistically different between the two groups.

Table 4.6 Comparison of the post-intervention outcome variables between the intervention group and control group using t-test.

Variables	Mean Score	SD	SEM	T-test	P-value
EPDS post intervention					
Intervention Group	2.05	2.82	0.63	3.709	0.001
Control Group	7.00	5.26	1.18		
IES-R post intervention					
Intervention Group	15.30	9.21	2.06	2.468	0.018
Control Group	24.05	12.90	2.89		
PSS: NICU post intervention					
Intervention Group	9.00	3.76	0.84	0.520	0.606

| | *Control Group* | 9.60 | 3.55 | 0.79 |

Significance at p < 0.05

4.7 Analysis of Co-Variance

In order to determine the effect of supportive counseling on maternal stressor levels (EPDS, IESR, and PSS: NICU), a one-way analysis of covariance (ANCOVA) was conducted for each of the outcome measures. The study group (intervention vs control groups) was entered as a fixed factor, while the mothers' post-intervention scores on the outcome variables were used as the dependent variable, and their baseline scores entered as covariates.

The ANCOVA was significant, with the p-value of 0.000 and the difference in post-intervention EPDS between the intervention and control groups remained statistically significant (p = 0.0038). This indicates that the significant reduction in EPDS in the intervention group compared with the control group is at least partly explained by the intervention. as shown in Table 4.7

Table 4.7: Analysis of Co-Variance for post-intervention EPDS score by group controlling for baseline EPDS scores

Source	Sum of squares	df	Mean Sum	F-ratio	P-value
Model	339.165	2	169.583	10.77	**0.0002**
Group	149.866	1	149.866	9.51	**0.0038 ***
EPDS baseline	94.140	1	94.140	5.98	0.0194
Error	582.810	37	15.751		
Total	921.975	39	23.640		

Significance at p < 0.05

The ANCOVA was significant, with the p-value of 0.0068 and the difference in post-intervention IES-R between the intervention and control groups remained statistically significant. This indicates that the significant reduction in IES-R in the intervention group compared with the control group is at least partly explained by the intervention with an effect size of 74 calculated using the formula below:

$$W^2 = \frac{SS_G - (K-1)\ MS_E}{SS_T + MS_E}$$

Where
W2 = omega squared (percentage of variance controlling the baseline-IES-R scores)
SS_G = Sum of Squares (group)
SS_T = Sum of Squares (total)
MS_E = Mean Square (error)

Where change in mean = 23.756 – 15.593 =8.005
MSerror= 114.382
Square root MSerror = 10.694
d=8.005/10.694
d=0.748
hence the effect size is 0.748

Table 4.8a: Analysis of Co-Variance for post-intervention IESR score by group controlling for baseline IESR scores

Source	Sum of squares	df	Mean Sum	F-ratio	P-value
Model	1308.629	2	654.314	5.72	0.0068*
Group	662.066	1	662.066	5.79	0.0212 *
IESR baseline	543.004	1	543.004	4.75	0.0358
Error	4232.146	37	114.382		
Total	5540.775	39	142.071		

Table 4:8b Result of ANCOVA analysis to determine the effect of supportive counseling on IES-R scores between intervention and control groups.

Group	Adjusted Mean	Std. Error	t-test	P-value	95% C. I
Intervention group	**15.593**	**2.395**	**6.51**	**<0.001***	**10.740-20.447**
Control group	**23.756**	**2.395**	**9.92**	**<0.001***	**18.903-28.610**

*Significance at p ≤ 0.05

The ANCOVA showed that there was no treatment effect on PSS: NICU as the post-intervention scores were not different between the two groups even after controlling for baseline scores (p=0.0832).

Table 4.9a: Analysis of Co-Variance for post-intervention PSS: NICU score by group controlling for baseline PSS: NICU scores

Source	Sum of squares	df	Mean Sum	F-ratio	P-value
Model	145.467	2	72.733	7.37	0.0020
Group	31.270	1	31.270	3.17	0.0832
PSS: NICU baseline	141.867	1	141.867	14.38	0.0005
Error	364.933	37	9.863		
Total	510.400	39	13.087		

Significance at p ≤ 0.05.

Table 4.9 Result of ANCOVA analysis to determine the effect of supportive counseling on PSS: NICU scores between intervention and control groups

Group	Adjusted Mean	Std. Error	T-test	P-value	95% C. I
Intervention group	8.367	0.722	11.59	<0.001*	6.905-9.830
Control group	10.233	0.722	14.18	<0.001*	8.770-11.695

p≤ 0.05 indicates the level of significance

4.3 Participants response to greatest worry on the PSS: NICU scale

An open-ended question was added to the parental stressor scale for mothers in the intervention group to identify what worries them the most in the special care baby unit. Of the twenty participants, nine (45%) reported emotional stress pertaining to the survival of the baby and their inability to sleep with their babies at night. About eight (40%) of the mothers identified stressors related to funding and the physical environment as major sources of worry. "*Procuring of medication outside the hospital facility.*" "*Climbing the staircase to the 4th floor every day to find food to eat*" and another woman reported that the "*Stress of payment for medication and investigations at the pay point*" *worries her a lot.* Of the remaining mothers, three of them (15%) were worried about breastfeeding techniques as shown in Table 4.10

Of the twenty mothers in the control group, six (40%) of them had no worries about the neonatal care unit while another 40% worried about their baby's well-being. One of the mothers (5%) reported that not having an adequate room for relaxation was her greatest worry. Two of the mothers (10%) reported that physical stress of navigating facilities in the hospital is their greatest worry. Another mother said her inability to lactate is her greatest concern (5%). The remaining mothers (20%) reported having a financial constraint in the care of their baby.

Table 4.10 Emerging themes from the Parental stressor scale "what worries mothers in the Neonatal unit" (Intervention and Control group)

Themes	Intervention n (%)	Control n (%)
1. The physical stress of navigating facilities in the Hospital *Procuring medication outside the hospital facility.* *"Climbing up and down to the 4th floor every day to get food to eat"* *"Stress of payment for medication and investigations at the pay point"*	8(40)	2(10)
2. Worry about the baby's wellbeing *"Not sleeping with my baby at night"* *"Survival of my baby"* "My baby on oxygen "it borders me a lot"	9(45.0)	6(30.0)
3.**Breastfeeding problems** *"The manner of approach of explaining breastfeeding method for a mother with such stressful experience is a bit harsh"* *The pain I experienced when I was told to express breast milk while not lactating.* *"Not lactating on time"*	3(15.0)	1(5.0)
4.**No worries**		6(30.0)
5.**Financial difficulty** "Not having much cash in hand" Money is important in procuring medications for my baby"		4(20.0)
6.Inadequate facilities *No adequate relaxing place for mothers*		1(5.0)

4.4 Client Satisfaction

The mean score on the responses to Client Satisfaction Questionnaire was 29.9 with an SD of 1.33. Six (30%) of the mothers were very satisfied with the counseling sessions while fourteen (70%) were satisfied with the intervention as shown in Figure 4.1. None of the participants were dissatisfied with the intervention.
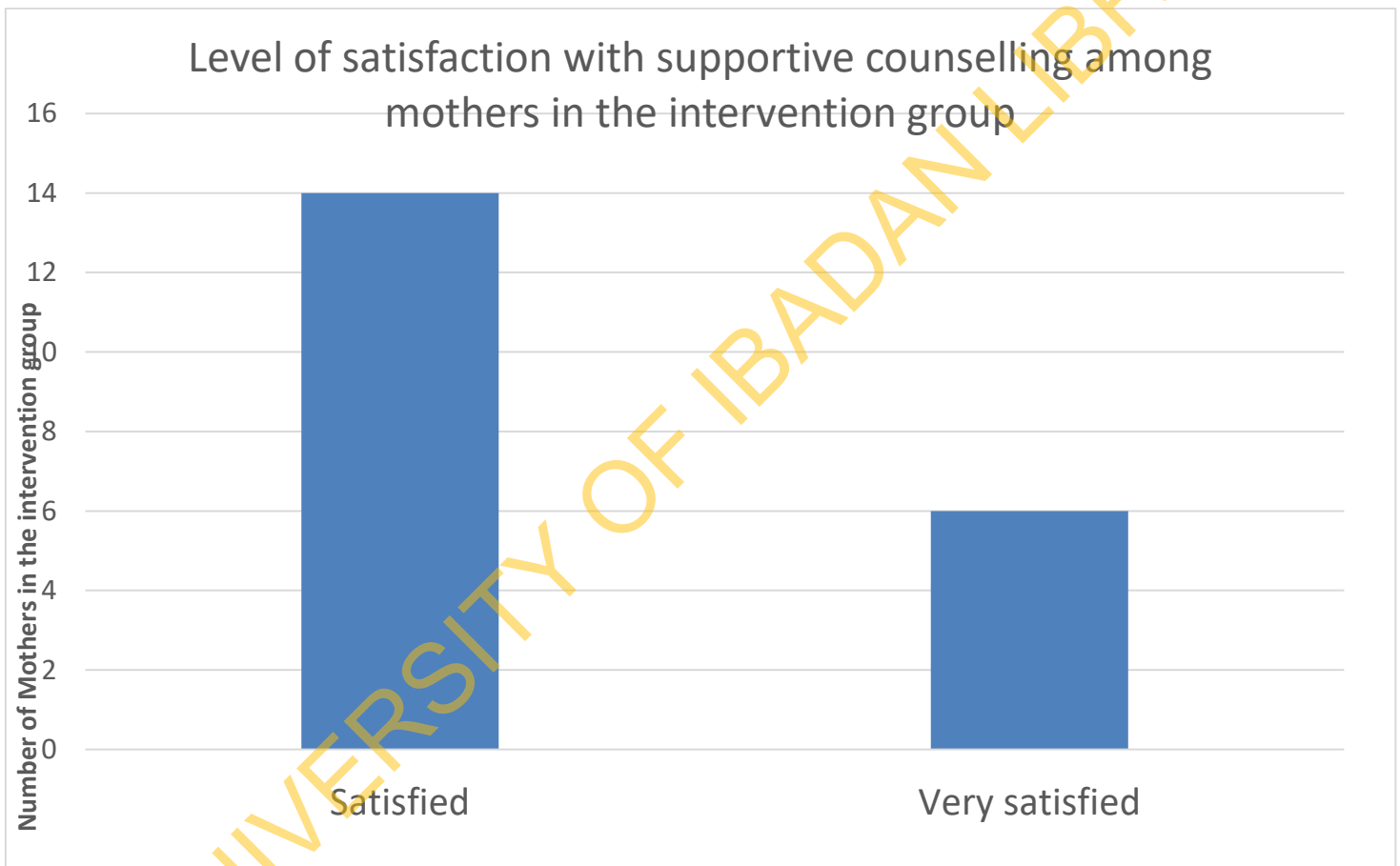
Levels of Satisfaction to the supportive counseling intervention

Figure 4.1: Bar chart representing the level of satisfaction of mothers with supportive counseling intervention

4.7 Participants responses to what they liked, disliked about the intervention

Three open-ended questions were added to the client satisfaction questionnaire

1. What I liked best about the counseling session

Seven women (35%) liked how the equipment in the special care baby unit was explained to them. Another five (25%) of the mothers liked the psycho-education on stress and its implication to the mental health of the mother and the baby. Another five (25%) liked the stress-reducing technique taught when faced with difficult emotional worries such as "counting your blessings". The remaining mothers (15%) liked the fact that there was a health professional around that they can talk to during this period.

2.What I didn't like about the counseling session

Most participants did not express any major concern about the counseling, however, three (15%) of the mothers felt that the timing was not conducive for them hence advocated for a better time for the session.

3. Mothers suggestions for improvement

Five of the mothers (25%) wished there could be a better structure such as permanent help desk in the neonatal unit where mothers can go for support during this period. Another three (15%) suggested that "*Emotionally disturbed mothers need a lot of support from husband and caregivers during this period hence advice for more support from relatives*".
Another three (15%) suggested that the counseling session should be organized in a larger and more formal way. Two participants suggested that there should be a hotline for mothers to call after being discharged.

Table 4.11 Emerging themes from what mothers liked about the counseling session

Theme	n	%
1.What I like about the counseling session		
General information		
"Education on the role of incubator, Kangaroo mother care, alarm, Oxygen in the SCBU"	7	35
"Educating on how to overcome the stress that comes with this period by confessing positively and counting your blessings".		
"Information passed to me about incubator, ventilator and allaying my fears of the unknown"		
"Care for my personal hygiene and how it helps my baby"		
" Education about the equipment and the importance of special care neonates"		
"Education on the role of Kangaroo mother care"		
Stress reducing techniques		
"How stress in this period can affect our mental health and how to reduce the stress by counting our blessing"	5	25
"Being taught how to count my blessings to remove negative thoughts"	5	25
"How to overcome the stress by practicing to count once blessing regularly"		
"Coping when negative thoughts come to mind"		
"How not to spend time on negative thoughts but rather exchanging it with positive things regularly"	10	50
Opportunity to ventilate		
"The therapist being there when I am worried"		
"Having someone to talk to when I feel concerned about what is going on with my baby"	3	15
What I didn't like		
2.Timing		
"The time for the counseling is not ok, as it coincides with the period of Kangaroo Mother Care so I advise a fixed time before other activities"	3	15
No response	17	85

Theme	n	%
3.Mothers suggestions to improve the supportive counseling **Home follow up** *"We need more dedication. Hotline number should be available to call during emergencies after discharge".*	2	10
Better structure *"It should be established in a formal and bigger way"* *"There should be a permanent office very close to SCBU where mothers can easily go to."* *"Ensure proper timing and a conducive room specifically for the counseling session"*	3	15
More sessions. *"Increasing the frequency of the counseling session'*	2	10
Compulsory for both spouses and extended family *"Every mother and father should be involved in the counseling"*	2	10
"Emotionally disturbed mothers need a lot of support from husband and caregivers during this period hence advice for more support from relatives" **Prenatal Counseling**	2	10
"Counseling during ANC should include discussions about special care unit so that mothers will have a prior knowledge of what can bring a baby into the SCBU"	1	5

CHAPTER FIVE

DISCUSSION

5.1 Discussion

This was a quasi-experimental feasibility study of the effect of supportive counseling on the psychological well-being of mothers in the neonatal units of the University College Hospital, Ibadan.

The supportive counseling resulted in significant reduction in maternal depression and post-traumatic stress levels in the intervention group as compared with the control group with large to moderate effect sizes.

5.2 Sociodemographic Characteristics of study participants

There was no significant difference between the sociodemographic characteristics in the intervention group and the control group. Also, the mean baseline scores on 2 of the three outcome measures (EPDS and IES-R) and most of the mother's background obstetric histories (except medical condition and previous abortion) were not statistically significant between the two groups. These findings justify the sampling technique showing reasonably good matching on the key demographic and outcome measures thereby minimizing possible confounding by baseline differences on the post-intervention outcome measures between the two groups.

5.3 Treatment effects

ANCOVA identified significant treatment effects in terms of reduction in post-natal depressive symptoms (EPDS) and post-traumatic stress (IERS). However, there was no significant treatment effect on the main outcome measure (i.e. stress related to the neonatal unit as measured by PSS: NICU). The reduction in EPDS score from the intervention resulted in a large effect size of 2.0.

The result of the EPDS outcome measure is of particular interest because the intervention included a component to address negative thinking which is a form of cognitive intervention used in other studies to address moderate to severe depressive symptoms for mothers during the postpartum period (Clark and Brown, 2008). This study by Clark and colleagues reported fewer depressive symptoms and following 12 weeks of treatment than did the depressed women in the waitlist control group. The fact that the current study found significantly reduced depressive symptoms after only 2 sessions is encouraging in a resource-constrained setting where it may be difficult to offer 12 sessions of psychological intervention. This suggests it may be more feasible and effective in the Nigerian setting. The current study is important as it focused on mothers of mostly preterm babies given that such mothers have been shown to have more negative feelings such as anxiety and depression, than did the mothers of full-term babies.

This further buttress previous studies which despite not looking at the effect size identified that at least one month after delivery, mothers of premature babies exhibited more negative feelings, in particular, anxiety and depression, than did the mothers of full-term children. (Ionio *et al.*, 2016)

The second outcome measure of maternal stress levels was the IES-R component. The intervention resulted in an effect size of 0.7 on the IESR rating which is moderate. A possible reason for this could be because the intervention taught the mothers coping strategies for managing stress as well as problem-solving techniques. A study found that mothers of preterm babies had higher depressive symptoms but not post-traumatic stress symptoms(Holditch-Davis *et al.*, 2014). However, this finding of no significant post-traumatic symptoms in the study by Holditch-Davis and colleagues does not negate the importance of the current study given that it also reduced depressive symptoms as already discussed. The need for interventions to address stress in mothers of preterm babies is

supported by a study done in Italy which also found that parents of premature babies experience the preterm birth, as a stressful event (Ionio *et al.*, 2016)

Another interventional study was done looking at the effects of the auditory-tactile-visual-vestibular (ATVV) intervention and kangaroo care (KC) on maternal distress and the mother-infant relationship compared to an attention control group. The mothers reported on the interventions they performed and regardless of group assignment, massage was associated with a more rapid decline in depressive symptoms, concluding that performing either intervention was associated with lower parenting stress levels (Holditch-Davis *et al.*, 2014).

The third maternal stress outcome measure is the PSS: NICU component. The ANCOVA showed no treatment effect on this measure. This was contrary to our expectations as it had been hypothesized that this measure would be most sensitive to change from the intervention; hence it was made the primary outcome. This hypothesis was based on the fact that the main component of the counseling sessions was helping the mothers understand the environment in the neonatal unit. This included the equipment, alarms, and the aspects that other studies have suggested can cause anxiety to someone who is unfamiliar with the set-up in an SCBU (Siewert, Cline and Segre, 2015). Nonetheless, possible factors responsible for the non-significant difference in the current study might include non-exposure of some of the mothers to some of the anxiety-provoking SCBU equipment because the babies did not need it. Also, the small sample size of the study can also be responsible for the non- difference (a possible Type II error) and the fact that C1 2nd ward is less intimidating in terms of equipment compared with SCBU. Similarly, a comparative analysis done in Korea looking at the perception of parents with premature infants in the SCBU and parents with full-term newborns looking at the effects of NICU educational support on parents with regard to their perception of the neonate and parental stress. They found no difference in direction of

National Perception Index (NPI) scores observed between parents in either the full-term or SCBU group (Ahn and Kim, 2007). This might probably be because of the patriarchal system in Korea and the delay time for the effectiveness of an intervention to become apparent in mothers which is why long-term intervention is advocated (Baker and Quinkert, 1983). Nonetheless, they found that NICU education improved NPI and decreased Parents Stress Scale (PSS) in fathers but not in mothers (Ahn and Kim, 2007)

5.4 Qualitative evaluation of mother's perception of the neonatal care unit

Of the twenty participants in the intervention group, nine reported emotional stress pertaining to the survival of the baby and their inability to sleep with their babies overnight. This is similar to studies done in Asia amongst NICU parents that identified that parents of premature infants in the NICU tended to have a negative perception of their infants compared with parents of full-term infant (Ahn and Kim, 2007).Another study supporting the emotional stress which not only documents stress experienced by parents of NICU infants but also highlight emotional consequences and the individual nature of parents' response to the NICU experience(Ashwani et al, 2017).Furthermore, a qualitative study done in Iran revealed that mothers thought connection of the infant to the incubator indicates worsening of the infant's condition and sometimes they cried because of watching this scene. (Malakouti *et al.*, 2013)

Eight of the mothers identified difficulties related to the physical stress of navigating the hospital environment such as climbing the staircase back and forth the 4th floor regularly while trying to pay for laboratory investigations on the 2nd floor, as a major source of worry. It is worth noting that the elevators in the building do not function optimally. Three of the mothers expressed worries about breastfeeding and suggested that the health practitioners should explain breastfeeding practices to them with more empathy since the mothers had recently gone through a stressful

experience in delivering their babies. In the control group, six of the mothers worried about the survival of their baby in the neonatal care unit while another 40% did not have any source of worry in the neonatal unit. Two of the mothers were concerned about the stress of navigating around the hospital. One of the mothers was worried that she was not lactating at the moment. A study done in North Carolina, USA found increased maternal depressive symptoms and role stress relating to maternal behaviors during feeding(Park *et al.*, 2016) Another case-control study in the US, reported that counseling of mothers with very low birth weight (VLBW) infants increased the incidence of lactation initiation and breast milk feeding without increasing maternal stress and anxiety. A longitudinal study was done in Canada which was part of a larger study following up mothers reported that mothers who experience substantial anxiety during pregnancy or the postpartum period are at increased risk for reduced initiation, exclusivity, and continuation of breastfeeding (Adedinsewo *et al.*, 2014)

The remaining mothers (40%) reported being worried because of the financial burden of taking care of their baby in the neonatal unit. This may be because most of the financial burden of patient care is borne by the parents. From the findings of this study, the majority of the participants and their spouses were artisans (35% and 30%) respectively and this might buttress the mothers' fears of the financial implications of neonatal care.

5.5 Client satisfaction evaluation

Majority of the women liked how the equipment in the special care baby unit was explained to them. Other participants liked the aspect of psychoeducation on stress and its implications on the mental health of both the mother and her baby. The remaining participants liked the coping strategies taught to manage stress such as "counting your blessings". This is in contrast to a similar study done in South Korea that reported that NICU education did not seem to benefit mothers,

identifying a need for early or long-term interventions for mothers and their premature infants. (Ahn and Kim, 2007).This is probably because Korea is still a patriarchal culture where childbearing and rearing is a woman's responsibility (Bjorklund and Pellegrini, 2000). Mothers with complicated pregnancies or abnormal reproductive outcomes often suffer from psycho-emotional disturbances such as guilt, self-hate, depression, and loneliness. loneliness (Baker and Quinkert, 1983).Thus, explaining why mothers did not have improved National Perception Index score (NPI) or parental stressor scale (PSS) after supportive education. Another reason why there was no significant improvement in the parental stress levels of mothers was that may take more time for the effectiveness of intervention become apparent in mothers which is why long intervention is advocated.

The second section highlights participants' dislikes about the intervention and only a few raised concerns about the timing of the intervention. This may be because mothers were not allowed to stay overnight with their babies. Hence most of the daytime period was scheduled for breastfeeding, bonding that is Kangaroo Mother Care or getting investigations done and finding a free and specific time when majority of mothers were free was difficult.

 Majority of mothers in the intervention group wished there was a permanent office for the therapist in the neonatal unit where this intervention can be carried out more efficiently. One of the mothers advised the need to include adequate prenatal counseling and education about the neonatal care unit during antenatal visits so as to enable mothers to have a prior knowledge and would not become unduly worried of what the neonatal care unit was all about. Other participants (20%) wished the intervention could include their husbands. This is quite important because a study identified a huge gap on the importance of fatherhood, both to normal parenting and during the challenge of parenting a child in the NICU (Nystrom and Ohrling, 2004). The study further

explained why fathers are neglected during the double duty of caring for both their postpartum spouse and offspring in the NICU while continuing with fatherly duties of taking care of the home (Ahn and Kim, 2007).

Some of the mothers proposed that there should be a hotline which will be available anytime the mothers need support even after discharge from the neonatal unit. A similar approach has already been carried out in some context in South Africa for maternal mental health where midwives are trained to screen women routinely for maternal mood disorders during their antenatal visits. Those screened positive were referred to on-site counselors who act as case managers for them through the delivery process. Every woman counseled received a routine six-week postnatal follow-up phone call. (Honikman *et al.*, 2012).In view of this, a need for a developmental model that will integrate maternal health services, child health services, and mental health service is advocated in Nigeria.

5.6 Strengths

A major strength of the study is the experimental design with a control group. The novelty of the study as few studies has been carried out in developing countries on this subject. Also, the qualitative aspect of the study helped to gain the mother's perspectives on the neonatal unit which have been fed back to the staff. The fact that the study followed a model of universal intervention has the mothers were not initially screened for disorder before being included in the study also made the study unique. This might be a useful model of primary prevention in mental health especially in areas where diagnostic assessments and man power are limited.

5.7 Limitations

While the findings of the study are encouraging, there are a few limitations to be considered. First, while it was a quasi-experimental study design, it did not involve full probability randomization of the study participants. Although the measured baseline factors were largely similar, it is possible that other unmeasured factors could be dissimilar between the groups. Full probability random allocation could have addressed this concern.

As is common to studies of psychological interventions, it was not possible to blind the participants although the research assistant who obtained the baseline and post-intervention measures was blinded to treatment allocation.

The sample size was small and the duration and intensity of the intervention were short. However, the short duration of the study was due to the time constraints imposed by the duration of the MSc program and also the short duration of stay of mothers in the neonatal care unit. The small sample size means that the study's findings should not be generalized without caution. It may also explain the lack of treatment effect on the main outcome measure (PSS: NICU) as this may be a form of Type II error.

Post-intervention measures were assessed immediately after the completion of the 2nd intervention hence not allowing time for internalizing the knowledge gained during the sessions

Although mothers in the intervention group had their group counseling in an assigned room on a separate floor from the mothers in the control group, there is still a risk of contamination as mothers could have meet at various points in the hospital to discuss about the intervention.

5.8 CONCLUSIONS

The study suggests that mothers whose babies were admitted into the neonatal intensive care unit are predisposed to psychological distress during this period. The neonatal care wards provide a convenient platform for mothers whose babies are admitted to receive psychological support during this period.

It further suggests that group based supportive counseling for reducing depressive symptoms and post-traumatic stress levels amongst mothers in the neonatal care unit is possible, acceptable and shows promising effectiveness in a low-income setting like Nigeria.

The study also found that apart from the specific stressors related to having a baby in SCBU, mothers suffer additional stresses related to the physical environment (e.g. climbing several flights of stairs to meet practical needs) and financial costs related to out-of-pocket payment. Addressing these practical factors could reduce the overall stress experienced by the mothers.

Further study of mothers in the neonatal intensive care unit should involve fathers and should be a follow up study to identify the effects of the intervention effectively with possible details of the infant health

5.9 RECOMMENDATION

1. Group-based psychological intervention for mothers in the neonatal care unit should be considered by the Ministry of Health in collaboration with mental health professionals.

2. Additional larger randomized controlled trials with a longer duration of intervention are recommended to generalize the findings.

3. Subsequent studies should explore training neonatal or public health nurses in order to deliver the intervention to develop a feasible blueprint for sustainable scaling up of this type of intervention.

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APPENDIX

INFORMED CONSENT

IRB Research approval number: <u>UI/EC/17/0547</u>

Title of Research: **THE FEASIBILITY AND EFFECT OF SUPPORTIVE COUNSELING ON PSYCHOLOGICAL WELLBEING OF MOTHERS IN THE NEONATAL WARD OF THE UNIVERSITY COLLEGE HOSPITAL, IBADAN**

The study is conducted by ………………, a Masters student of the Centre for Child and Adolescent Mental Health, University of Ibadan Nigeria. The purpose of the research is to find out if supportive counseling is going to be helpful to mothers in the neonatal ward of University College Hospital, Ibadan.

You are being invited to take part in a research study to see if counseling can help the wellbeing of mothers in the neonatal ward encountered while their babies are on admission in the neonatal ward. Research shows that some mothers in the neonatal ward may feel stressed by the experience or due to worries about their baby.

A total of 40 women will take part in the study. Of this group, half (20) will meet with the researcher twice for counseling meetings with other mothers. This will take place weekly for 2 weeks. This group will be compared with the other half (20) to see if taking part in the counseling made any difference to those who had it.

Please be rest assured that no matter the group you are placed, you and your child will be offered the standard treatment available in the facility.

All information collected in this study will not be shared with anyone else. Once the information is checked, the names will be removed and replaced with numbers so that it will no longer be possible to identify the people who participated when the result is put in reports. Whether you want to participate or not is your decision. If you decide not to participate it would not affect the treatment you or your baby receive in this hospital.

Consent statement

If you have fully understood the study and would be willing to participate in the study. Please

kindly sign in the space provided.

Sign …………………………….   Date ……………………

Name ……………………………………………………………………….

Witness Name ………………………   Sign ………………………………….

INSTRUMENTS

APPENDIX I (SDQ)

THE FEASIBILITY AND EFFECT OF SUPPORTIVE COUNSELING ON PSYCHOLOGICAL WELLBEING OF MOTHERS IN THE NEONATAL WARD OF THE UNIVERSITY COLLEGE HOSPITAL, IBADAN

SOCIODEMOGRAPHIC QUESTIONNAIRE (ENGLISH)

Please write the answers to the questions or draw a circle where it applies to you. This is not an examination it is only to find out about you and your health.

SECTION I

1. . Name of Maternity Centre /Referral Centre……………….…...

2. . Where do you live? (Address of Present Abode):

3. . Date of Birth: _____ _____ _____

4. . what type of religion do you practice?

5. (a) Islam   (b) Orthodox Christian   (c) Pentecostal Christian   (d) Traditional religion   (e) Other

6. Family Information

7. . Family Type: (a) Monogamous (b) Polygamous

8. If polygamous, what is her position out of the wives?.............

9. . Marital Status of Patient:

   (a) Married (b)Separated (c) single (d) Divorces

10. Level of education. (1) No formal education 2) Primary 3) Secondary 4) Tertiary institution

11. If married, duration of marriage?.......................

12. . what is your occupation

13. a) Unemployed   b) Apprenticeship   c) Civil servant d) Artisan e) Trading f) Student e) others

14. Please indicate if you or your spouse own any of the items listed below

Material	Yes	No
a) House		
b) Motorcar		
c) Flat screen TV		
d) Satellite TV		
e) Computer		
f) Fridge		
g) Mobile phone		

15 Who do you live with presently?

 (a) husband   (b) parents   (c) in law   (d) cousins   (e) no one

 f) others (specify)

16. Who accompanied you to the hospital the first time?

(a) husband   (b) Mother   (c) relative (d) others

17 Occupation of a spouse?

a) Unemployed   b) Apprenticeship   c) Civil servant d) Artisan e) Trading f) Student e) others

18. Level of education of spouse

  1) No formal education 2) Primary 3) Secondary 4) Tertiary institution.

19.Parity …………………………………

20Gender of living children.

21. How old were you at your first pregnancy?........................

22. Age of current pregnancy at ANC booking?.............

28. Who accompanied you to the hospital the first time?

  1)Husband 2) Mother 3) Grandmother 4) Aunt 5) Other.

29. How many times did you attend ANC?....................

30.last confinement…………………………

31. Did you have any mental health challenges in this pregnancy?

(1) Yes (2) No

32. Where you diagnosed with any chronic medical condition in this pregnancy? 1)yes 2) No

 33. If yes, what sort of difficulties?

    1) Bleeding 2) difficulty with breathing (3) vaginal discharge (4) vomiting (5) low mood (6)

       lack of appetite 7) Fatigue 8) Sleep difficulties 9) Others (please specify)

 34. Have you spoken to anyone about the challenges? 1) Yes   2) No

 36.Any previous abortion?   1) yes 2) No

 37Mode of previous delivery? 1) vaginal 2) Assisted 3) cesarean section

38.Birthweight of baby ……………...

39.Sex of the baby …………….

40.Age of baby(days) ………………….

APPENDIX II (IES-R)

IMPACT OF EVENTS SCALE-Revised (IES-R)

INSTRUCTIONS: Below is a list of difficulties people sometimes have after stressful life events. Please read each item, and then indicate how distressing each difficulty has been for you DURING THE PAST SEVEN DAYS with respect to _____

_____(event) that occurred on _____(date). How much have you been distressed or bothered by these difficulties?

	Not at all	A little bit	Moderately	Quite a bit	Extremely
1. Any reminder brought back feelings about it	0	1	2	3	4
2. I had trouble staying asleep	0	1	2	3	4
3. Other things kept making me think	0	1	2	3	4
4. I felt irritable and angry	0	1	2	3	4
5. I avoided letting myself get upset when I thought about it or was reminded of it	0	1	2	3	4
6. I thought about it when I didn't mean to	0	1	2	3	4
7. I felt as if it hadn't happened or wasn't real	0	1	2	3	4
8. I stayed away from reminders of it.	0	1	2	3	4
9. Pictures about it popped into my mind.	0	1	2	3	4
10. I was jumpy and easily startled.	0	1	2	3	4
11. I tried not to think about it.	0	1	2	3	4
12. I was aware that I still had a lot of feelings about it, but I didn't deal with them	0	1	2	3	4
13. My feelings about it were kind of numb	0	1	2	3	4
14. I found myself acting or feeling like I was back at that time.	0	1	2	3	4
15. I had trouble falling asleep.	0	1	2	3	4
16. I had waves of strong feelings about it	0	1	2	3	4
17. I tried to remove it from my memory.	0	1	2	3	4
18. I had trouble concentrating.	0	1	2	3	4
19. Reminders of it caused me to have physical reactions such as sweating, trouble breathing, nausea or a pounding heart.	0	1	2	3	4
20. I had dreams about it.	0	1	2	3	4
21. I felt watchful and on-guard.	0	1	2	3	4
22. I tried not to talk about it.	0	1	2	3	4

Total IES-R Score: -------

Revised Impact of Event Scale (22 questions):

The revised version of the Impact of Event Scale (IES-r) has seven additional questions and a scoring range of 0 to 88.

On this test, scores that exceed 24 can be quite meaningful. High scores have the following associations.

24 or more	PTSD is a clinical concern. (Asukai, N. Kato, 2002) Those with scores this high who do not have full PTSD will have partial PTSD or at least some of the symptoms.
33 and Above	This represents the best cutoff for a probable diagnosis of PTSD. (Creamer, M. Bell, R. & Falilla, 2002)
37 or more	This is high enough to suppress your immune system's functioning (even 10 years after an impact event).(Kawamura, N. Yoshiharu, K. & Nozomu, 2001)

The IES-R is very helpful in measuring the effect of routine life stress, everyday traumas, and acute stress

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APPENDIX III (CSQ)

CLIENT SATISFACTION QUESTIONNAIRE

1. How would you rate the quality of your service you have received?

………………………4……………………….3……………………….2………………………1

Excellent   Good   Fair   Poor

2. Did you get the kind of service you wanted?

………………….1……………………2……………………………………3…………………4

No, definitely   No, not really   Yes, generally   Yes, definitely

3.To what extent has our program met your needs?

………………….1…………………2……………………3……………….…………4

Almost all my needs   most of my needs have   Only a few of my needs   None of my needs

Have been met   been met   have been met   have been met.

4. If a friend were in need of similar help, would you recommend our program to him or her?

………………1……………………….2…………………3………………………….4

No definitely not   No, I don't think so   Yes, I think so   Yes, definitely so.

5. How satisfied are you with the amount of help you have received?

………………1………………………2…………...........3……………………….4

Quite dissatisfied   indifferently or mildly Mostly satisfied   Very Satisfied

                 Satisfied

6. Have the services you received helped you to deal more effectively with your problems.

………………………1……………........... 2………………….3…………………………….4

Yes, they helped   Yes, they helped   No, they really didn't   No they seem to not

                 great deal   help   help but get things worse

7. In an overall general sense, how satisfied are you with the service you have received?

………………….1……………………2………………………3……………………………4

Very satisfied   Mostly satisfied   Indifferent or mildly   Quite dissatisfied

Dissatisfied

8. If you were to seek help again, would you come back to our program?

………………………1…………………….2…………………….3……………………….4

No definitely not   No, I don't think so   Yes, I think so   Yes, definitely

9. What I liked best about the counseling session is …………………………………………...

10. What I didn't like about the counseling session is……………………………………….

11. My suggestion to improve counseling session are …………………………………………

APPENDIX IV(EDPS)

EDINBURG POST NATAL DEPRESSION SCALE DATE……………….

AGE……………………. Week of pregnancy/Age of baby: …………………….

1. I have been able to laugh & see the funny side of things	As much as I could always do. 0 Not quite so much more…………1 Definitely not so much………….2 Not at all……………………….3
2. I have forward with enjoyment to things	As much as I ever did…………….0 Rather less than I used to……....1 Definitely less than I used too...2 Hardly at all……………………….3
3. I have blamed myself unnecessarily when things went wrong	Yes, most of the time…………….3 Yes, some of the time…………….2 Not very often…………………………1 No, never…………………………………0

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4. I have been anxious or worried for no good reason	No, not at all……………….0 Hardly ever…………………1 Yes, sometimes………….2 Yes, very often……………3
5. I have felt scared or panicky for no good reason	Yes, quite a lot………….3 Yes, sometimes……………2 No not much………………1 No, not at all……………….0
6. Things have been getting to me	Yes, most of the time I haven't been able to cope...3 Yes, sometimes I haven't been coping as well as usual.2 No, most of the time I have coped quite well...1 No, I have been coping as well as ever….0
7. I have been so unhappy that I have had difficulty sleeping	Yes, most of the time………….3 Yes, sometimes…………………….2 No, not very often…………………1

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	No, not at all…………………………0
8. I have felt sad or miserable	Yes, most of the time……….3 Yes, quite often…………………2 No, not very often………………1 No, not at all……………………0
9. I have been so unhappy that I have been crying	Yes, most of the time……….3 Yes, quite often………………2 Only occasionally……………………1 No, never………………………….0
10. The thoughts of harming myself have occurred to me	Yes, quite often………………3 Sometimes…………………….2 Hardly ever…………………1 Never………………………….0

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APPENDIX V (PSS)

This is an adapted version of the PSS: NICU which focuses on "Worries about Sight and Sound in the Neonatal unit". It consists of a 6-short item questionnaire based on the "Sight and Sounds of the Unit" subscale of the PSS: NICU.

Tick the box that best describes how worried you feel about these six aspects of what goes on in the neonatal unit

	What goes on in the neonatal unit:	Not worried (1)	A bit worried (2)	Very worried (3)	Frightened /terrified (4)
1	Seeing many monitors and equipment.				
2	Hearing the noises made by monitors and equipment				
3	Seeing the sick babies				
4	Hearing sudden alarm noises				
5	Seeing large numbers of nurses and doctors				
6	Seeing babies using a ventilator/machine to breathe				

7. What is the most important thing that worries you……………………

Minimum score = 6
Maximum score = 24
Range = 6-24

GROUP-BASED SUPPORTIVE COUNSELING INTERVENTION FOR MOTHERS IN THE NEONATAL UNIT IN NIGERIA

TREATMENT PROTOCOL

By: DR CORNELIUS ANI

AND

DR OLUFEMI OYEKUNLE

This is a protocol for delivery of supportive counseling/supportive psychotherapy for Mothers in the neonatal ward which was adapted from previous studies in related areas (Chourasia *et al.*, 2013), (Siewert, Cline and Segre, 2015) (Bella-Awusah *et al.*, 2014). The aim of this manual is to be user-friendly, problem-focused, replicable and acceptable to women. (Kong, Chung, and Lok, 2014).

The first study whose content was included in this manual looked at the effect of counseling on the stress levels of NICU mothers in India (Chourasia *et al.*, 2013) while the second is from a nurse delivered "Listening Visit program" for mothers to reduce depression and anxiety symptoms in postpartum women. (Siewert et al, 2015).The third manual is from a Cognitive Behavioral Therapy (CBT) intervention for adolescents with depression in Nigeria. The aim of adopting from the latter manual is to use similar religious and cultural contents which are likely to be applicable to participants in the current study   (Bella-Awusah *et al.*, 2014).

Supportive counseling or therapy includes listening sympathetically as well as comforting, advising, encouraging, and providing reassurance. In supportive counseling, the therapist provides

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an emotional outlet, the chance for patients to express themselves and be themselves. Group counseling has been a useful intervention in developing countries which is cheaper and more accessible to a larger audience than individual therapy. (Hamzehgardeshi *et al.*, 2017)

The aim of this intervention is to reduce the stress levels as well as the psychological distress of mothers present within the NICU. The original manuals were subjected to various changes in order to adapt it to mothers in the neonatal unit.

6) Group format was chosen because it is cheaper and more accessible than individual counseling in Nigeria. Group therapy would also enable the mothers to share their experiences and support each other.

7) The number of the session was restricted to 2 sessions with a session every week to fit with the average time babies are admitted to the neonatal ward in study site and also to limit "contamination of the study" by other mothers whose babies are admitted after the start of the study.

8) Emphasis will be laid more on positive self-talk, problem-solving techniques and self-care techniques rather than complex cognitive interventions(Valizadeh *et al.*, 2016).

9) The language and examples will be adapted to Nigerian settings and further translated to the local Yoruba Language.

10) In view of the existence of high religious coping in our environment, religious components will be incorporated. (Bella-Awusah *et al.*, 2014)

BACKGROUND

Therapy sessions in this program will be divided into 2 sessions.

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The first session offers an understanding of the neonatal environment, functions of the incubator and other equipment as well as listening to individual concerns and worries that the participants may have and encouraging positive self –talk.

The second session will comprise of further listening to concerns of mothers, encouraging mutual emotional support in the group, and teaching relaxation techniques for managing anxiety.

RATIONALE FOR CHOICE OF SESSION CONTENTS

The main goals of this program are to improve the psychological well-being of mothers whose infants are in the neonatal ward. Thus, the program was designed to be brief so as to ensure that mothers have time to practice what was learned and improve their wellbeing before the infants are discharged from the neonatal unit. Also, each session will be carried out by the investigator with the support of nurses in the neonatal unit. Involving the neonatal nurses means that, if the intervention is found to be helpful, they can be trained to provide supportive counseling for mothers in the Unit in future.

Instructions for therapist

Please this manual as a guide. It presents the key areas you should focus on during sessions. It also provides examples that will serve as guides when the mothers do not provide material to work with in session. However, do work with examples or difficulties the mothers bring to the sessions as these would be relevant to their particular circumstances. Please familiarise yourself with the manual until you feel comfortable and confident in using it in sessions.

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The sessions are usually 45 minutes long. The manual suggests specific time intervals for each activity. Try and adhere to these times to avoid the session over-running or having to miss out sections. At the end of each session, Mothers are given the opportunity to practice before the next session. These "practices" are essential as they help the mothers to translate what they learned in each session into practice.

Start the first session with an introduction of yourself and each group member and set ground rules for the sessions

Introduce yourself and ask each group member to introduce themselves e.g. Mrs. so and so. Make the introduction non-threatening by avoiding people having to say things they may be embarrassed about. It may be sufficient for them to simply say their name.

Time = 5 minutes

GROUND RULES FOR THERAPY SESSIONS

Time = 5 minutes

1. Please be punctual by arriving on time.

2. Come every week. Each session is different and builds on the previous week. It is therefore essential for every session to be attended in order to gain the full benefit of the programme.

4. Do the "practice". You will find the sessions more helpful by practicing what you learn in these sessions.

5. What you talk about in session is **confidential**. However, it's ok if you want to share what you have learned with other people if you want but don't mention the names of other group members of anything they said in the sessions.

6. Try to be as honest as possible and express yourself just as you are and how you feel.

7. Turn off your phone or put it on "vibrate" once you come into the therapy so it doesn't interrupt the session.

Ask the group members to add more rules if they wish

SESSION ONE

Introduction /Informational

The first session will be 2-4 days after the infant's admission. Mothers will have a 45min training session about the environment, equipment, and medical staff of the SBCU, care procedures (e.g. venipuncture), characteristics of premature infants (e.g. appearance, behavior and physical signs), common medical terminology in the SBCU, possible feelings of parents during their infant's hospitalization, and methods of participation in infant care (e.g. kangaroo mother care).

Purpose of session 1

- Listen to concerns and worries of mothers.
- Learn how worrying about the baby can affect your thoughts, mood and actions and how saying positive affirmation can improve mood and feelings
- Learn the functions of the equipment in NICU i.e. incubator, alarm, hygiene, humidity via pictures, posters, videos.

Time: 35 minutes

Explain the equipment's in the neonatal unit and talk about their functions.

Ask group members for concerns, worries and offer problem-solving strategies for them.

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Say: *Stress is common among postpartum women especially those whose babies are requiring hospital care – so the group members are not the only persons affected (they happen to be those identified and who would get help from the program).*

Say: *psychological distress is a difficult and unpleasant experience but there is **a lot that can be done to help make it better.** This program is designed to show them how to make it better.*

Say: *what we say comes from what we think (our mouth is the window into our mind). So, if we say negative things about our self or our baby, we are likely to experience negative feelings and have negative experiences. The good news is that the opposite is also true – if we say positive things and reject negative comments, we feel more positive and behave positively. Encourage each person to make a "positive confession" about themselves and say how it makes them feel. Ensure each participant makes at least one positive comment about themselves. Encourage them to choose a positive comment that is factual or realistic or faith-based. This may include religious beliefs e.g. "I am a child of God; good things will come).*

Say – *some people call this "counting their blessings". Explain that however difficult things are, if we look closely in ALL other aspects of our life, there would be some positives we can take (e.g. my baby is alive, there are good doctors & nurses caring for him/her)*

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ENDING SESSION 1

KEY MESSAGES FROM SESSION 1

1. Read the key messages aloud and check every group member understands them.

2. Ask the group if they have any questions or comments.

3. Ask the group which of the techniques learned today might be most useful to them.

Key messages

1. The equipment in the neonatal Unit can look scary but they are all designed to help my baby get better.

2. Psychological distress is common in postpartum period so you are not alone.

3. We can do a lot of things to make your mental wellbeing better. This program will help you in coping during this period and in the future.

4. What we say to ourselves can affect how we feel and come true. So, start every day by making a positive statement about yourself. and counting your blessings. This can be part of a morning prayer (if you normally pray in the morning). Remind yourself of your positive statement at least 4 times during the day.

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PRACTICE

Say: *I would like to talk about the importance of practicing the skills you learn in the group. Some of you may be thinking: "what do you mean by practice?" Practice means doing brief activities on your own outside of the group.*

You can think of the things you learn here as tools to use in your everyday life to improve your well-being. By trying out your new skills at home while you are still coming here, you can report back to the group and let us know what worked for you and what didn't work. Then we can come up with ways to make them work better.

This programme will be successful for you if you learn skills for managing stress and you feel confident using these skills in your daily life. You will need to practice because if you don't practice the skills, you won't learn them.

Each session's practice will consist of one or more "after-group practice" that everybody in the group will be encouraged to do.

Practice for Session 1

Make a new positive statement about yourself every day in the morning and   2 good things you have experienced at the end of each day. Then repeat them to yourself 4 times during the following day.

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SESSION TWO

This session involves offering the mothers psychological support and the opportunity to share their feelings and experiences with other mothers of premature infants during a 45-60min session.

PURPOSE

- Reinforcing the previous information given; allowing the women to discuss their feelings, worries, and concerns; discovering possible underlying stress factors.

- Listening to concerns, answering and problem-solving technique.

- To learn how to reduce the stress in our mind and body by practicing relaxation techniques and slow breathing exercises when faced with worries.

START

Welcome the mother backs back and thank them for coming to the session.

Remind them of the ground rules

REVISION OF SESSION 1

Check with the mothers

(a) *If they have any questions from the last session*

(b) *How they found putting the ideas into practice*

EMOTIONAL SUPPORT AND PROBLEM SOLVING

Invite the mothers to share any worries or concerns they have about their babies or themselves.

Encourage them to support each other and work together to find practical advice where necessary and possible.

Make note of problems that may require discussion with nurses or doctors and make sure these are discussed and feedback given to the mothers concerned.

RELAXATION

Many things in life can make us feel worried. When we are worried, our body starts to work very hard even though we may not be aware of it. For example, we start to breathe faster and our heart starts to beat faster. Our mind also works too hard. The result is that we feel tired and exhausted even when we have done little or no work. Thinking becomes harder and we feel down and unhappy.

It is therefore important that we learn to do activities that can help relax our body and our mind.

The activities we learn here help our body's natural ability to relax even when things are tough. These activities can help us create peace and calmness in our mind regardless of what is going on around us. Feeling at peace can help you recover your mental and physical energy.

SLOW DEEP BREATHING

Breathing deeply and slowly is an effective way to calm our body. Encourage everyone to join. In order to reduce distraction and make it easier to shy participants, ask everyone to close their eyes as they do the activity. Ask them to sit comfortably with enough space between them.

Demonstrate 2 cycles of deep slow breathing. Then ask them to close their eyes, take a slow deep breath – and keep going until they cannot get any more air inside their chest. Then hold for 5 seconds and breathe out slowly through their mouth.

Ask them to focus closely only on their breathing and nothing else. Check every one is taking in very deep breaths and slow (about 6 per minute). Remind them to empty their mind and just focus on the air going in and out of their breaths.

They can start with a positive mental self-talk or prayer and may wish to focus on the words in their mind (instead of focusing on their breath).

Ask them to continue for 5 minutes and stop. Ask members to give feedback on how relaxed they felt.

MUSCLE RELAXATION

Ask them to sit in a comfortable position

Ask them to close their eyes, and ....

Tense the muscles in your legs slowly pointing your toes up…Hold for 5 seconds…and slowly release over 5 seconds and feel the tension draining away with each muscle tensed and relaxed. Do the opposite, pointing your toes downwards…Hold…and release…

Tense the muscles in your knee and thigh …Hold…and release…

Tense the muscles in your stomach by drawing it in as if you were to make your belly button to touch your back…Hold…and relax.

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Tense the muscles in your chest by taking in a very deep breath. Hold it…and exhale slowly

Close your hand into a tight fist. Hold it ... and slowly release

Tense your forearm as if you were showing off your muscles in both arms. Hold it….and

release.

Tense the muscles in your shoulders by raising them as if you were going to touch your ears

with them…Hold…and release…

Tense the muscles in the back of your neck as if you were going to touch your back with your

head. Focus only on tensing the muscles in your neck…Hold…and release…

Tense your jaw by opening your mouth real wide until you stretch those muscles…Hold…and

release…Let your jaw drop...

Tense the muscles in your forehead by raising your eyebrows as much as you can…Hold….and

release…

Tense the muscles around your eyes by squeezing them shut…Hold… and relax…Feel a sense of

deep relaxation spreading out all over that area and throughout your body

POSITIVE IMAGERY

Ask them to think of the happiest thing that has ever happened to them. If you can't think of one,

imagine the happiest thing that can happen to you – even in your dream. Think about that

situation in-depth and add more details to make the image or memory more and more powerful.

Your image or situation can be a religious experience. It does not have to be real – you can just

make up something you have been dreaming of. Make sure it is an image or memory that really

makes you happy and relaxed when you think about it.

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Focus on this image or memory closely ignoring any distractions or noises or other thoughts coming into your head. Stay focused on it for 10 minutes and see how relaxed you feel.

ENDING SESSION 2

KEY MESSAGES

Stress and worries make our body and mind tense and exhausted

Problem-solving can help us find the best solution to our problems

To be able to care properly for our babies we need to take care of our needs too

PRACTICE

Lead them in a relaxation exercise.

Do the deep slow breathing technique (12 breaths in and out) in the morning, repeat in the afternoon and before going to bed every day and anytime you feel worried and anxious.

Review the key messages from both sessions and reinforce session and check that everyone has been able to continue to do the PRACTICE topics for each week.

Do a formal ending and goodbyes.

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APPENDIX VII: ETHICAL APPROVAL

INSTITUTE FOR ADVANCED MEDICAL RESEARCH AND TRAINING (IAMRAT)
College of Medicine, University of Ibadan, Ibadan, Nigeria.

Director: **Prof. Catherine O. Falade**, MBBS (Ib), M.Sc., FMCP FWACP
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e-mail: cfalade@comui.edu.ng lillyfunke@yahoo.com

UI/UCH EC Registration Number: NHREC/05/01/2008a

NOTICE OF FULL APPROVAL AFTER FULL COMMITTEE REVIEW

Re: A Feasibility Study on the effect of Supportive Counselling on Psychological Wellbeing of Mothers in the Neonatal ward of the University College Hospital, Ibadan

UI/UCH Ethics Committee assigned number: UI/EC/17/0547

Name of Principal Investigator: **Dr. O. O. Oyekunle**

Address of Principal Investigator: Department of Psychiatry
College of Medicine
University of Ibadan, Ibadan

Date of receipt of valid application: 05/12/2017

Date of meeting when final determination on ethical approval was made: N/A

This is to inform you that the research described in the submitted protocol, the consent forms, and other participant information materials have been reviewed and given full approval by the UI/UCH Ethics Committee.

This approval dates from **10/05/2018 to 09/05/2019**. If there is delay in starting the research, please inform the UI/UCH Ethics Committee so that the dates of approval can be adjusted accordingly. Note that no participant accrual or activity related to this research may be conducted outside of these dates. All informed consent forms used in this study must carry the UI/UCH EC assigned number and duration of UI/UCH EC approval of the study. It is expected that you submit your annual report as well as an annual request for the project renewal to the UI/UCH EC at least four weeks before the expiration of this approval in order to avoid disruption of your research.

The National Code for Health Research Ethics requires you to comply with all institutional guidelines, rules and regulations and with the tenets of the Code including ensuring that all adverse events are reported promptly to the UI/UCH EC. No changes are permitted in the research without prior approval by the UI/UCH EC except in circumstances outlined in the Code. The UI/UCH EC reserves the right to conduct compliance visit to your research site without previous notification.

A.T.

Principal Assistant Registrar/Secretary, UI/UCH Ethics Committee
For Chairperson, UI/UCH Ethics Committee
E-mail: uuchec@gmail.com

Research Units • Genetics & Bioethics • Malaria • Environmental Sciences • Epidemiology Research & Service
• Behavioural & Social Sciences • Pharmaceutical Sciences • Cancer Research & Services • HIV/AIDS

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IPELE KINNI

AWON OHUN ELO

AWON IBERE TI OJO MO IRUFE AWON NKAN TI O YO O KA LAWUJO

Jowo ko idahun si awon ibeere tabi ki o yi odo si ibi ti o ba ye. Eleyi ki I se idanwo, o wa fun lati se iwadi nipa re ati ilera reni.

Ibere ni pa ara re

1 Oruko ile igbebi

2 Ibo ni o ngbe (ni lowo bayi)?

3 Ojo ibi?

4 Esin wo ni o nse?   (a) Musulumi (b) Kristiani Ode Oni (c) Esin ibile/Abalaye (d) Awon iyoku

5 Iru ebi (a) Oniyawo Kan (b) Oniyawo meji ati jube lo

6. Ti o ba je oniyawo meji ati jube lo, ipo wo ni o wa ninu awon iyawo?

7. O ti wa ni ile kana abi ko ni be (a) Owa ni ile oko (b) E ti pin ya (c) O ti wo ile oko (d) E ti ko ara yin sile

8 Ipele eko (a) Mi o ka iwe rara (b)Ile-eko alakobere (c) Ile-eko airama (d) Ile eko Unifasiti /Poli

9. Ti oba wa ni ile oko, odun kelo re ti o ti wa ni be?

10.Ise wo ni o nse?

11.Iwo at tani ejo ngbe bayi? (a) Oko (b) Obi (c) Ana (d) Ebi (e) Ko si

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12 Ta ni o tele o losi ile iwosan ni igba akoko

13. Ise oko re? (a) Ise ara eni (b) Omo-ikose (c) Onise ijoba (d) Ise-ona (e) Onisowo (f) Akeko
(g)iyoku

14. Ipele eko oko re (a) Ko ka iwe rara (b) Eko alakobere (c) Eko Girama (d) Eko Unifasiti/Poli

15. Omo melo ni o ti bi yala o wa laye tabi kosi?

16 Se ako/Abo ni awon omo ti o wa laye

17. Omo odun melo ni o nigba ti oloyun akoko?

18. Osu melo ni oyun re ni igba ti o wa fi oruko sile fun itoju alaboyun bayi?

19.Tani o tele e wasi ile iwosan ni igba akoko?

20.Igba melo ni o wa fun eto itoju alaboyun?

21 Odun wo ni o bi mo keyin?

22.Nje o ni idojuko pelu ilera opolo/okan ninu oyun yi?

23Nje o ni ailera ti o le ninu oyun yi? (i) Beeni (ii) Beeko

24 Ti o baje beeni, iru ewo ni? (a) Ki eje ma daa lara (b)Inira ni pa ti mi soke misodo (c) Ki nkan
ma jade loju ara (d) Eebi (e) Ki ara eni ma jafafa (f) Aile jeun (g)Ki o ma re eni lati inu wa (h)Isoro
orun sisun(g) Oyoko (jowo ko sile)

25.Nje o ti ba enikeni soro idoju yi (i) Beeni (2) Beeko

26. Nje o ti se oyun ri (i) Beeni (2) Beeko

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27. Bawo ni o se tim bimo lati eyin wa (i) Oju ara (2) A ran o lowo (3) Ise abe

28. Iwon omo…………

29 Ako tabi abo………

30 Ojo aye………………………………...

IPELE KEJI

OSUWON BI ISELE SE RI LARA ENI

ITONI SONA: Awon akosile isoro to awon eniyan ma n dojuko lehin awon wahala orisirisi isele ti oma nse si awon eniyan.Jowo ka ikankan daradara, ki o si so bi o se ni o lara to lati bi OJO MEJE SEYIN ninu isoro…………………ti o se ni……………Bawo ni inira wonyi se po to?

	Kosi	Di e	Ni won ba	Opo di e	Opo gan
1.Ti mo ba tin rant o maan mu ero bi ose n se mi pada wa	0	1	2	3	4
2. Mo ni isoro orun sisun	0	1	2	3	4
3. Awon nkan miran ma nje ki nranti e	0	1	2	3	4
4. Inu maa n bi mi, ara si ma nkan mi	0	1	2	3	4
5. Mi o ki nje ki inu bimi nigbakigba ti mob a ranti	0	1	2	3	4
6. Ero naa maa nwa nigba ti mi o tile fe ro	0	1	2	3	4
7. O maa nse mi bi eni pre ko sele tabi wipe kise otitio lo sele	0	1	2	3	4
8. Mo maa njina si ohun ti o le mu mi ranti	0	1	2	3	4
9. Aworan e maa ndede wa si okan mi	0	1	2	3	4
10. Eru maa ntete bami, ti ara mi a maa gbon nigba naa	0	1	2	3	4
11. Mo maa n gbiyanju lati ma ranti	0	1	2	3	4
12. Mo mo wipe, mo sini opolopo ero nipa a,sugbon mi o doju ko won nigba naa.	0	1	2	3	4
13. Mi o tile so ni pato bi ero mi nipa e se ri	0	1	2	3	4
14. Mo maa nri ara mi bi eni wipe m nse/mo nro bi enipe nkan naa se se nsele ni	0	1	2	3	4
15. Mo ni isoro la ti sun	0	1	2	3	4
16. Mo ni ero ti o lagbara nipa isele naa	0	1	2	3	4
17. Mo ti gbiyanju lati mu kuro ninu iranti si mi	0	1	2	3	4
18. Mo ni isoro lati fi okan si ohun ti mo nse	0	1	2	3	4
19. Tim o bar anti, aagun a bo mi,mi o nile mi daradara, a daabi enipe kin bi tabi ki okan mi ma se gbi-gbi	0	1	2	3	4
20. Mo ma nfi la ala	0	1	2	3	4
21. Mo ma nso ohun ti onsele ni ayika mi,mo si ma nwa ni imura sile	0	1	2	3	4
22. Mo ma n gbiyanju lati ma soro nipa isele naa	0	1	2	3	4

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IPELE KETA

IBEERE O TE MI LORUN ONIBARA

1. Kini iwon bi ase da o lohun se ri?

…………………….4…………………….3…………………….....2…………………….1

O dara gan   Odara   Odara die   Ko dara

2. Nje iru itoju ti o fe ni or gba?

…………………….1…………………….2…………………….3…………………….4

Ko jo rarara   Rara ko joo   Beeni lapapo   Bee gan ni

3. Bawo ni eto wa se ba o pade si?

…………………….1…………………….2…………………….3…………….…………4

Koda gbogbo re la   Pupo ninu re ni a ba   Die ninu re ni a pade   Ko si eyi ti aba pade

Fe ba pade tan   pade

4. Ti ore re ba n fe iru itoju bayi, nje o le royin eta wa fun wa?

…………………….1…………………….2…………………….3…………………….4

    Rara rara   Mi o ro bee   Bee ni, mo ro be   dajudaju

5. Bawo ni iranlowo ti o ri gba se te o lorun si?

…………………….1…………….……………. 2…………. ... . …. .. .3…………………….4

Ko te mi lorun   ayipada die   O te mi lorun   Ot emi lorun gan

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6.Nje awon eto wa ti ran lowo lati koju isoro re dara dara?

…………………………1……………................ 2…………………….3…………………………………4

Beeni won ran mi lowo   Beeni,won ranmi lowo Rara, won ko ran mi lowo Ko da won da kun ni

7.Lakotan, bawo ni awon eto idahun wa se te olorun si?

………………….1……………………2………………………….3………………………….4

O te mi lorun gan ni   O te mi lorun   Ko si ayipada   Ko te mi lorun rara

8.Ti o ba nilo iranlowo lekan si, nje wa pada wa si odo wa?

…………………………1………………………..2………………………3………………………….4

Rara rara   Mi o ro be   Beeni , mo ro be   Dajudaju

9Ohun ti mo feran ju ninu abala igbaniyanju ni …………………………………………...

10.Ohun ti nko feran ninu abala igbaniyanju ni……………………………………………….

11. Erogba mi lati mu ki abala igbaniyanju fi dara si ni ………………………………………

IPELE KARUN

Eyi jẹ ẹya ti PSS: NICU ti o da lori "Awọn iṣoro nipa iriri ati ohun ni eka omo owo omo/ ikoko".
O ni awọn ibeere kukuru mefa ti o da lori "Awọn aworan ati ohun eka naa" iwọn-ipele ti PSS: NICU.
Fi ami si àpótí ti o ṣe apejuwe bi o ṣe ro nipa awọn ipele mẹfa ti ohun n sele ni eka omo owo/ ikoko ti o wa.

	Ohun ti o n lọ ni eka omo owo/ ikoko	1. **Ko ṣi aifokanbalebalẹ**	2. **Ifokanbale die**	3. **Ifokanbale ti o po.**	4. **Ni Iberu**
1.	Riri ọpọlọpọ awọn ẹrọ				
2.	Gbigbọ awọn ariwo nipasẹ awọn ẹrọ				
3.	Riri awọn alaisan ti o je omo owo/ikoko				
4.	Gbigbọ itaniji lojiji				
5.	Riri ọpọlọpọ awọn noosi ati awọn dokita Oyinbo				
6.	Riri awọn ikoko ti o n lo ẹrọ atẹgun lati mii				

7. Kini ohun pataki ti o ma n fun o ni iṣoro/aifokanbale ....

Iwon ti o kere ju = 6
Iwọn to pọju = 24
Ibiti = 6-24

IPELE KEFA

IGBEMORAN ATI ATILEYIN IRANLOWO FUN AWOM IYA NI EKA OMO AWON OMO OWO NI ORILEDE NAIJIRIA.

ILANA ITOJU

LATI OWO

OMOWE CORNELIUS ANI

ATI

OMOWE OLUFEMI OYEKUNLE

Eyi je Ilana fun itoju lori imọran/atilẹyin fun awọn iya ni eka awon omo owo ti a ya lati ise iwadi ti a se ṣaaju ni awọn agbegbe ti o jọmọ (Chourasia et al., 2013), (Liao et al., 2015) (Bella-Awusah et al., 2014). Ero itọnisọna yii jẹ ti ore si ore, lati yanju iṣoro ati ohun elo ti yo je itẹwọgba fun awọn obirin. (Kong, Chung ati Lok, 2014).

Iwadi akọkọ ti akoonu re wa ninu imudaniloju yii wo ipa ti imọran n ko lori awọn ipọnju ti awọn iya n ko ju ni eka awon omo owo ni orilede India (Chourasia et al., 2013) nigba ti ekeji wa lati ọdọ nọọsi "Eto abewo ati fifi eti si le " fun awọn iya lati din irewesi okan atii awọn aami aifọkanbalẹ ni ara awọn obirin ti o se se bimo. (Liao et al., 2015) Ẹkẹta da lori awon itọnisọna lati inu isesi alaisan (CBT) fun awọn ọdọ ti o ni irewesi okan ni orilede Naijiria. Ero lati lo iyipada akọsilẹ ikẹhin ni lati lo awọn akoonu esin ati aṣa ti a le lo fun awọn olukopa ninu iwadi ti o n lo lowo (Bella-Awusah et al., 2014).

Imọran a la tileyin tabi itoju ailera je fifi arabalẹ ati gbigbọ pẹlu itunu,gbigba nii ni imọran, iwuri, ati ipese idaniloju.Fi fun nii ni imọran a la tilẹyin, olutọju a pese ipinnu iṣoro itọju fun alaisan lati

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fi ara re han ati ki o jẹ ara re. Igbaninimoran alapejopo jẹ eyi ti o wulo fun awọn orilẹ-ede to sese n dagbasoke. O jẹ eyi ti o din wo ti o si rọrun fun opolopo eniyan ju itọju ailera kọọkan lọ. (Hamzehgardeshi et al., 2017)

Ero iwadi yii ni lati din inira ati awọn aibanujẹ awọn iya ti o wa ni eka awon omo owo. A yi awọn akọsilẹ akọko lati mu ki o ṣe deedee si awọn iya ti o wa ni eka awon omo owo.

1) A yan opo ẹgbẹ layo nitori pe o din wo ti o si rọrun ju imọran eni kọọkan lọ ni orilede Naijiria. Itọju ailera alapapo yoo tun jẹ ki awọn iya salaye awọn iriri wọn ati atilẹyin fun ara wọn.

2) A o din awon akoko igbani ni imoran si emeji pelu igbani ni imoran si ekan ni ose pẹlu ibamu igba ti a da awon omo owo duro si eka awon omo owo ni agbegbe ibiti iwadi ti n lo ati lati din "idibajẹ iwadi" ni pa sẹ awọn iya ti a da awọn omo won duro lehin ti iwadi ti bere.

3) A o fi ipinu le le lori ọrọ nipa ara ẹni, ona lati yanju isoro ati awọn ilana itọju ara ẹni ju awọn iṣoro ipenija lati da eniyan mo (Valizadehet al., 2016).

4) Ede ati awọn apeere yoo wa ni ibamu si awọn eto orilede Naijiria. A o si tumo re ṣiwaju si ede yoruba.

5) Ninu idaniloju igbesi aye ti o ni ẹsin ti o ga julọ ni ayika wa, awọn ẹya ẹsin yoo darapọ. (Bella-Awusahet al., 2014)

ISE TI ATI SE SEYIN

A o pin akoko itọju ailera inu eto yii si akoko meji.

Akoko kini yo funni ni oye nipa ayika eka omo owo, awọn iṣẹ ti incubator ati awọn ohun elo miiran ati fifi eti sile si awọn iṣoro ti ara ẹni ati awọn iṣoro ti awọn olukopa le ni ati iwuri fun ara ẹni.

Akoko keji yoo da lori fifi eti sile si awọn iṣoro ti awọn iya ni,si ṣe iwuri fun imudaniloju imolara ninu ẹgbẹ, ati kiko won nipa awọn imuduro imularada fun sisakoso iṣoro.

IRONU TI O WA LEYIN AWON OHUN TI A YAN LATI LO NINU AWON IPELE

Idi pataki eto yi ni lati mu iyipada ba ilera awon iya ti awọn ọmọ owo won wa ni eka omo owo. A se eto yii ni kukuru lati ri daju pe awọn iya ni akoko lati ṣe ohun ti a kọ won ati lati mu ki ilera won gbe peli si saaju ki wọn to da awọn ọmọ owo won sile kuro ni eka omo owo. Bakannaa, akoko itọju ailera yo ma waye pẹlu oluwadi pelu atileyin awon nursii ti o wa ni eka omo owo. Ki kopa awon nursii eka omo owo tumo sii wipe ti eko yen ba wulo, won a le fun won ni idanileko lori bi a se n fun iya ti o wa ni eka omo owo ni imọran atilẹyin ni ojo iwaju.

ILANA FUN OLUTOJU

E jọwọ manual yii je itọnisọna. O n ṣe afihan awon ibiti o yẹ ki e fojusi ni akoko itọju ailera. Yo tun pese apẹẹrẹ ti yoo jẹ itọsọna nigbati awọn iya ko ba pese awọn ohun elo lati ṣiṣẹ pẹlu ni akoko itọju ailera. Sibẹsibẹ, e ṣe ise pẹlu awọn apẹẹrẹ tabi awọn iṣoro ti awọn iya gbe wa si akoko itọju ailera toripe yoo ṣe pataki si ipo ti wọn wa ni pato. Jọwọ ṣe imọ ararẹ pẹlu itọnisọna yii titi ti o fi ni itura ati igboya ṣaaju lilo rẹ ni awọn akoko itọju ailera.

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Awọn akoko itọju ailera naa maa n jẹ iṣẹju marun le logoji. Itọnisọna yii n se alaye akoko fun iṣẹ-ṣiṣe kọọkan. Gbiyanju ki o tele awon akoko yii lati yago fun igbalori ṣiṣe tabi nini lati padanu awọn apakan lakoko itọju ailera. Ni opin akoko itọju ailera kọọkan, awọn iya ni aanfani lati ṣe ki o to to akoko fun itoju ailera miran. Awọn "iṣe" wọnyi sẹ pataki nitori a je ki awọn iya le ṣe itumọ ohun ti wọn kẹkọọ re ni akoko itọju ailera kọọkan.

Bẹrẹ akọkọ itọju ailera pẹlu ifihan ti ara rẹ ati eyan kọọkan. Ki o ṣeto awọn ofin fun awọn akoko itọju ailera

Ṣe afihan ara rẹ ki o si so fun enikankan pe ki o se afihan ara re fun apere arabinrin bayi bayi. Ma je ki ifihan naa je idẹruba nipasẹ didenaa siso nkan nipa ara eni ti o le mu idoju ti wa. O to ki wọn sọ orukọ wọn nikan.

Aago = iṣẹju marun

ILANA FUN IPIN ITOJU

Aago = iṣẹju marun

1. Jowo ma wa deede ki o si ma de lasiko.

2. Ma wá ni ose ose. Akọkọ itọju ailera kọọkan yato o si ma n da lori ose ti o kọja. Nitorina o jẹ dandan lati wa fun akọkọ itọju ailera ni gbogbo igba lati   le ni anfani gbogbo eto naa.

4. Ṣe iṣe   naa. Iwọ yoo ri pe awọn akọkọ itọju ailera naa n se iranlọwọ nipasẹ ṣiṣe ohun ti o kọ ni awọn akọkọ itọju ailera.

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5. Ohun ti o sọ nipa re ni akọkọ itọju ailera jẹ eyi ti yo wa ni ipamo. Sibẹsibẹ, o dara ti o ba fẹ pin ohun ti o ti kọ pẹlu awọn eniyan miiran ti o ba fẹ ṣugbọn ma daruko awon omo egbe nipa ohunkohun ti won sọ ni awọn akoko itọju ailera.

6. Gbiyanju lati jẹ olotitọ bi o ti ye. Ki o si sọ nipa ara rẹ gẹgẹ bi o ti wa ati bi o ṣe lero .

7. Pa foonu rẹ tabi ki o fi si vibration ni kete ti o ba ti wa fun akoko itọju ailera ki o ba ma fa idiwo fun akoko itọju ailera

Beere lowo awọn omo ẹgbẹ lati fi awọn ofin diẹ sii ti wọn ba fẹ

IPIN KINNI

IFIHAN/ALAYE

 Akọkọ itọju ailera kinni yoo jẹ ọjọ meji si merin lẹhin igbati a da ọmọ owo duro. Awọn iya yoo ni akoko ikẹkọ iseju aarun le logoji nipa ayika, awọn ohun elo, ati awọn oṣiṣẹ ilera ti eka omo owo, awọn ilana itoju (fun apẹẹrẹ, venipuncture), iwa awọn ọmọ ikoko ti ojo ori won ko pe (fun apẹẹrẹ bi won se ri, awọn ami bi ara se n wu iwa si), awọn ọrọ nipa oogun ni eka omo owo , awọn iṣoro ti o le ṣe awọn obi ni igba ti a da ọmọ wọn duro ati awọn ọna ti won le fi kopa ninu abojuto ọmọ owo (fun apẹẹrẹ kangaroo mother care).

Idi itọju ailera kinni

• Fi eti sile si awọn iṣoro awọn iya.

• Ko nipa bi iṣoro nipa ọmọ owo se le ni ipa lori ero, iṣesi ati awọn iṣẹ rẹ ati bi o ṣe le sọ idaniloju rere pe o le mu iṣesi ati awọn iṣoro dara

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• Ko nipa awọn iṣẹ ti awọn ẹrọ ti a n lo ni inu eka omo owo se n sise si fun apere incubator, itaniji, imototo, omiminu ategu nipasẹ awọn aworan, awọn akọle, awọn fidio.

Aago: iṣẹju marun din logoji.

Ṣe alaye awọn ẹrọ ti a n lo ni eka awon omo owo ati ki o si sọ nipa awọn iṣẹ wọn.

Beere lowo awọn ọmọ ẹgbẹ fun awọn ifiyesi ati awọn iṣoro ti wọn n koju ki o si wa idahun si iṣoro naa fun wọn.

Sọ wipe: Iṣoro aifokanbale wọpọ laarin awọn obirin ti o ṣẹse bimo paapaa ti awọn ọmọ wọn nilo itọju ile iwosan - nitorina awọn omo ẹgbẹ nikan ko lo kan. (o ma n sele si awọn ti a ti toka si ati ti yoo gba iranlọwọ lati inu eto yii).

So wipe: ibanujẹ ẹdun ọkan je ohun ti o nira ati iriri ti ko ni igbadun sugbon nkan po pupọ ti a le ṣe ṣi lati mu ki o dara si. Eto yii jẹ apẹrẹ lati fi han wọn bi o ṣe le dara si.

Sọ wipe: ohun ti a n sọ wa lati inu ohun ti a n ro (ẹnu wa ni ferese si inu wa). Nitorina, ti a ba sọ awọn ohun ti ko dara nipa ara wa tabi ọmọ wa, o le jẹ ki a ni awọn iriri ti ko dara. Irohin ti o dara ni pe idakeji tun jẹ otitọ. Ti a ba sọ awọn ohun rere ti a si kọ awọn ọrọ odi, a o ma wu iwa rere. Gba eniyan niyanju lati ṣe "ijẹwọ rere" nipa ara wọn. Ki won si sọ bi o ṣe mu lokan won si. Rii daju pe omo egbe kọọkan so ọrọ kan ti o dara nipa ara re. Gba wọn niyanju lati yan ọrọ ti o dara ti o jẹ otitọ tabi igbagbọ. E leyi le je igbagbọ nipa ẹsin fun apẹẹrẹ. " Omọ Ọlọrun ni mi; ohun rere yoo wa).

Sọ wipe - Awọn eniyan kan ma n pe eleyi ni "kika awọn ibukun wọn". Ṣe alaye pe bi nkan se nira to, ti a ba wo gbogbo igbesi aye wa, a o ri awọn aseyori ti a le lo (fun apẹẹrẹ ọmọ mi wa laaye, awọn onisegun oyinbo ati awọn nursii ti o dara n tọju rẹ)

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PIPARI IPIN KINNI

KOKO ORO LATI IPIN KINNI

1. Ka awọn oro ti o se koko soke ki o si ri wipe o ye omo egbe Kankan.

2. Beere lowo ẹgbẹ kankan ti wọn ba ni awọn ibeere tabi awọn ọrọ.

3. Beere lowo ẹgbẹ kankan awọn nkan ti won kọ loni ti o jẹ eyi ti o wulo julọ fun wọn.

KOKO ORO

1. Awọn irinse eka omo owo je eyi ti o n dẹruba nii ṣugbọn wọn ṣe lati ṣe iranlọwọ ki ilera ọmọ mi le ba dara.

2. Isoro opolo wọpọ leyin ibimo,nitorina eko da wa.

3. A le ṣe ọpọlọpọ awọn nkan lati je ki ilera opolo yin dara si. Eto yii yoo ran yin lọwọ lati kopa ni akoko yii ati ni ọjọ iwaju.

4. Ohun ti a ba sọ fun ara wa le ni ipa lori bi a ṣe ri ki o si wa si imuse. Nitorina, bẹrẹ ọjọ kankan nipa ṣiṣe alaye rere kan nipa ara rẹ ati kika awọn ibukun rẹ. Eyi le jẹ apakan adura owurọ (ti o ba ma n gbadura ni owurọ). Ṣe iranti ara ọrọ rere si ara rẹ. O kere, emerin lojumo.

ISE SISE

Sọ wipe: Mo fẹ lati sọrọ nipa awon imo ti o se pataki ti e ko ninu egbe. Diẹ ninu yin le ma ro wipe "Kini mo mọ nipa imo?" Imo tumọ si ṣe awọn iṣẹ kukuru lori ara rẹ ni ita ẹgbẹ.

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O le ronu nipa awọn ohun ti e kọ nibi bi awọn irinṣẹ ti o le lo ni igbesiaye rẹ lojoojumọ lati mu igbesiaye rẹ dara sii. Nipa gbigbiyanju awọn ogbon titun rẹ ni ile nigba ti o ṣi n wa sibi, o le ṣe alaye pada fun ẹgbẹ naa ki o si jẹ ki a mọ ohun ti o ṣiṣẹ fun ọ ati ohun ti ko ṣiṣẹ. Lẹhinna, a le wa awọn ọna ti yo fi ṣiṣẹ daradara.

Eto yii yoo jẹ aṣeyọri fun ọ bi o ba kọ imọ fun ṣiṣe iṣakoso wahala ati nini igboya nipa lilo awọn ọgbọn wọnyi ni igbesi aye ojoojumọ rẹ. Iwọ yoo nilo lati ṣe iṣe naa nitori ti o kọ ba lo awọn imo naa, iwọ kii yoo kọ wọn.

Igbesẹ kọọkan yoo ni iṣe kan tabi ju bẹ lo lẹhin iṣe ti ẹgbe ti gbogbo eniyan ninu ẹgbẹ yoo ni iwuri lati ṣe.

ISE SISE FUN IPIN KINNI

Ṣe asọtẹlẹ tuntun kan nipa ara rẹ ni owurọ ni ojọjumọ ati awọn ohun rere meji ti o ti ni iriri nipa re ni opin ọjọ kọọkan. Lẹhinna,so si ara rẹ ni igba merin ni ọjọ keji.

IPIN KEJI

Ipin yii ni ṣe pelu iranlọwọ alatilẹyin fun awon iya ati anfani lati pin awọn iriri ati ero wọn pẹlu awọn iya omo owo miiran nigba akoko 45-60min.

IDI

• Imuduro alaye ti a ti fun won tẹlẹ ; gbigba awọn obirin laaye lati jiroro nipa awọn iriri, iṣoro ati awọn ifiyesi wọn; Siṣe akiyesi awọn okunfa wahala.

• Fifi eti sile sii awọn ifiyesi, didahun awon iṣoro ati awon ilana iṣoro.

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• Lati kọ bi a ṣe le din wahala ku ni ara ati okan wa nipa ṣiṣe awọn eto igbafe ati awon ere mimi die-die nigba ti e ba dojuko awọn iṣoro.

Ibẹerẹ

Ki iya kaabo ki o si dupe lowo won fun wiwa fun ipin naa.

Ran wọn let awọn ofin ti o wa nilẹ

ATUN YEWO LORI IPIN KINNI

Ṣe ayẹwo pẹlu awọn iya

(a) Ti wọn ba ni ibeere kankan lati ipin ti won se kẹhin

(b) Bawo ni wọn ṣe ri fifi awọn ero won sinu ise sise won.

EMOTIONAL SUPPORT AND PROBLEM SOLVING

Pe awọn iya lati pin eyikeyi ninu awọn iṣoro won ti wọn ni nipa awọn ọmọ wọn tabi ara wọn.

Gba wọn niyanju lati ṣe atilẹyin fun ara wọn ati lati ṣiṣẹ papọ lati wa imọran ti o wulo nigbati o yẹ.

Ṣe akọsilẹ awọn iṣoro ti o le nilo ibanijiroro pẹlu awọn nọọsi tabi awọn onisegun oyinbo. Ki o si ri daju pe wọn jiroro lori re. Ki won si fun awọn iya ti o kan ni esi.

ISINMI

Ọpọlọpọ nkan ni o le mu wa ma ronu. Nigba ti a ba ni iṣoro, ara wa a ma bẹrẹ si n ṣiṣe takun-takun bi o tilẹ jẹ wipe a ko ni mọ. Fun apere, a o bẹrẹ si n mi kiakia ti okan wa naa a bẹrẹ si lati

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ma lu ara. Ẹmi wa a tun ma ṣiṣẹ takun-takun . Esi re ni wipe a ma re wa paapaa nigba ti a ba ṣe ise kekere tabi ti a ko si iṣẹ. Ironu a di wahala ti o je wipe a o ni ijakule ati aidunnu.

Nitorina o ṣe pataki ki a kọ ẹkọ awọn iṣẹ ti o le ran igbadun ara ati okan wa lọwọ.

Awọn iṣẹ ti a o kọ nibi yo ṣe iranlọwọ fun ara wa lati le sinmi paapaa nigbati awọn nkan ba le. Awọn iṣẹ wọnyi le ṣe iranlọwọ fun wa lati ṣẹda alaafia ninu okan wa laibikita ohun ti o n se le ni ayika wa. Nini alaafia le ran yin lọwọ lati ṣe atunṣe ilera ọpolo ati agbara ara rẹ.

MIMI KANLE DIE-DIE

Mimi kanle die-die jẹ ọna ti o wulo lati mu ara wa sinle. Gba gbogbo eniyan niyanju lati darapo. Lati din mimu okan kuro ninu nkan yen ati lati je ki o rọrun fun awon ti o n tiju, ni ki gbogbo eniyan di oju wọn bi wọn ṣe ṣe iṣẹ naa. So fun wọn pe ki wọn joko daada pẹlu aaye pupo laarin wọn. Ṣe afihan meji nipa mimi kanle die-die. Lẹhin na, so fun won wipe ki won di oju won,ki won mi kanle die, ki won si maa se lọ titi ti wọn ko fi nini afẹfẹ mo ninu aya wọn. Lẹhin na,ni ki won duro fun iseju aaya marun ki won si mii sita die-die pelu ẹnu won.

Ni ki won ma foju si nkan mi yato si mimii won pẹkipẹki. Ṣe ayẹwo pe olúkúlùk won n mi kanle sinu die-die (bi emefa ni iṣẹju kan). Ran wọn leti lati gbagbe gbogbo nkan ti o wa lọkàn. Ki won fi oju si afefe ti o n wọle ati eyi ti o n jade kuro ninu emi wọn.

Wọn le bẹrẹ pẹlu ọrọ ara ẹni ti o dara tabi adura ati pe won le fi oju si awọn ọrọ inu wọn (dipo fifi oju si emi won).

Ni ki won se fun iṣẹju marun ki won si da wo duro. Beere lowo awọn ọmọ ẹgbẹ bi ara won se ba le si.

ISINMI ISAN

So fun won ki won joko ni ipo itura

So fun wọn ki won di oju wọn, ati ....

Jẹ ki awọn iṣan inu ese rẹ fi ara ba le die-die nipa kika ika ẹsẹ rẹ soke ... Duro fun iseju marun ... ki o si fi sile ni iseju ayaa marun, ki o si mo lara pe isoro yen n kuro bi isan Kankan se n fi ara bale.

Ṣe idakeji, nipa kiko omo ika ẹsẹ rẹ si salẹ ... Dimu ki o si tu silẹ

Jẹ ki awọn iṣan inu orunkun ati itan rẹ fi ara ba le... Dimu ki o si tu silẹ

Jẹ ki awọn isan ikun rẹ fi ara ba le nipa fifa si inu bi ẹnipe o fẹ ki bọtini ikun re fi ọwọ kan eyin rẹ ... Dimu ki o si fi ara bale/ ki o sinmi.

Jẹ ki awọn isan inu aya rẹ fi ara ba le nipase mimi kanle gan. Dimu ki o si mi sita laiyara

Pa ọwọ rẹ de pekipeki. Dimu ki o si fi silẹ laiyara

Je ki awon ọwọ iwaju rẹ fi ara bale bi ẹnipe o n fi isan owo rẹ mejeji han. Dimu ki o si tu silẹ

Jẹ ki awọn isan ejika rẹ fi ara bale nipa gbigbe wọn soke bi ẹnipe o fe fi ọwọ kan eti rẹ pẹlu re ... Dimu ki o si tu silẹ

Jẹ ki awọn iṣan ti o wa ni ẹhin ọrùn re fi ara bale bi ẹnipe o yoo fi eyin re kan ori rẹ. Foju si fif isan orun re bale. ... Dimu ki o si tu silẹ

Je ki agbọn rẹ fi ara bale nipa sisi enu re gbagada titi ti wa fi naa awon isan naa... Dimu ki o si tu silẹ ... Jẹ ki agbon re jabo.

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Jẹ ki awọn isan iwaju ori re fi ara bale nipa gigbe eyin oju re soke bi o se fe. Dimu ki o si tu silẹ

Jẹ ki awọn isan ti o wa ni agbegbe oju re fi ara bale nipa fifun oju po…… Dimu ki o si tu silẹ ...

Ni aro jinle nipa isinmi ti yo kari gbogbo agbegbe re ati gbogbo ara re.

AWỌN AWORAN OJU-IWE

Ni ki wọn ronu nipa ohun idunnu ti o ti ṣẹlẹ si wọn rii. Ti o ko ba le ronu nipa nkankan, fi oju inu wo ohun idunun ti o le ṣẹlẹ si ọ paapaa ninu ala rẹ. Ronu jinle nipa ipo naa ki o si fi alaye kun awon iranti naa ki o le ba lagbara siwaju sii. Awon aworan re tabi ipo rẹ le jẹ iriri ẹsin. Ko pon dandan ki o je nkan ti o sele. O le ṣe nkan ti o ti n lala nipa re. Rii daju pe o je aworan tabi iranti ti o ma n fi okan re bale ati ti o ma n mu inu re dun ni igba ti o ba n ro.

Fi oju si aworan tabi irant yi pẹkipẹki nipa didena ohunkohun tabi ariwo tabi awọn ero miiran ti o n wa si ori rẹ. Da ojukọ fun iṣẹju mẹwa ki o si wo bi okan re se bale si.

PIPARI IPIN KEJI

Awọn Esi ti o se koko

 Iṣoro ma n gbe okan ati ara wa soke.

Yiyanju iṣoro le fun wa ni esi ti o dara si awon isoro wa.

Lati le ṣe itoju awọn ọmọ wa daradara, a nilo lati ṣe abojuto awọn aini wa naa.

ISE SISE

Dari won fun ere idaraya.

Ṣe ilana itọju mimi ti o jinle (mimi jade ati sinu ni emejila) ni owurọ, tun ṣe ni osan ati ki o to sun ni ọjọjumo ati nigbakugba ti o ba ni ibanujẹ ati aibalẹ okan.

Ṣe ayẹwo awọn esi ti o se koko lati inu ipin mejeeji. Ki o si ri wipe o pon dandan awon ipin naa. Ki o si se ayewo wipe gbogbo eniyan ni anfani lati tẹsiwaju ninu sise awon ise ti o ye ki won ṣe ni ose kọọkan.

Ṣe ipari ti o gbẹhin ki o si da gbere.