
**SCHOOL OF NURSING AND MIDWIFERY**

**COLLEGE OF HEALTH SCIENCES**

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**LEGON**

# MATERNAL RESILIENCE IN CARING FOR PRETERM BABIES AT THE NEONATAL INTENSIVE CARE UNIT (NICU) AT PRESBYTERIAN HOSPITAL, DORMAA-AHENKRO.

**BY**

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# DECLARATION

I, Sabina Eduku, declare that this work is my thesis under the supervision of Dr. Emma Annan and Dr. Mary Ani-Amponsah. I also declare that with the exceptions of all the literature used, which are duly acknowledged, the work is a product of the research conducted and no part nor the whole of this work has been presented in any institution for the award of any degree.

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# ABSTRACT

Mothers are at a high risk of acquiring psychological distress as a result of unexpected and upsetting experiences. While there is a strong emphasis on the infant's health, the mother's well-being, particularly her mental health, is sometimes disregarded. This study explored the resilience of mothers in the care of their preterm newborns at the NICU. A qualitative exploratory descriptive design was used. The study applied a purposive sampling technique to select 15 postnatal women with their preterm babies on admission to the NICU at the Presbyterian Hospital, Dormaa-Ahenkro. The findings of the study showed that maternal confidence helps in their resilience. Mothers had a purpose of having their preterm babies survive which contributed to their resilience. Mothers benefited from social support systems however, they encountered some psychological strains and some challenges in the care which they adapted to through spirituality, self-efficacy, drawing strength from the baby, and accepting the situation. Mothers should be supported psychologically, emotionally, financially, and physically to enable mothers to stay healthy during the care of the preterm infant in the NICU.

**Keywords:** *Preterm babies, Neonatal Intensive Care Unit, Maternal Resilience, Confidence, and Strategies.*

# DEDICATION

Dedicated to God, my two daughters; Lawrencia Kroah Blay and Hillary Naa Amelley Fofo Hammond, and to all mothers who participated in the study.

## ACKNOWLEDGEMENT

My honest appreciation goes to the almighty God without whom this work would not have been successful, and also to the mothers who willingly participated in the study and gave out all the necessary information used in this study. The completion of this thesis would not have been possible without the efforts of my supervisors, Dr Emma Annan and Dr Mary Ani-Amponsah who assiduously made time out of their demanding schedules to correct all flaws in the work. Not forgetting all faculty members of the School of Nursing and Midwifery, especially the maternal and child health department.

I am immensely grateful to my parents for their support, my siblings and my local Pastor for the constant prayers and encouragement. To my two girls, Lawrencia and Hillary, you girls did marvellously well for the two years I left you at home. I acknowledge there were difficult moments but you endured. To Aramata, I cannot be grateful enough to you for the role you played in my absence.

Finally, the success cannot be meaningful enough without my colleagues and course mates. Thank you so much for being part of my success.

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## LIST OF ABBREVIATIONS AND MEANINGS

| Acronym | Meaning |
|---|---|
| AIDS | Acquired Immune Deficiency Syndrome |
| APH | Antepartum Haemorrhage |
| BPC | Breastfeeding Peer Counselling |
| CHAG | Christian Health Association of Ghana |
| FDA | Food and Drugs Authority |
| GSS | Ghana Statistical Service |
| GRNMA | Ghana Registered Nurses' and Midwives' Association |
| HIV | Human Immunodeficiency Virus |
| IRB | Institutional Review Board |
| JHS | Junior High School |
| NICU | Neonatal Intensive Care Unit |
| NMC | Nursing and Midwifery Council |
| OPD | Out Patient Department |
| PHD | Presbyterian Hospital, Dormaa-Ahenkro |
| PTB | Preterm Birth/Baby |
| PROM | Premature Rupture of Membranes |

| | |
|---|---|
| SDG | Sustainable Development Goals |
| SHS | Senior High School |
| SSS | Senior Secondary School |
| TB | Tuberculosis |
| UN | United Nations |
| UNICEF | United Nations of International Children's Emergency Fund |
| WHO | World Health Organisation |

# CHAPTER ONE

## 1.0 INTRODUCTION

This chapter comprises the background to the study of maternal resilience in the care of preterm babies at the neonatal intensive care unit (NICU), statement of the problem, purpose of the study, objectives of the study, research questions, significance of the study, operational definitions, as well as the organisation of the thesis.

### 1.1 Background

Globally, an estimated 15 million newborns are born preterm each year, and the figure keeps rising. Preterm is defined as babies born alive before 37 completed weeks of gestation (World Health Oorganisation (WHO), 2018). Preterm birth is a global problem, with Africa and South Asia accounting for more than 60% of all preterm births. Out of the 15 million premature infants, each year, around 1 million children die as a result of preterm delivery problems (WHO, 2018). Despite progress in the fight to reduce morbidity and mortalities among newborns since the 1990s, greater progress is required by more countries especially in sub-Saharan Africa and south Asia to fully reach the sustainable development goal (SDG) by 2030 (Hug et al., 2019; UN Inter-agency Group for Child Mortality Estimation et al., 2020; WHO, 2019).

There are sub-categories of preterm birth, based on gestational age; extremely preterm (less than 28 weeks), very preterm (28 to 32 weeks), and moderate to late preterm (32 to 37 weeks). Preterm labour has long been classified into two types according to the causes: spontaneous and elective or provider-initiated preterm labour (WHO, 2018). According to Wong et al, (2015) pregnancy interval, antepartum haemorrhage (APH) (Zini & Omo-aghoja, 2019), multiple pregnancies and pregnancy-induced hypertension (Mulualem et al., 2019), are included in the

contributing factors of preterm birth (PTB). Additionally, urinary tract infection, premature rupture of membrane (PROM) (Phillips et al., 2017; Zini & Omo-aghoja, 2019), polyhydramnios or oligohydramnios, and genitourinary infections, exposure to intimate partner violence (Chen et al., 2019; Zini & Omo-aghoja, 2019) are the spontaneous aetiological factors. The gestational age at delivery is directly related to the neonatal prognosis. Setting a lower gestational age restriction and reporting all preterm births, including stillbirths, before 37 weeks will provide a realistic picture of the preterm birth burden (WHO, 2018). Prematurity is a major hindrance to the attainment of (SDG)-3.2 target considering its high contribution to neonatal mortality. The survival chances of preterm vary dramatically depending on where they are born (Wagura et al., 2018). The risk of neonatal death due to complications of PTB is at least 12 times higher for an African baby than for a European baby. Yet, more than three-quarters of these preterm babies could be saved with feasible, cost-effective care, and further reductions of these deaths are possible through intensive neonatal care ( WHO, 2018).

Globally, 5.2 million mortalities among children under 5, close to half of these mortalities were found to be in neonates of which prematurity happens to be the highest cause (UN Inter-agency Group for Child Mortality Estimation et al., 2020; Liu et al., 2015; Muhe et al., 2019; WHO, 2019). It is as well a significant contributor to long-term adverse health outcomes like cerebral palsy and learning disabilities, vision and hearing impairments that may appear later in childhood or even adulthood for many preterm babies survivors (Liu et al., 2015; Muhe et al., 2019; WHO, 2018).

Relating to Asia and sub-Saharan Africa, more than 80% of the preterm births occurred in there (Chawanpaiboon et al., 2019). However, there is a survival gap between high income and

low-income countries, with more than 90 percent of pre-term babies surviving in the former, while 10 percent or less survive in the latter (Howson et al., 2013). Again, the estimated prevalence of PTB in developing countries (12%) is higher compared with developed countries (9%) (Chang et al., 2013). Generally, the prevalence of PTB varies from country to country among different studies. For example, a study conducted in Sweden found out the prevalence of PTB to be 5% (Pandolfo et al., 2014). The prevalence of PTB in Kenya 18.3% (Wagura et al., 2018) and in Ethiopia, the prevalence of PTB was 13.0 (Woldeyohannes et al., 2019).

In Ghana, about 140,000 babies are born prematurely annually, and 8,400 of these preterm babies die even before reaching 30 days of their life (UNICEF Ghana, 2015). With preterm deliveries, more mothers are afflicted by the problems associated with preterm delivery (Chen et al., 2019). Resilience is a term that is often used to describe an individual's ability to bounce back or recover from stress and able to adapt to stressful circumstances (Masten, 2015; Stainton et al., 2018). Robertson et al., (2015), believe that for one to demonstrate resilience, there are four factors one will go through such as adaptation, social support, confidence, and purposefulness. To what extent do these factors influence maternal resilience in the care of their preterm babies at the NICU?

Preterm birth is a concern because babies who are born too early may not be fully developed and it negatively affects the babies and the mothers. The entire family as a result suffer psychological shock and trauma due to the physical outcome of the babies. Adding on, studies conducted by Raju et al., (2014) and Woodward et al., (2014) affirms that the survival of preterm babies often depends on important aspects related to the mother's care as well as the health system. Aspects such as mother-baby bonding, resilience, availability of appropriate equipment for

neonatal care, and competent neonatal care personnel, have been mentioned to have supportive care for both mothers and their neonates throughout the period of admission (Hoffenkamp et al., 2012). Parents may feel disoriented and upset in the newborn unit since it is a strange atmosphere. Caesarean section and no or limited contact with their infant immediately after birth increase the impact of premature birth on parental stress (Henderson et al., 2016). For many parents, having a preterm infant in the (NICU) may be a traumatic experience. Depression, psychological anguish, and concern over their baby's health and survival are common symptoms for mothers of premature newborns (Ettenberger et al., 2017). The physical separation of the baby, the size, and the appearance of the preterm baby have been the main sources of stress for the mothers (Dua'a Fayiz Al Maghaireh et al., 2016). Similar to this study, it was found that the condition of the infants and tube feeding are also sources of stress for these mothers who are usually unprepared psychologically and physically (Malakouti et al., 2013). Considering the magnitude of psychological challenges and trauma these mothers go through regarding the birth and care of their preterm term babies, there is the need to look at the resilience of these mothers in their care of their babies at the NICU.

The plethora of previous studies focused extensively on the experiences of mothers with preterm babies (Adama, 2018; Lomotey et al., 2020) outcomes of preterm delivery, and associated factors (Abdul-mumin et al., 2020; Agbeno et al., 2021) predictors of preterm births (Abadiga et al., 2021) and predictors of preterm death (Annan & Asiedu, 2018). However, in Ghana, there is a paucity of empirical data on the resilience among mothers caring for preterm babies at the NICU. It is against this background that the researcher sought to explore maternal resilience in caring for

their preterm babies at the NICU at the Presbyterian hospital Dormaa-Ahenkro. This study was underpinned by the I- resilience model.

### 1.2 Problem Statement

Preterm babies of varying severity are frequently admitted to a NICU. The mother's desire of bringing home a healthy baby is dashed when her child is admitted to the NICU (Fowler et al., 2019). The mother is at a high risk of acquiring psychological distress as a result of the unexpected and upsetting experience. While there is a strong emphasis on the infant's health, the mother's well-being, particularly her mental health, is sometimes disregarded (Beck & Harrison, 2017; Fowler et al., 2019).

Mothers with preterm babies admitted into the NICU experience intense stress because the birth of a preterm baby is an unexpected event (Aagaard, 2015; Ionio et al., 2016). More so, the mother and the entire household experience dissatisfaction, fear, hopelessness, agony, and social stigma as a result due to their inability to name the infant on the stipulated day (Suraju, 2013) due to NICU admission. These mothers would need to be resilient to the changing state of responsibility in their lives. Even though preterm babies are usually admitted to NICU for crucial monitoring and special health care, mothers of these babies often face several daunting challenges, such as depression, anxiety, and fear of losing their babies (Stacey et al., 2015). Moreover, preterm delivery can negatively affect mothers by reducing maternal self-belief and maternal confidence which can eventually lead to the inability of the mother to bond adequately with the babies and subsequently unable to care adequately for her preterm baby (Korja et al., 2012).

In the face of all the challenges faced by mothers in the care of preterm babies at NICU, they are expected to stand resolute (Shosha & Kalaideh, 2012). Several studies have indicated the

psychological trauma mothers experience during the care of their preterm newborns at the NICU (Beck & Harrison, 2017; Fowler et al., 2019; Lomotey et al., 2020; Malouf et al., 2021; Namusoke et al., 2021). Separation from mothers during NICU admission creates a combined hardship for the mother who may be battling with puerperium, feeding a premature baby, and wondering about her newborn's uncertain fate (Namusoke et al., 2021). Also, a Ghanaian-based study reported constant worry and uncertainty about baby's survival, feeding and financial challenges as sources of maternal stress resulting from preterm baby NICU care (Lomotey et al., 2020). Maternal resilience is crucial in the care of these preterm babies because its absence has been linked to lower maternal sensitivity to the suffering of the baby (Clavarino et al., 2010) as well as predictive of lower maternal attachment (Evans et al., 2012; Wyatt et al., 2020). It is, therefore, crucial to explore maternal resilience in caring for preterm babies at the NICU as the well-being of the preterm babies can be affected by the mothers' resilience during their admission (Dardas & Ahmad, 2012).

Preterm delivery at the Presbyterian Hospital in the last five years has seen a steady increase. In 2017 there were 153 preterm deliveries out of a total of 2274 total deliveries making an average of 13 preterm deliveries a month which is 7% of the total deliveries. In 2021 out of 2163 deliveries, 216 were premature, that is 18 preterm deliveries per month, that is 10% of all deliveries, all of which were admitted to the NICU (Dormaa Presbyterian Hospital Annual report, 2021). Additionally, the researcher's observation of challenges encountered by mothers at the NICU, as most NICU nurses and midwives are much more concerned about only the health of the baby and neglect the health, especially the psychological health of the mothers. With regard to these challenges and the need for maternal resilience in the care of these newborns, this study,

therefore, sought to explore mothers' resilience in caring for their preterm babies at the NICU at the Dormaa Presbyterian hospital, Bono region as there is a dearth of information about maternal resilience in caring for preterm babies at the NICU.

### 1.3 Purpose of the study

The purpose of this study was to explore maternal resilience in caring for their preterm babies at the NICU, Dormaa Presbyterian Hospital, Bono region.

### 1.4 Objectives

The specific objectives of the study were to;

1. explore maternal confidence in the care of preterm babies at the NICU.
2. describe mother's sense of purpose in caring for preterm babies at the NICU.
3. investigate the social support for mothers caring for their babies at the NICU.
4. describe the adaptation of mothers in the care of preterm neonates at the NICU.

### 1.5 Research questions

1. How does maternal confidence help their resilience during the care of preterm babies at the NICU?
2. How does maternal sense of purpose of care influence mother's resilience in caring for preterm babies in the NICU?
3. What social support systems influence maternal resilience in the care of babies at the NICU?
4. What are the adaptation strategies employed by mothers during the care of preterm babies at the NICU?

### 1.6 Significance of the study

The findings from the study will add to knowledge and help augment existing information on maternal resilience in the care of their preterm babies at the NICU. This will become a rich source of information for practice for all health practitioners relative to the management of preterm babies. It will also be useful information for healthcare providers, especially NICU staff and hospital management on maternal resilience during admission of a preterm child. Additionally, the findings will also inform relevant stakeholders such as the Ministry of health, and the Paediatric Association of Ghana among others in the formation of essential policies to guide decision-making on the management of preterm babies and the need for maternal education during admission of preterm infants at the NICU. The study's findings will further contribute vital knowledge in the area of preterm newborns and enrich further studies in Ghana and beyond.

### 1.7 Operational Definitions

**Maternal resilience**: mothers' ability to withstand all forms of stressors associated with care of preterm babies admitted to the neonatal intensive care unit.

**Mothers:** women who have given birth to preterm babies with their live babies admitted to the NICU.

**Newborn/Neonate:** newborn within the first 28 days of life.

**Preterm babies:** babies born alive before 37 weeks of pregnancy is completed.

### 1.8 Organisation of the Study

This study is organised into six Chapters; chapter one consists of the background of the study, problem statement, purpose of the study, objectives of the study, and significance of the study, Chapter Two focuses on the literature review, and Chapter Three consists of the research

methodology. In Chapter Four, are the presentation of the research findings, Chapter Five focuses on the discussion of the findings in relation to existing literature and Chapter Six, is the summary, recommendations, limitations, implications and conclusion of the thesis.

# CHAPTER TWO

## 2.0 LITERATURE REVIEW/THEORETICAL FRAMEWORK

This chapter of the study comprises the literature review organised in two sections; the first section is on the theoretical framework guiding the study while the second section is on the empirical review on the objectives of the study; maternal confidence in the care of preterm babies at the neonatal intensive care unit, sense of purpose of mothers caring for preterm babies at the NICU, social support systems for mothers caring preterm babies at the NICU, adaptation of mothers caring for preterm neonates at the NICU. In conducting this literature review, the following search engines were utilized; PubMed, Cumulative Index to Nursing and Allied Health Literature (CINAHL) Sage, Research gate, Medical Literature Analysis and Retrieval System Online (MEDLINE), ScienceDirect, Scopus, Google Scholar, Wiley Online Library. Keywords used as part of the literature search include; 'Preterm' 'Premature' 'babies' 'Neonate' 'Care', 'Neonatal Intensive Care Unit' 'Newborn unit', 'Mother' 'Maternal' 'Resilience', 'Sense of Purpose, 'Confidence', 'Social support' and 'Adaptation'.

### 2.1 Theoretical Framework

In the search for a suitable model to guide the work, several models came up, which included the Northeast Resilient Consortium Resiliency Competency Model by The Northeast Resiliency Consortium (2018), which outlines resiliency competency for students in community college courses and after they graduate and enter the workforce. This approach identifies five skills that are essential for student achievement. A collection of activities is supplied in addition to the skill description to highlight some successful examples of students' behaviour in each competency. The model has five competency areas. These areas include critical thinking which involves the use

of logic to discover the benefits and drawbacks of various techniques in a variety of scenarios, adaptability; Successful adaptation to a variety of favourable and bad circumstances and conditions, self-awareness; Clear grasp of one's attributes, strengths, and limitations, as well as how they affect oneself and others, reflective learning which involves prior and current learning are integrated and applied to new contexts and collaboration; working with others to attain the same aim (Northeast Resiliency Consortium, 2015). This model was primarily developed to measure the competency of students and the constructs do not measure the objectives of this study.

Another model of resilience that came across was the Compensatory model (Zimmerman & Arunkumar, 1994) best describes the situation where a resilience component counteracts or functions in the reverse direction of a risk factor. The resilience factor has a direct impact on the result, regardless of the risk factor's impact. In the compensatory model, resilience is viewed as a factor that mitigates risk exposure. The outcome of the prediction is influenced by both risk and compensating factors (Ledesma, 2014). Studies by Kumpfer and Hopkins as referenced by Ungar (2004), discovered optimism, empathy, insight, intellectual competence, self-esteem, direction or mission, and determination and tenacity were among the compensatory qualities. The Compensatory Model, Zimmerman and Arunkumar (1994), being a direct effect of a promotive factor on an outcome, this model will not suit this study as it is more suitable for a quantitative study and the constructs do not also fit the objective of this study

**I-resilience model (Cooper, 1999).**

The I-resilience model, though developed for workers to describe their capabilities to maintain high performance and positive well-being, fits this study as it measures one's ability to sustain successful performance and positive well-being in the face of adverse conditions, and to recover from or adjust easily to misfortune or change the mothers of such preterm babies'

experiences (I. Robertson & Cooper, 1999; Stainton et al., 2018). It implies that mothers of preterm neonates who remain resolute despite all the challenges that are associated with preterm babies have demonstrated resilience. A more appropriate method to identify this resilience demonstrated by these mothers is to use a model that includes constructs with comparable backgrounds and is useful for qualitative research.

The I-Resilience model also has constructs that fit the objectives of this study and suit more for a qualitative study like this. The complete I-resilience model though has not been directly used in studies in premature babies. The concepts have been appropriately used in other resilience research investigations in health. For instance, a study on the resilience of mothers of very low birth weight babies indicated the mothers were resilient as they received support from mothers of infants admitted to the NICU as well as the NICU-based breastfeeding peer counsellors (BPCs), who were all mothers of premature infants in the same NICU as the most facilitating and supporting component of becoming a mother or establishing the maternal role while in the NICU (Rossman et al., 2017). Another study by (Ryff, 2014) on Psychological well-being revisited reported on how resilience is an important theme in maintaining individual's psychological well-being

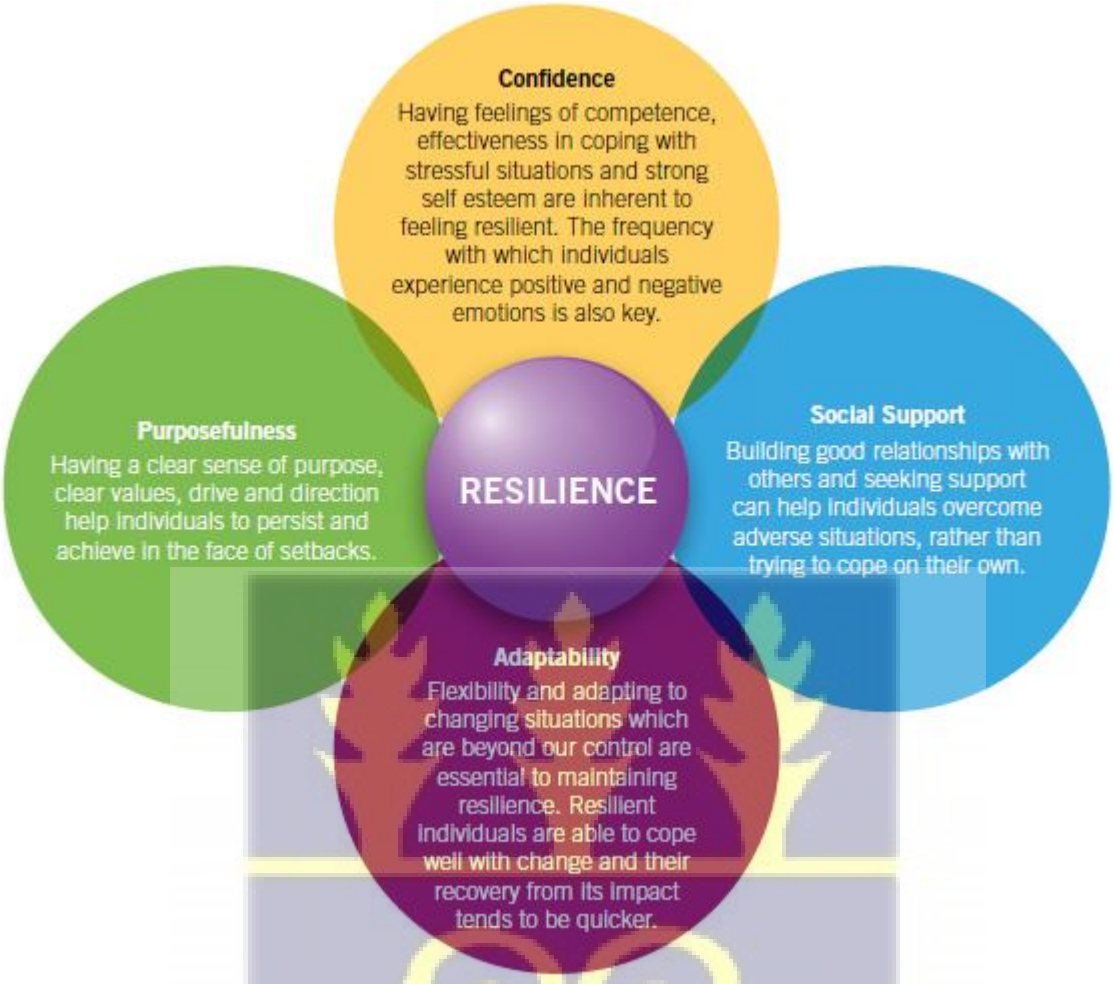
Rossman et al. (2017) also indicated that being positive emotionally has been linked to resilient child outcomes and has been identified as a sign of psychological wellness. In another study on the factors affecting adaptation to the role of motherhood in mothers of preterm infants admitted to the NICU by Heydarpour et al., (2016), self-efficacy was identified as a factor that helped adapt well to the problems of their infant. The relevance of the I-resilience model for this research is further explained by the application of these concepts in prior studies, as the concepts are the same.

**2.2 Justification of the model**

The I-Resilience model by Cooper (1999), upon several searches and critical reviews, was identified as the most suitable model for this study. Robertson Cooper, a Manchester and London-based business psychologist, established the I-resilience model in 1999 to provide leadership development and talent consulting services related to well-being, stress, and resilience. Robertson Cooper wanted to know why some firms fail and collapse during economic downturns while others rebound and turn a profit in the same circumstances. In the same vein, this study seeks to understand the resilience of mothers during the care of their babies at the NICU looking at the stress that comes along with the care of babies at the NICU and the fears associated with preterm babies and their associated complications.

The I-Resilience model serves as a springboard for a systematic, personalized path to self-resilience. It makes one aware of the strategies individuals use the most and how it affects how they will react in challenging situations (Cooper, 1999). The model highlights the following constructs; Purposefulness, Confidence, Adaptation, and Social support. The four constructs of Robertson Cooper's concept of resilience are all impacted by personality and the abilities gained throughout time. Each component represents a different aspect of one's personality. The constructs indicate distinct elements that may aid or hinder your resilience for each one. Understanding these can help one build resilience. The objectives of the study were informed by the constructs of the model.

### 2.2.1 The I-Resilience Model




***Source: Robertson Cooper, (1999).***

**Figure 2.1 I-Resilience Model**

### 2.3. Maternal confidence in the care of preterm babies at the Neonatal Intensive Care Unit

Self-confidence, according to Vealey (1986), is a person's assurance in his or her skills. Self-confidence is a crucial quality that has the power to affect people's actions (Oney & Oksuzoglu-Guven, 2015). Confidence, according to Stajkovic, (2006), is a relatively high concept that is defined as a feeling of certainty. Confidence has four manifestations which depict an

individual who sets out what needs to happen and how it should be done (hope), cultivates a conviction that he or she can do definite tasks (self-efficacy), formulates an affirmative result on the complete mission (optimism), and works with the conviction that he or she will be able to rebound even if things do not go as expected (resilience). Hope, self-efficacy, optimism, and resilience, according to the author, are the building blocks of confidence.

### 2.3.1 Optimism

Optimism is a cognitive construct (expectations about future outcomes) that has a motivational component; optimistic individuals put forth effort (Carver & Scheier, 2014). The study of optimism originated in the health field, with positive connections linking optimism and indicators of improved mental and physical health. Distinctions from both health-promotion activities and physiologically coping concomitants are likely to cause physical health impacts. The scientific study of optimism has recently expanded to include social relationships: fresh research suggests that optimists have stronger social ties, partially because they strive harder to maintain them (Carver & Scheier, 2014).

Hendricks et al., (2020) in their study in India indicated how mothers expressed a high degree of emotional stability and strength in their statements. Though the first few days were emotionally draining, they grew stronger and more warrior-like in the days that followed. It was as though each terrible event was accompanied by a wave of enthusiasm. Mothers' confidence kept increasing quickly. In Israel, the findings of a study by Kozel et al., (2022) indicated negative associations between optimism and deep acting as well as between optimism and whole emotion regulation which is congruent with the results of Kestler-Peleg and Lavenda, (2021) also in Israel who also showed a significant negative correlation between optimism and maternal peripartum depression.

In a similar study in Iran, it was shown that participants' comments made it clear that mothers in this study tried to adjust their psychological traits to see the current circumstance positively. They made an effort to act as if everything was going smoothly. They concentrated on the good things and hoped for more favourable circumstances and days in the future. They make plans for the future and make an effort to relax by focusing on advantages (Arzani et al., 2015).

### 2.3.2 Hope

Hope is believing in one's ability to derive pathways to desired results and encouraging oneself to use these pathways through agency ideas (Snyder, 2002). Hope is a positive motivating condition that is developed from an active sense of effectiveness (a) agency (goal-directed energy), and (b) paths (planning to meet goals) (Snyder, 2002). Hope has been shown to boost resilience and also has a negative correlation with depression (Snyder et al., 1991). Hope improves one's confidence in life threats while facing problems. Therefore, a greater amount of hope leads people to better overcome their problems. Hope is associated with the meaning and value of life which empowers people to adapt to stressful situations and maintain a quality of life. The lack of hope will make people vulnerable to problems (Afshar et al., 2021).

Even when faith is lost, hope is something an individual can cling to. For example, a person may wish for justice even if they believe it will not come, and so be pessimistic (Milona, 2020). This is corroborated in a study by Heidari et al., (2017), in Isfahan a city in Iran where the majority of parents indicated that hopelessness is among the main stressful issue, and that the slightest of hope strengthened them emotionally. Similarly, Penjvini et al., (2015), in their study on the lived experiences of hope in mothers of NICU infants the findings revealed that the majority of the respondents had received a thorough and adequate comprehension of hope. They said that in this

setting, hope had been fostered and that the mother-infant-nurse effective communication had been built.

In a study conducted in Iran by Alinejad-naeini et al., (2021) it was indicated that the mother's skills for dealing with stress and crises are included in creating hope. By instilling hope in themselves, mothers attempted to control and manage the current problem. Following the first crisis, most mothers look for hope in a variety of ways. An aspect that gave mothers hopefulness was a nice feeling mothers had when they detected signs of improvement (Nazaria et al., 2020). In a study by (Rossman et al., 2017) in Chicago, a participant indicated how hopeful and more positive she was and felt like a mother and indicated how she was concentrating much more on the idea that she will be capable of learning as well as performing whatever she needed to do in the care for her child with the assistance of someone who knows what to do medically. It was only a matter of concentrating on the strengths of the child rather than the flaws.

### 2.2.3. Resilience

Resilience is the capacity and ability of an individual to bounce back to the normal after encountering a stressful or traumatic situation while maintaining a normal psychological functioning state (Russo et al., 2012). Resilience in the cooperate work domain can be described as the ability to sustain both high performance and positive well-being in the face of adversities (Cooper, 2022). Resilience encompasses a wide range of behavioural traits; the idea of resilience is challenging to operationalize. Biological characteristics associated with more effective coping responses in resilient individuals have only recently been identified in the largely phenomenological literature on human resilience (Russo et al., 2012). Although they contain different components, resilience and coping are commonly used interchangeably, coping is not

considered as a distinct concept, but rather as a part of resilience (Caldeira, 2016). The dynamic process of resilience is context-specific, goal-oriented, and focused on overcoming obstacles and achieving favourable results. Coping mechanisms, on the other hand, might not always be beneficial or protective and might even work against an individual in the long run (Fletcher & Sarkar, 2013). This entails remaining calm in the face of difficulties, exhibiting flexibility when faced with setbacks, avoiding tactics that wear one out, and holding onto hope and happiness when things get tough. The fact that many mothers of premature newborns go through a trying time highlights how important it is for them to be resilient and emotionally well (Bang, 2015).

As premature infants fight for their survival at the NICU mothers and families struggle to assume parenting roles in the face of extreme emotional trauma such as guilt, fear, anger and hopelessness (Grunberg et al., 2022), resilience is much needed to keep these traumatised mothers going. A study in a tertiary NICU Chicago by (Rossman et al., 2017c) on the resilience in mothers of low-birth-weight infants on admission at the NICU described the resilience of mothers during the admission of their infants at the NICU though the situation at the NICU was a real stressful one.

**2.4 Maternal sense of purpose in caring for preterm babies at the Neonatal Intensive Care Unit.**

A purpose is a primary, personality life goal. A purpose is fundamental since it is a central element of a specific individual if it is there (Kashdan & Mcknight, 2009). If we imagine a person placing personality descriptions on a dartboard, the purpose would be towards the centre of the range image. In the sense that it offers a foundation for structured patterns of behaviour in daily life, the purpose is self-organizing (Kashdan & Mcknight, 2009; Ryff, 2014). People's goals, the effort they put into achieving them, and their decision-making, when faced with competing options

for how to use finite resources like time and energy, should all show signs of self-organisation (Kashdan & Mcknight, 2009).

Lee et al., (2017), believe that purposefulness, which includes optimism and resilience, is at the centre of our existence. Failing to recognise its importance in the face of disease in general, and particularly throughout the recovery process, will lead to care that is limited and incomplete. Possessing a sense of purpose and being able to assign significance to many elements of our lives assists us to create and discover meaning when dealing with a medical condition (Kim et al., 2020). Purposefulness is a result of the will thus the will to participate in a much larger story. As a result, addressing purposefulness means addressing the individual as a whole, as it recognises either their power to choose as well as their perspectives (Adolescent Moral Development Lab & John Templeton Foundation, 2018). A study by Buys and Gerber, (2020) in South Africa reported that the majority of respondents' remarks indicated that they thought their newborns were extremely fragile and that they were worried about their health.

The findings of Sih et al., (2014) revealed that praying to God for the capacity to resist the pressure brought on by a certain event might be referred to as praying for God's strength, grace, and the survival of the babies. Being emotionally attached to a child entails a want to be with them constantly and for as long as feasible. Participants stated that while they were in the hospital, they wanted to always be with their babies. Additionally, participants said thanks to God for the baby's gender.

**2.5 Social support for mothers caring for preterm babies at Neonatal Intensive Care Unit.**

Social support is the support available to an individual through social relationships with other individuals, groups, and the greater community (Charney & Southwick, 2007). The social support system refers to individuals, resources, and agencies that a caregiver connects with –

which could be direct or indirect (John Hopkins Medicine, 2021).(John Hopkins Medicine, 2021) The sense or experience that one is loved and cared for by others, revered and cherished and part of a social network of mutual help and duties is defined as social support (Taylor, 2011). Social support has been characterized as a multi-dimensional concept that includes emotional, evaluative, instrumental, material, and informational assistance in the past. Supportive relationships and social networks, as well as the perceptions of this support, are all examples of social support (Eriksson, 2021). Social support is frequently regarded as either perceived or received (Lobato et al., 2019). Received social support refers to the real quantitative aid and support that people receive from their social networks, whereas perceived social support refers to an individual's perception of the number and quality of services received from his or her social network (Kim et al., 2017; Ong et al., 2018). A partner, relatives, friends, workplace, and social and community ties can provide social support.

Social Support has often been categorized into numerous distinct categories. When one person assists another in better understanding a distressing incident and identifying what resources and coping methods may be required to deal with it, this is known as informational support (Eriksson, 2021). A person under stress can use this knowledge or counsel to identify exactly what expenses or stresses the traumatic situation may entail and how to effectively handle them. Instrumental support entails the provision of concrete aid in the form of services, financial aid, and other specialized aid or items (Schultz et al., 2022). Emotional support entails reassuring a person that he or she is a valuable member of society for whom others care by offering warmth and nurturing (Taylor, 2011). When social support is inadequate it may be harmful and contribute to negative physical and mental health consequences (Cohen & Wills, 1985), whereas strong social

support experiences have been found to develop stress resistance and protection against psychopathology (Charney & Southwick, 2007).

A study conducted in Japan indicated that social support could be received through formal or informal means, informal support constitutes, of family members, friends, and neighbours which are widely recognised to reduce caregivers' burden. Formal social support from professionals/public services (e.g. family physicians, nurses, and social workers) can as well be used to offer social assistance (Shiba et al., 2016). This is corroborated by the findings of Heidari et al., (2017), in Isfahan, Iran revealed that when parents received the necessary support from the health care providers which includes providing mothers with necessary information concerning the time of recovery, date of discharge from the facility, the baby's health progress, treatment effectiveness, and prognosis., it had a beneficial impact on their capacity to maintain their resilience. Similarly, the findings of Bry and Wigert, (2019), showed that when mothers are supported emotionally, which may come in the form of expressions of comfort or discussions on how the mothers felt, or support could also be conveyed through the simple empathic tone in staff-parent dialogue or positive attention from the health care provider. In another study in Australia by Turner et al., (2015), mothers' capacity to deal with their NICU situation was aided by having favourable interactions with nursing professionals. Research on the relationship between resilience and social support has discovered a link between strong resilience and hopefulness among people with cancer, as well as a favourable impact of family social support on patients' adaptation and survival (Ong et al., 2018).

Social support is regarded as very necessary in the puerperium (Barkin et al., 2014) which contributes to the reprioritization of how even restricted social networks can be used and whatever

facilities are available to help women and families (Zlotnick et al., 2016). According to Ango (2016) a Ghanaian-based study, it was revealed that family support which is informal social support has a negative correlation with anxiety in mothers with their preterm neonates at the NICU. This implies that the more family support a mother receives the lesser the anxiety level of the mother. In a study by Fleck, (2016), he indicates that mothers who receive the service of family members in caring for their newborn feel more competent than mothers who bear the entire responsibility for their newborn. An integrative review of the experiences of mothers at the NICU came out that when mothers willingly share stories and also empathize with other mothers in familiar circumstances it helped them to regulate their emotions by talking to people who knew what they were going through (Loewenstein et al., 2019). This is corroborated in a study by Bry and Wigert, (2019) as well as Heydarpour and Keshavarz, (2016), who found out that psychological assistance, such as comforting and inspiring discussion, as well as information from other women with newborns, admitted to the NICU, aided resilience in mothers. Similarly, the findings of a study by Penjvini et al., (2015), on the lived experiences of hope of mothers with NICU infants indicated that participants assisted and supplemented one another's information.

Support groups as social support have also proven to be a crucial source of emotional support in the NICU (Morais et al., 2020). According to a study by Adama et al., (2022), participants indicated support group satisfied their emotional, educational, and supportive care requirements, as well as allowing them to share their experiences with others in the presence of other parents . The majority of the respondents in a study on 'Psychosocial support for parents of extremely preterm infants in neonatal intensive care by Bry and Wigert, (2019), noted how much they enjoyed meeting parents of older children who were born preterm as a result of visits to the

hospital by the preterm baby association, an organisation dedicated to assisting parents of premature newborns.

**2.6 Psychological strain associated with the care of preterm babies at the Neonatal Intensive Care Unit.**

It is a deviation from the standards of pregnancy and childbirth to have a child hospitalized in the NICU. Most parents wish for a safe pregnancy and to leave the hospital with their newborn child. When this is not the case, a parent's experience in the NICU may be unpleasant, leading to psychological discomfort and changing parental roles (Woodward et al., 2014). A systematic review of the prevalence of anxiety and post-traumatic stress among parents with babies in NICU brought to light that parents are more likely to experience anxiety and post-traumatic stress (PTS) than average (Malouf et al., 2022). The findings of a study by Hanson et al., (2020) in the United Arabs Emirates also reported that mothers experienced emotional trauma when they got to know their babies needed care at the NICU hence subsequent separation from them. Mothers also sense some form of danger as babies were admitted to the NICU. Moreover, mothers' feelings of fear also heightened when they first saw their babies in the NICU, surrounded by machines and had tubes in their mouths, noses, and other areas. In a study by Namusoke et al. (2021) in Uganda, women of premature infants were so bothered about the weight fluctuations all the time and that they would immediately rush back to the hospital if the baby's weight dropped. Additionally, mothers were concerned about taking care of babies; they experienced challenges with feeding and indicated they would be willing to face any other difficulties if they knew their infants would live. It was said that the anguish of not knowing whether or not one's baby would live was excruciating. In a similar study in Brazil, it was revealed that mothers feel a sense of loss when their newborns are separated from them which caused such emotional turmoil they needed to overcome with

positive attitudes from the interdisciplinary team by encouraging them to raise their emotions as well as their confidence, and also involve them in the care of babies (Veronez et al., 2017). In the findings of a study by Acharya et al., (2021) in Nepal, mothers become emotionally disconnected as a result of unplanned early birth and NICU stay. They experience negative emotions like anxiety and shame over the lives of their children as a result of this estrangement. Similarly, seeing their child hooked to medical devices increases a mother's anxiety. Some mothers also held themselves responsible for the baby's condition. Similarly, Parents felt sadness, unease, despair, agitation, and anxiety because they believed the child might pass away, when told that their infant needed to be admitted to the NICU, many parents said they felt scared. Also, the sight of the various tubes and wires connecting to the infants inside the incubators, the sound of the equipment, and occasionally the care given to the newborns all created bad emotions in many parents (Byiringiro et al., 2021).

**2.7 Challenges of mothers in the care of preterm babies at the Neonatal Intensive Care Unit**

Mothers of preterm newborns encounter challenges in the course of care of the neonate at the NICU (Abuidhail et al., 2017; Lakshmanan et al., 2022). For instance in a study in Los Angeles and Boston children hospitals in the United States, Lakshmanan et al., (2022), found many particular areas that families faced financial hardship, such as paid leave and out-of-pocket payments. After leaving the NICU, 53% of participants expressed concern about the expense of healthcare. Furthermore in Northern Ireland, parents encountered financial challenges as a mother who was spending more than her maternity pay could not request a meal voucher, and her co-workers could not provide one either despite having a clear need for one (Franck et al., 2017). In a study conducted in Nigeria, the distance of the NICU from the participants' place of abode also is one challenge encountered by mothers as they care for their preterm newborn at the NICU as

some parents reported being unable to visit their children as frequently as they would have liked since the NICU was too distant from their homes (Abeasi & Emelife, 2019).

In a study conducted in Ghana by Apedani et al., (2021), findings revealed that though mothers received assistance, they had varied attitudes about environmental assistance. The provision of lodging and sanitation facilities for mothers was affirmed by all respondents. They indicated, however, that these amenities were insufficient to match their needs. These facilities were considered by the respondents as not only insufficient but also uncomfortable, contributing to their already stressful situation around the birth of a preterm infant. The participants assessed the unit's sanitary conditions as awful. Apedani et al. (2021), again in their study indicated how some participants expressed dissatisfaction with the unit's lack of professional counselling services though there were some educational sessions.

**2.8 Adaptation strategies of mothers caring for preterm neonate at the Neonatal Intensive Care Unit**

Adaptation is adjustability, fortitude, and the capacity to deal with adversity that is out of an individual's control. During therapy, clients who adapt and acquire inner confidence have better health results. The nature of the stimuli and the mother's existing pattern of adaptation influence a mother's ability to adjust to stressors. In other words, the higher the infant's prematurity, the greater the stressors that affect the mother's current style of adaption (Khalesi et al., 2021). Several studies have identified elements such as spirituality (Heydarpour et al., 2017; Reihani et al., 2014 & Wang et al., 2021) and self-efficacy (Kachoosangy et al., 2020; Kim, 2020 & Penjvini et al., 2015) as means which enable them to adapt to distressing conditions associated with caring for their preterm babies at the NICU.

### 2.8.1 Spirituality

Spirituality is the awareness of a sensation, sense, or conviction that there is something more to being human beyond physical sensation, and that the greater total of which we are a part is cosmic or divine in nature (Spencer, 2012). Spirituality focuses on the individual's beliefs and has an impact on critical cognitive judgments in the coping process; it can also help people perceive unfavourable situations differently and feel more in control and satisfied (Reihani et al., 2014). Spirituality according to Zafarian et al., (2016), gives caregivers of children with acute illness optimism and a feeling of meaning for life, bringing stability to their lives and assisting them in coping with the condition. Spirituality and religion according to Penjvini et al., (2015), a study carried out in Iran have an important effect on maternal health and perspectives regarding sick and preterm infants. These essential principles have an indirect influence on a child's healthy birth and have therapeutic potential for mothers.

A systematic review by Wang et al., (2021), indicated how NICU mothers' belief systems were tested as they formed a bond with their new infant. The mothers felt hope and comfort at the prospect of a higher power (e.g., God, ancestors) watching over and protecting their children from more adversity. Mothers, in particular, prayed to higher forces for direction and bravery in caring for preterm, frequently medically challenged infants. A quantitative study by Reihani et al. (2014), has indicated that spirituality can help mothers who are caring for premature babies in hospitals feel more at ease. Spirituality focuses on what an individual believes and has an impact on critical cognitive judgments in the coping process; it can also help people perceive unfavourable situations differently and feel more in control and satisfied. NICU mothers placed a high value on religion and spirituality as revealed in a study by Rossman et al., (2015), a mother indicated she felt more at ease with herself once she started praying which increase her faith in helping her cope with the

difficulties of her baby's condition. She also indicated she was a religious person, and once she started praying, everything just seemed to fall into place. She felt more at ease and at peace since she was less worried.

Similarly, a study by Heydarpour and Keshavarz, (2016), on the adaptation to the role of motherhood indicated that issues of morality and faith in God, according to most mothers, are real factors in promoting adaptation in mothers. According to the study, a mother indicated that praying and reading the Quran helped her feel peaceful, and her faith in God soothed her. Similarly, studies have indicated that spiritual care has been demonstrated to relieve psychological distress in mothers of sick babies by minimizing the sense of guilt, fear, wrath, and disappointment, as well as enhancing their inner calm, which in turn enhances their hope (Moghaddam et al., 2016; Reihani et al., 2014). Spirituality (praying to God) is a strong, reliable, and positive element, mothers think, enabling parents to adapt and deal with their troubles in the face of the most helpless conditions. Participants stated that the NICU setting was stressful for parents and that this produced a situation in which parents sought hope and serenity by praying to God for assistance. Parents are seeking hope and speaking with doctors and nurses. Unfortunately, the NICU circumstances do not meet the demands of parents, therefore they turn to God, spirituality, and prayer to help them cope with their stress. Spirituality and praying were cited by most parents as useful in lowering fear and establishing resilience (Heidari et al., 2017).

Furthermore, the majority of NICU caregivers believe that spiritual and religious views (such as prayers) provide considerable consolation to parents of premature infants. Reihani et al., (2014), in their study on the effects of spiritual self-Care training on the feeling of comfort in mothers of hospitalized preterm infants found that spiritual self-care can help those who are caring for premature newborns in hospitals feel more at peace. In addition, patients who have been trained

in spiritual self-care have shown quick improvement as a result of family training. In another study by Alinejad-naeini et al. (2021), they indicated that mothers find tranquillity by praying, paying alms, and keeping promises to God to help their children survive. To cope, they turn to God, spirituality, and prayer. Mothers felt that their religious and spiritual lives had been tested and that they might not be able to do their motherly obligations to the best of their abilities, so they requested God for aid, believing that this was a successful way of gaining energy and boosting their power. Mothers also found that they needed to rely on their religious or spiritual beliefs to adjust to changing mother expectations when their child was brought to the NICU. They prayed for guidance from a spiritual entity who understood everything about God's destiny and will when they realized they could not undo what had transpired with anxiety

### 2.8.2 Self-efficacy

Self-efficacy as defined by (Bandura, 1998) is an individual's ideas about his or her capacities to produce specified levels of performance that exert control over events that affect his or her life. One's self-efficacy perceptions influence how he or she feels, reasons, encourages their self, as well as acts.

Mothers' self-efficacy in coping with challenges is a determinant of how well they adapt to their new position as mothers. When mothers see similar or worse cases than their children, it is viewed as a source of hope, self-efficacy, and motivation in coping with challenges. Tolerance is also a trait that impacts mothers' self-efficacy in adapting to the job of mothers (Heydarpour & Keshavarz, 2016). Rossman et al., (2015), in their studies, revealed that mothers learned ways that allowed them to adjust to NICU pressures, reinvent their lives, and give them new meaning. When they realized they could not undo what had happened, they showed inner strength. Mothers realized their life had changed in ways they had not anticipated. A mother who gave birth at 6

months gestation recounted how she came to terms with the realities of her new life. Studies have indicated that when mothers are furnished with information on the care of their newborns at the NICU, it assists them in the adaptation process.

A study has indicated that inadequate information and understanding about neonatal care is a worry for women in the postpartum period. Education for women has a substantial favourable influence on maternal self-efficacy (Kachoosangy, et al., 2020). Additionally, in a study on addressing the needs of mothers with infants in the NICU, Kim (2020), the creation of a family-friendly NICU atmosphere which consisted of positive attitudes of the health professionals, access policy for visitors 24 hours day, 7 days a week in which the women felt at ease, welcomed, and comforted might aid their adjustment to parenthood. Furthermore, mothers who care for their preterm babies in NICUs or engage and attach to infants get a higher self-image and are better able to relate to their children (Penjvini et al., 2015). Despite the critical nature of their newborns' health, mothers explored new ways to get to know, care for, and support their infants. The women acknowledged that their lives had changed and that they needed to adapt to their new conditions, even if they did not feel prepared to take on these duties. Mothers did this in part by including mothering behaviours in their visits to their babies (Rossman et al., 2015).

**2.9 Summary of Literature Review**

In summary, it was revealed by literature that maternal confidence, the sense of purpose of the mother, social support received by mothers as they cared for the preterm newborn as well as adaptability are necessary for the development of their resilience. Mothers need to be optimistic and hopeful to demonstrate their confidence to help in their resilience as they care for their preterm infants at the NICU. Literature discovered that mothers caring for their preterm infants at the NICU had a sense of purpose for the care which motivated and helped their resilience as they care

for the preterm newborns though there was limited literature on the maternal sense of purpose of care. The review of the literature also showed the various social support available to these mothers as they care for the newborns, many studies were quantitative comparing the relationship between social support and optimism and revealed that social support has a positive influence on optimism.

Additionally, literature also brought to bear the various psychological strain as well as challenges mothers experience as they care for the preterm newborn in spite of the social support received. Most studies reviewed were conducted outside the country (Ghana) and those conducted in the country focused on participants' experiences at the NICU. Moreover, not all the studies were conducted during the admission of the neonates at the NICU. There appears to be an existing gap on maternal resilience during the care of the preterm newborn at the NICU, this study therefore, sought to explore maternal resilience in caring for preterm babies at the NICU.

# CHAPTER THREE

## 3.0 RESEARCH METHODOLOGY

This chapter constitutes the philosophical basis underpinning the study, the method for the study, the study design, the setting, the population from which the target population was drawn, the inclusion and exclusion criteria, sample size, sampling and data collection technique, data analysis, data management, pretesting of the interview guide, methodological rigour, and ethical considerations.

### 3.1 Philosophical Basis of the Study

This study was underpinned by constructivism. Constructivist scholars describe a method of interpreting the meaning of something from a particular perspective or scenario as Hermeneutics. According to constructivist research theory, social reality may be viewed subjectively. The constructivist paradigm's core goal is to comprehend the subjective realm of human experience (Creswell, 2007). This method attempts to get into the minds of the participants being researched and to comprehend and interpret what the participant is thinking or interpreting the context. Every attempt is made to grasp the point of view of the subject being watched, rather than the observers (Kivunja et al., 2017). Understanding the individual and their interpretation of the environment around them is emphasized. As a result, the constructivist paradigm's central assumption is that reality is socially produced, people who participate in the research process, and researchers should try to comprehend the complicated world of lived experience from the perspective of those who live it (Schwandt, 2000). The constructivist paradigm assumes a subjectivist epistemology, a relativist ontology, a naturalist methodology, and a balanced axiology (Kivunja et al., 2017).

Subjectivist epistemology assumes that the researcher makes sense of their data via their thought and mental processing of data, which is influenced by their interactions with participants. There is an assumption that the researcher would develop knowledge socially as a result of his or her real-life experiences in the natural settings studied (Punch, 2005). The researcher and their participants are assumed to be involved in interactive procedures in which they communicate, converse, question, listen, read, write, and record research findings. The assumption of a constructivist ontology means believing that the condition under investigation has different perspectives, each of which can be investigated, given interpretation, or reconstructed through interpersonal interaction between the researcher and the research participants, as well as among the research participants (Chalmers et al., 2009). Balanced axiology believes that the study's results will represent the researcher's values, with the goal of presenting a balanced account of the findings (Kivunja et al., 2017).

The constructivist research has the following beliefs; the recognition that the social world cannot be comprehended from the perspective of a single person. The concept that various realities are socially produced, acceptance of the fact that interaction between the researcher and his or her research participants is unavoidable, acceptance of the importance of context for knowledge and understanding, the assumption that results establish knowledge can be value-laden, and the values must be stated explicitly (Lincoln & Guba, 1985). Individuals must be understood rather than general laws. The concept that causes and effects are inextricably linked and the concept that contextual elements must be included in any methodical approach (Lincoln & Guba, 1985; Morgan, 2007).

### 3.2 Study Design

This study employed an exploratory descriptive qualitative design. When little is known about a phenomenon an exploratory descriptive design is needed for an indebt information about the phenomenon. This study employed the exploratory descriptive design because little is known about the resilience of mothers caring for their preterm babies at the NICU and the researcher sought an indebt knowledge of the topic. Qualitative research is a type of scientific research that consists of an investigation that seeks answers to a question, systematically uses a predefined set of procedures to answer the question, collects evidence, produces findings that were not determined in advance, and produces findings that are applicable beyond the immediate boundaries of the study (Creswell, 2014). Methods ensure an adequate discourse and interaction between the researcher and the participants on their resilience so that individual sentiments could be elicited from the participants. Qualitative inquiry 'explores the meanings people attach to their experiences and identifies and describes the social structures and processes that shape these meanings. Qualitative research places more emphasis on the need to give out a 'thick description' of the individual characteristics and the situation they are in (Morse, 2015).

### 3.3 Study setting

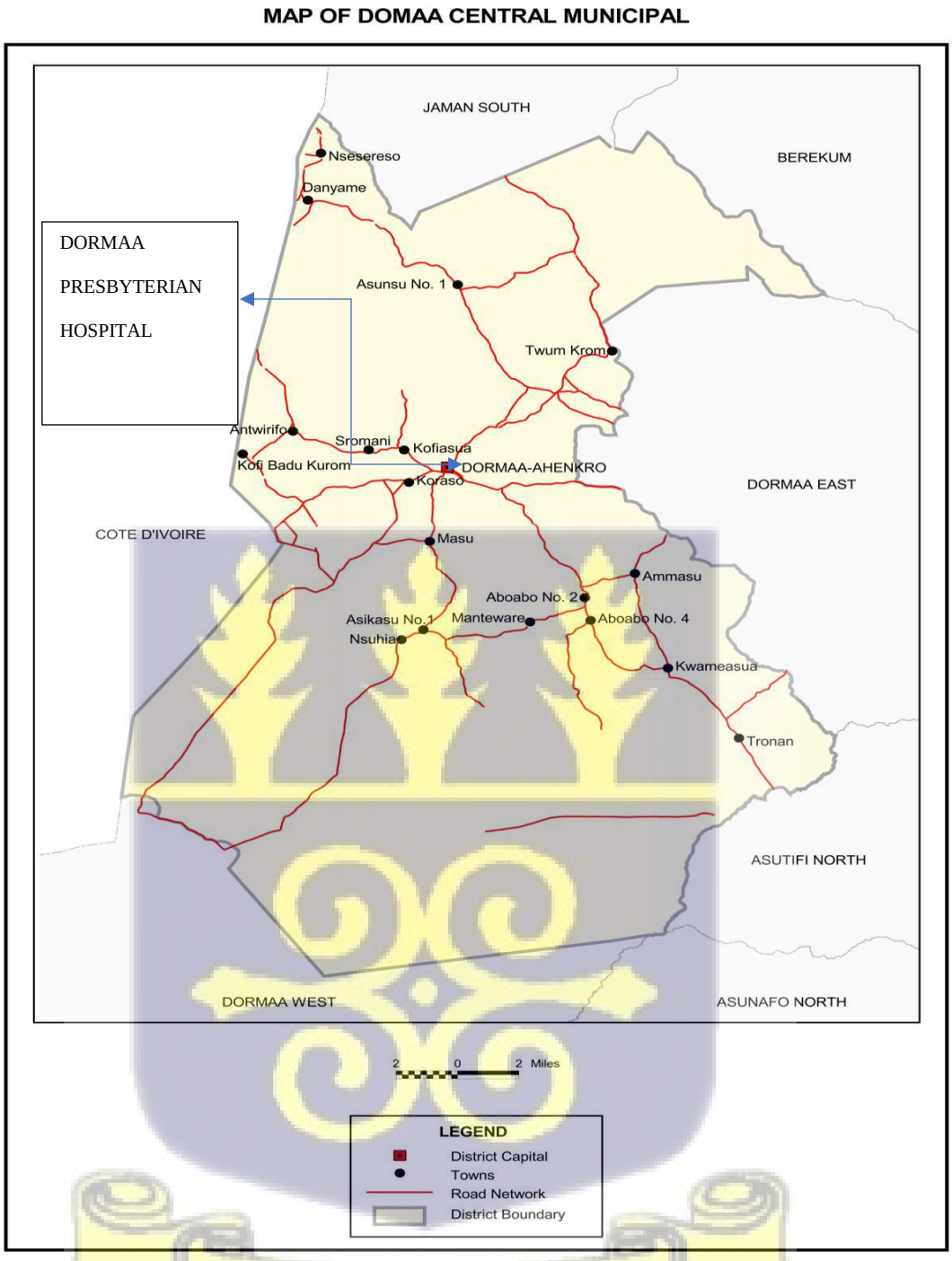
This study was conducted at the Presbyterian hospital, Dormaa-Ahenkro in the Dormaa Central Municipality. Dormaa central Municipality is one of the twenty-seven (27) administrative districts within the Brong Ahafo Region of Ghana. It is one of the oldest districts in the Brong Ahafo Region of Ghana. With a total population of 112,111 comprising 52,589 (47.8%) males and 58,522 (52.2%) females. Thus, the Municipality has the majority of its population being females (Ghana Statistical Service, 2014). The sex ratio is 91.6 that is, for every 100 females, there are

about 92 males which compares to that of the region with its sex ratio at 98.2. (GSS, 2014) with the majority (61%) of the populace living in rural areas and 39.0% in urban areas.

With regard to religion, the Christian religion has the largest proportion of followers (84.3%) and is followed by Islam (10.9%). Those who do not associate with any religion constitute about seven per cent (6.5%) of the population. There are more males (6.5%) than females (2.5%) with no religion. Pentecostal and Charismatic followers have the largest following with more females than males. Concerning education, a total of 42,160 of the population are currently attending school with 47.2 per cent in primary school followed by JHS/JSS (18.8%), Kindergarten (15.8%), SSS/SHS (8.6%), and tertiary (1.4%). There are more females (48.3) than males (46.2%) currently attending primary school. In the contrast, there is a decrease in the proportion of females. About eight per cent (7.8%) and just a little above one per cent (1.1%) at SSS/SHS and tertiary levels respectively females compare against their male counterparts dominating these levels with 9.3 per cent for SSS/SHS and close to two per cent (1.7%) at tertiary (Ghana Statistical Service, 2014).

The Dormaa Presbyterian hospital is a municipal Christian Health Association of Ghana (CHAG) facility located in Dormaa-Ahenkro. The hospital serves as a referral centre for the residents of the Dormaa municipality, Dormaa west, East districts, and parts of some districts in the western north regions such as Adabokrom, and its environs. It also serves close border towns and villages around the La Cote D'Ivoire border and has an active catchment population of 190,006. The hospital has an array of medical services including, OPD, 24-hour emergency care, paediatric and neonatal care, Obstetrical and gyaenacolgical care, general medical services, child and reproductive health care, special clinics (eye, ear-nose-throat, dental, mental health), mortuary services, and theatre/surgical care, Mental Health, Physiotherapy, Pharmacy, Radiology,

Electrocardiography Laboratory HIV/AIDS, Special Diabetic Clinic, Special Hypertensive Clinic, Special TB Clinic, Morgue Services, and other specialist consultancy services. It has about 200 bed-capacity with a bed occupancy rate of 75% with one (1) resident Paediatrician, One (1) resident Obstetrics and Gynaecologist, One (1) resident Surgeon, and four (4) General Practitioners. One (1) visiting Ophthalmologist. One (1) Pharmacist, 77 Nurses, 44 Midwives, 134 Auxiliary Nurses, and 170 support staff. The selection of the facility for the study was purposefully done as it had a paediatric block that housed the NICU, where data will be collected. The NICU has 22 nurses in all which comprises 3 registered midwives, 11 registered general nurses and 4 nurse assistants (clinical) and 4 community health nurses. The unit has 12 incubators in all with 6 being active, and 19 cots three warmers and 3 phototherapy machines (PHD annual report, 2020).




*Source: Ghana Statistical Service, GIS (2014)*

**Figure 3.1: Map of Dormaa Central Municipal and Dormaa Presbyterian Hospital**

### 3.4 Target population

The target population included all mothers with their preterm neonates on admission at the NICU.

#### 3.4.1 Inclusion criteria

Participants included in the study were;

1. All mothers of preterm babies on admission at the NICU who were 18 years and above as they were in the best position to provide the needed data for the study as compared to mothers under 18years who may not be fully involved in the care of the infants by virtue of minimal or no experience in caring for these infants as such care of the infants born to these mothers under 18 years are rather rendered by the grand mothers and great grandmothers.

#### 3.4.2 Exclusion criteria

Clients who were not eligible for the study were as follows;

1. Mothers who had preterm babies on admission but were seriously ill.
2. Mothers who had preterm babies but babies had died

### 3.5 Sample Size and Sampling Technique

Sample refers to the group of people selected from the target population to represent the population from which data was collected. Selected samples made up the participants. Sampling technique is the means through which participants were selected for the study (Mohsin, 2016). Participants for the study were sampled purposively because they had lived experiences of the phenomenon and would provide relevant information for the study. Purposive sampling happens to be the most frequently used sampling in qualitative research, participant are selected following

a preselected standard (Polit & Beck, 2009). Participants were purposefully sampled to include only mothers whose newborn babies were born preterm and on admission to NICU. Participants who met the inclusion criteria and were willing to partake in the study were recruited and interviewed for the study. The participants were selected for the study until saturation was achieved (Boddy, 2016). Saturation is the point at which no new information is obtained from the participants and therefore redundancy is deemed to be achieved or a point at which the collection of new data no longer provides new concepts, nor does it reveal any different ideas (Polit & Beck, 2009). Saturation for this study was achieved at 13$^{th}$ participant where no new data was generated. However, two more were interviewed for confirmation.

### 3.6 Data collection tool and procedure

A semi-structured interview guide was developed based on the study objectives which were used as the data collection instrument (Appendix E). A face-to-face interview with participants was conducted (Creswell, 2014). The interview guide comprised two sections, A and B, for the demographic data and open-ended questions developed from the objectives of the study which is based on the constructs of the resilience model. The interviews were conducted at a convenient time and in a quiet room in the labour ward of the hospital which was conducive for the participants after seeking institutional permission. This made the participants to be fully involved in the interview.

Ethical clearance was obtained from the Christian Health Association of Ghana ethical review committee, CHAG-IRB03022022 (Appendix A). The researcher worked hand in hand with the nurse managers of the NICU, the lying-in as well as the labour ward to help with the identification of the participants. Data collection procedure was duly explained to participants after they had

consented both verbally and in written form (Appendix D) to participate in the study and contact numbers were exchanged which enabled the researcher to arrange a convenient time for the interview with the participants. Participants were reassured of privacy and confidentiality throughout the process.

The interviews were conducted in Akan languages (Twi and Bono) as well as English in a very conducive and relaxed room in the labour ward of the facility free of distractions where participants freely gave out information. Open-ended questions were asked and probing was done where necessary, the interview section lasted between 45 and 60 minutes. The researcher established a very good interpersonal relationship with the participant to win the trust of the participant to obtain rich information needed for the study. The interviews were audio recorded and transcribed verbatim, field data of gestures or any form of nonverbal communication were as well taken after the indebt interview to prevent distractions during the interview. Ethical approval and an introductory letter from the school of nursing and midwifery, and institutional approval was sought before the data collection from the participants

### 3.7 COVID-19 Safety Protocols

In collecting the data from the participants, the COVID-19 safety preventive precaution measures were strictly adhered to. The preventive precautionary measures include maintaining a social distance of six feet (about 2 arm's length) between the researcher, wearing the Food and Drugs Authority (FDA) approved nose masks, and the use of alcohol-based hand sanitizer (70%) alcohol content before, during and after the entire data collection process. All participants were provided with an approved nose mask as well as the standard alcohol-based hand sanitizer (70%) alcohol content by the researcher during the period of the data collection.

### 3.8 Pretesting of the Interview Guide

Pretesting is the procedure of interviewing small participants who have similar characteristics to participants in the study setting to ensure the interview guide's suitability (Doody & Doody, 2015). The pretesting was done at the Holy family Hospital, Berekum with 4 participants. The interview guide was pretested before its usage in the actual study with mothers with similar characteristics for the main study. The pretesting offered the researcher an opportunity to identify challenges with the wording and understandability of the questions by the participants. The necessary changes were affected before the actual application of the interview guide in the study. This helped the researcher to get adequate and appropriate responses from the participants in the study. This also helped the researcher to know what to expect from the actual study. Data obtained from the pretesting were not included in the actual study.

### 3.9 Data Management

Concerning data management, data taken were protected to ensure privacy and confidentiality. All participants were given pseudonyms P1, P2, P3……. P15. Interview audio recordings were transcribed verbatim and kept in a folder on the laptop which was password protected. All soft data were kept safely in the researcher's passworded laptop, google drive account, Gmail account, and hard copies of transcripts, audio, and field notes also under lock and key in the custody of the researcher. The researcher's laptop was protected against viruses so as not to lose the participants' data. For anonymity, codes were allotted to the participants as their unique identification.

### 3.10 Data Analysis

Data was analysed simultaneously with data collection using thematic content analysis. Thematic content analysis is a form of interpretation that requires the researcher to engage in an iterative process of critical thinking, questioning, and categorizing (Lapan et al., 2012). Thematic content analysis is a technique for finding, analysing, and reporting patterns (themes) within data. It organises the set of data in the basic minimum and gives (in-depth) descriptions of it (Braun & Clarke, 2006). Six processes in the qualitative data processing process. The data was organised and prepared for analysis by transcribing interviews, scanning materials as efficiently as possible, and documenting all visual materials, the second stage was to read or examine all of the data.

The goal of this step was to get a general feel of the data and to have time to ponder on its overall significance. Coding the data which was the third phase was done. The data was organised by categorizing the text and then assigning a term to each category. The coding method was used in the fourth phase to create a description of the persons, setting, or categories/themes for the study. This stage was critical since it aided in the creation of thorough descriptions for various types of research endeavours. The researcher developed the approach in which themes and descriptions were expressed in the qualitative narrative in the final stage. The fifth stage was to name and define the list of themes. In defining them, the meaning of each theme is brought to bare especially how it provides the meaning to the data. The last, stage was to interpret the findings or results (Creswell, 2013).

Content analysis was done as the researcher read and re-read the transcripts severally to acquire a feel of the overall picture and a general comprehension of what participants were saying. The researcher employed the content analysis in addition to the thematic analysis because certain

themes that emerged from data analysis for instance, psychological strain as an emerging theme did not fall in line with the construct of the model used. At this point, the researcher began to form opinions about the primary points or concepts that participants were conveying. The text is divided into smaller sections, namely meaning units. The researcher then further reduced these meaning components. This was done to guarantee that the main meaning was not lost. The next stage was to designate condensed meaning units with codes and then organize these subthemes into themes (Erlingsson & Brysiewicz, 2017).

### 3.11 Ethical Considerations

Ethical clearance was sought from the Christian Health Association of Ghana Ethics Review Committee (Appendix A) after sending an introductory letter from the School of Nursing and Midwifery, University of Ghana (Appendix B). Institutional approval was also obtained from the Presbyterian Hospital, Dormaa-Ahenkro (Appendix C) before commencing the study. All ethical principles such as anonymity, confidentiality, and voluntary participation and withdrawal at any time without suffering any form of consequences were explained to the participants and undertaken. They were adequately informed of the possible benefits and inconveniences associated with the study. Participants were made to sign consent (Appendix D) forms before commencing the study.

### 3.12 Methodological Rigour

Rigour is how we demonstrate integrity and competence, a way of demonstrating the legitimacy of the research process (Tobin et al., 2004). The standard applied in quantitative research methodology such as internal validity, generalization, reliability, and objectivity vary from that of the qualitative methodology as these criteria do not fit well in judging the worth of

qualitative research (Korstjens & Moser, 2018). Guba and Lincoln's ideas on trustworthiness provide an opportunity for naturalistic inquirers to explore new ways of expressing validity, reliability and generalizability outside the linguistic confines of a rationalistic paradigm. Their concept of trustworthiness was demonstrated by introducing criteria of credibility, transferability, dependability and confirmability (Tobin et al., 2004).

### 3.12.1 Credibility

This criterion evaluates the degree to which the findings of a qualitative research inquiry portray the actual responses from the participants. To ensure credibility is achieved, there are two main functions to be carried out; first carry out the inquiry in such a way that the probability that the findings will be found to be credible is enhanced and second, demonstrate the credibility of the findings by having them approved by the constructors of the multiple realities being studied. Credibility usually constitutes long-term and continuing interactions with respondents (Lincoln & Guba, 1985). Credibility was ensured by the presentation of a truthful image of the phenomenon under study. The necessary participants were mothers who had their preterm babies on admission to the intensive care unit. Purposive sampling was employed to choose the participants. To make sure that the participants' stories had been thoroughly captured before conclusions were reached, member checking was done by having the participants confirm the responses following the interview.

### 3.12.2 Transferability

This has to do with the applicability of the research findings. Transferability is achieved through a thick description of data; the description of findings should not just be the behaviour but the setting or context so that the findings can be applied elsewhere (Lincoln & Guba, 1985). This

was made by providing a detailed account of how participants were chosen, the research environment, the participants' backgrounds, and how the entire study procedure was carried out to increase the applicability of the findings.

### 3.12.3 Dependability

The consistency of findings across time. Dependability entails participants' judgment of the study's findings, analysis, and suggestions, all of which are supported by data collected from study participants (Lincoln & Guba, 1985). Dependability can then be proved by an audit trail, in which others can scrutinize the inquirer's documentation of facts, techniques, decisions, and the final product (Tobin et al., 2004). Appropriate questions were posed to generate responses that would address the research objectives to ensure the study's reliability. Supervisors also offered assistance to the researcher as themes and subthemes from the data were extracted.

### 3.12.4 Confirmability

The extent to which the investigation study's conclusions could be corroborated by other researchers. Regard to the fact demonstrating that the data and interpretation of the data are not fabrications of the researcher's imagination, but are accurately deduced from the evidence. Confirmability is concerned with the unbiased aspect (Lincoln & Guba, 1985). This was ensured by presenting the true findings of the study data collected from the mothers. The interviews were transcribed verbatim from which themes and sub-themes generated were supported by verbatim quotes.

# CHAPTER FOUR

## 4.0 FINDINGS OF THE STUDY

This chapter presents the findings of the study. The study explored maternal resilience in caring for preterm babies at the neonatal intensive care unit (NICU). The I-resilience model guided the study. Six (6) themes emerged from the analysis of data with four (4) corresponding with the constructs of the model and two emergings. All themes have their corresponding subthemes, which were eighteen (18) in all and supported by some verbatim quotes from some of the responses. The first aspect of this chapter is on the demographics of participants

### 4.1 Socio-demographic characteristics of participants

Fifteen (15) mothers, between the ages of eighteen (18) and forty-three (43) years participated in the study, eight (8) of them were married out of which one (1) had the husband residing in another town and the other five (5) were cohabitating the rest were single. Seven (7) of these mothers had given birth for the first time, thus the preterm babies, four (4) had four (4) children each at home, two (2) had two (2) children, and the last two (2) participants each had one (1) and eight (8). Among the 15 mothers two (2) had no formal education, seven (7) had their highest level of education to be at the junior high school (JHS) level, three (3) senior high school (SHS) level, two (2) tertiary and one (1) other who dropped out of school at primary six. Five (5) of the mothers were unemployed, two (2) mothers were farmers, apprentice two (2) while two (2) were government workers, and one (1), each a petty trader, a seamstress, a food vendor, and a student. The gestational age of deliveries was from 27 weeks to 36 weeks of which one (1) was extremely preterm (less than 28 weeks), five (5) were very preterm (28 to 32 weeks) while the other nine (9) were moderate to late preterm (32 to 36 weeks). Their birth weights were between

0.9 to 2.1 kilograms. Of the 15 preterm participants, three (3) had babies to be a set of twins. The length of stay at the NICU was from four (4) to eleven (11) days. Almost all the participants were Christians except one who was a Muslim. The mothers were of varied ethnic groups with five (7) being Bonos, two Frafras, and 1 Fante, Nzema, Krobo, Dagaarti, and Mossi, all of which are Ghanaian ethnic groups and 1 other Mossi (Burkina Faso). The details of the information are presented in the table below in table 4.1.

**Table 4.1: Demographics**

| Pseudonym | P 1 | P 2 | P 3 | P 4 | P 5 | P 6 | P 7 | P 8 | P 9 | P 10 | P 11 | P 12 | P13 | P14 | P15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **A in yrs.** | **26** | **19** | **23** | **27** | **30** | **30** | **25** | **19** | **19** | **36** | **37** | **42** | **39** | **19** | **22** |
| **MS: M/C/S** | M | C | C | M | M | M | C | C | S | M | M | M | M | S | C |
| **NC** | 2 | 1 | 0 | 4 | 4 | 0 | 0 | 0 | 0 | 4 | 2 | 4 | 8 | 0 | 0 |
| **EL** | TER | JHS | JHS | SHS | JHS | TER | SHS | JHS | JHS | Nil | JHS | PRI | Nil | SHS | JHS |
| **OC** | TN | UEM | SS | PT | UEM | Nurse | UEM | APP | UEM | FMG | UEM | FMG | FV | STD | APP |
| **BW(Kg)** | 1.3 | 1.3 | 1.8 | 1.9 | 2.1 | 1.4 | 1.8/1.7 | 2.1 | 1.3/1.3 | 0.9 | 2.1/2.2 | 1.3 | 1.3 | 1.9 | 1.2 |
| **GA(WKs)** | 28 | 29 | 33 | 35 | 36 | 34 | 35 | 36 | 31 | 27 | 36 | 29 | 30 | 34 | 31 |
| **LS (dys)** | 6 | 11 | 4 | 5 | 6 | 4 | 5 | 4 | 6 | 9 | 4 | 5 | 4 | 5 | 4 |
| **ENG** | Bo | Fante | Dg | Bo | Fra | Nz | Fra | Bo | Bo | Mosi | Bo | Krobo | Mosi | Bo | Bo |
| **RL** | CH | CH | CH | CH | CH | CH | CH | CH | CH | ML | CH | CH | CH | CH | CH |

**LIST OF ABBREVIATIONS AND MEANINGS**

A -Age

APP-Apprentice

BW-Birth Weight

Bo- Bono

C- Cohabitation

CHR-Christian

Dg-Dagaarti

ENG- Ethnic Group

EL-Educational Level

Fra-FRAFRA

FMG-Farming

FV-Food Vendor

GA-Gestational Age

LS- Length of Stay at NICU

M-Married

MS- Marital Status

ML-Muslim

NC- Number of Children

Nz-Nzema

OC-Occupation

PRI-Primary

PT-Petty Trader

RL-Religion

S- Single

SS-Seamstress

TER- Tertiary

TN-Teaching

UEM-Unemployed

Yrs- Years

**Table 4.2 Themes and Sub-themes**

| Theme | Emerged Themes | Subthemes |
|---|---|---|
| 1. Confidence | | a. Optimism |
| | | b. Hope |
| 2. Maternal sense of purpose | | a. Child survival |
| | | b. Love for the child |
| | | c. Gender preference |
| | | d. Children are assets |
| 3. Social support | | a. Informational support |
| | | b. Instrumental support |
| | | c. Emotional support |
| | | d. Spiritual support |
| | 1. Psychological strain | a. Anxiety |
| | | b. Sadness |
| | 2. Challenges associated with care | a. Financial challenges |
| | | b. Distance from NICU |
| 4. Adaptation strategies | | a. Spirituality |
| | | b. Self-efficacy |
| | | c. Drawing Strength from baby |
| | | d. Accepting the situation |

**Source: Transcribed data, (2022).**

### 4.2 Maternal confidence in the care of preterm babies at NICU

This gives a narration on the factors that influence maternal confidence in their resilience during the care of preterm babies at NICU. The main theme, confidence was generated from the data and corresponds with the construct of the model and had two sub-themes; optimism and hope.

#### 4.2.1 Optimism

This sub-theme describes how optimistic participants were for their baby's survival. All participants expressed being optimistic in diverse ways. Some expressed their optimism through their confidence in God for their baby's survival while some indicated being optimistic because of reassurances from their family, a few others expressed their optimism based on the condition of their babies, while others showed their optimism by what the nurses told them.

Some participants indicated they were optimistic about the survival of their preterm infants because they had a positive mindset. P6 a 30years had this to say;

> *Sure, I have a positive mindset, so I will try to calm myself down and have faith that I will take my baby home no matter what happens. Even if I know baby is losing weight, I'm going to take baby home and I know with time, baby will be able to pick up gradually (gain weight), (P6).*

P7 25years also narrated this,

> *I am the type who always doesn't like to think negatively; I always allow the positive thoughts to outweigh the negative thoughts anytime I am into something. I have no feeling that something bad might happen to them (twin babies) (P7).*

Other participants expressed how optimistic they were by trusting and having confidence in God to help their baby to survive. They also narrated these;

> *I have confidence in Go, because whatever I am going through tells me that God will never leave me, and my baby will surely come back to me (P1,* 26 years*).*

> *I have been strong because I believe in God that my child will survive. I am not sad at all. (P3,* 23years*)*

Few other participants indicated being optimistic about their baby's survival by the observation they made on the condition of their babies. They had these to say;

> *I am very optimistic that my child will survive, I know from what I see on the child, if the child will survive I can tell. I see some babies are inactive, they don't move their bodies at all but it is not the case for my child he moves his body actively, opens his eyes, and looks at your face. The last time we were asked to take a photo of the chest, you needed to be there to see the way he was screaming, throwing limbs everywhere so, I'm very optimistic that my child or survive. (P4, 27 years).*

> *Initially, anytime I go there to see her, she will just be lying down not moving but now when I go to see her, I can see she is active now and moving the limbs and licking her lips just that the breastmilk is not coming but I am sure God will let her survive because the way she was initially and has been able to*

*survive for 9 days I know God will let her survive for me to take her home. (P10, 36 years).*

A 42-year-old mother showed she was optimistic because of the feedback given by the nurses at the NICU upon inquiry about the baby's survival. She also had this to say;

*When I ask the nurses, they tell me something encouraging so I am very optimistic that my child will survive, (P12).*

### 4.2.2 Hope

This sub-theme indicates the participants' hopefulness for the survival of their infants. All the participants interviewed were hopeful of their babies' survival. They indicated their hopes in God as well as the health care professionals, others narrated they had hope because of reassurance and encouragement received from some of the health professionals, and few were hopeful because of how strong they saw their babies to be.

A participant narrated she was hopeful because she always prayed to God and indicated she was not afraid because she believed in God. P3, 23years said this;

*My hope is in God, I always pray to God to help my baby to survive even though he was born preterm. People have some fears when they give birth to such babies but, I was not afraid when I delivered my child because I believe in God, so I am hopeful that my child will survive. (P3).*

Similarly, P11, a 37-year-old twin mother also reported that all her hopes were in God for the survival of her babies so she did not put her trust in man. This was her narration;

*All my hopes are in God, just as I am saying, with all these expenses if God doesn't intervene, they (expenses) will all be in vain, I don't put my trust in man. (P11*).

Other participants also expressed their hopes for their babies' survival in the care being given by the health professionals, these were some of their narrations;

*By the grace of God, I believe what the doctors are doing and I know if there is a problem they will tell, and as they have not told me anything of that sort I am very hopeful that my child will survive. (P10, 36 years).*

*I am of the hope that my child will survive. Where my child has been brought to and the way the nurses are treating him I am of the hope that my child will be fine. (P14, 19years).*

Few participants indicated they became hopeful after reassurances and encouragement from the doctor. P12, 42 years had this to say;

*I kept asking the doctor if the baby will survive and the doctor encouraged me a lot, so it gave me some hope. So now I am hopeful of my baby's survival. Now I don't entertain fear again. I am very hopeful that my child will survive for me to take him home. (P12).*

Another participant also narrated she was hopeful of her baby's survival based on how strong the baby was anytime she went to see the baby at the NICU. This was the response of P2, a 19-year-old mother.

*Anytime I go to him to see if he is awake or ready to be breastfed, I see he is strong so it gives me hope that my child will survive. (P2).*

### 4.3 Maternal sense of purpose in caring for preterm babies at NICU

This theme which was generated from the data and in line with the construct of the model had four sub-themes including child survival, love for the child, gender preference and children are assets.

#### 4.3.1 Child survival

All participants interviewed narrated they were purposed to care for their babies so they survive and be taken home. Many of the participants indicated their belief in God to help their babies to survive, few indicated their readiness for a prolonged stay at NICU for the survival of the child, and while one reported that children are gifts from God and will do everything in her capacity for their survival while another indicated her purpose was for the baby to survive and add up to their family.

A participant narrated that her main motive of care was for the child to survive and continue taking care of her at home, P6, 30 years had to say;

*The main motive for caring for my child is that, I know I'm going to take my baby home and I will continue to care for baby in the house. (P6).*

Another mother also indicated her purpose was to care for her baby for the infant to be well after undergoing successful surgery, P15, 22 years said this;

*My purpose for my care is that as God has helped me to go through a successful operation and I am still alive it is my aim to care for the baby very well. (P15).*

P3, a 23-year-old, mother indicated the baby needed to survive to increase their household number, and this is how she narrated it;

> *My main purpose is that God should help my baby to survive so that he can add up to the family. (P3).*

Participants reported how their purpose for their babies' survival influenced their resilience. They indicated they were ready to stay at the NICU no matter how long they needed to stay. Some of their narrations include;

> *My aim is as the baby was 7 months, I have given myself about 3-4months, that staying here within that period, I will take my baby home. I hope even when I stay here for a year, I will get my child and take him home. (P1, 26years).*

> *I'm still here because of their (twin babies) health, I hope they will be healthy so that when I take them home I won't have any challenges. I don't want to be discharged home and bring them back because of a mistake I might have done. (P7, 25years).*

P11, 37 years, twin mother, narrated that the babies were gifts from God so she will do everything within her means to provide anything requested by the doctor and pray to God for them to survive and be strong so she can also be happy. She also had this to say

> *Hmmm, as for this question, (...) these babies (twins) are gifts from God so my purpose in caring for them is that in case the doctor says this is what is needed to help in the care of the babies I will be able to provide So, I will do all I can as*

*a mother and pray that God should let them survive because when the babies survive and they are strong I will be happy. (P11).*

### 4.3.2 Love for the baby

The majority of the participants indicated that their love for the baby gave them strength as they cared for their babies. Some indicated their love because that was their first child, while one indicated that she desires to care for her children as a mother and the joy of having twins influenced her resilience. A mother indicated that she loved the baby because the baby happened to be her first child. P6 a 30year old narrated;

*One other thing motivating me is my love for the child. That is my first child. (P6).*

Additionally, few mothers indicated their love for their babies was so much such that they always wished to be with their babies, these are some quotes from two mothers;

*Also, I love the baby so much that if I don't come to see him then I feel uncomfortable, I really have love for the child so that alone is enough reason for my strength. (P14, 19years).*

*I go and see him till evening and when the doctor comes then I leave for him to come and assess him. (P2, 19years).*

Meanwhile, another mother recounted that she desires to care for her babies as a mother, as well as the love and the joy of having twins, and will do everything in her capacity to make the babies survive, P11, 37 years twin mother had this to say;

*As a mother, I always wish to care for the newborns. Just as I am talking about the breastmilk that they are not suckling. As they are not able to suckle it is a worry to me so, I have to force and do all I can for them to be strong because as they are not even suckling, I am also feeling the pain in my breast, it is painful so I need to do I all I can in my capacity to make these babies survive. So, I am doing all these as a mother and the love for the babies as well as the joy I even have for having twins. (P11).*

### 4.3.3 Gender Preference

The particular gender of the baby also had contributed to the resilience of mothers. Few participants also indicated how having a male child gave them joy and encouraged them to care for their babies.

*So, when the surgery was done and the baby was brought here (NICU), anytime I come I ask them (nurses) how my baby is doing, I like to ask a lot of questions and sometimes they (nurses) also encourage me, so me I really believe my child will do well for me to take him home. What is even influencing me more is the joy that I have a male child [laughing]. (P12, 42years).*

*To be frank, I was very happy when I had this (male), it really child strengthens me. I was eager to have a male child; God is so good I had one. I prayed to God to give myself and my child life when I was about to go for the surgery (C.S). I was grateful to God and I was very happy after the CS when my child and I were alive. He is tiny though [laughs] but I am very happy and I love this child; I am excited today. (P5, 30years).*

### 4.3.4 Children are assets

Other participants indicated that the babies were assets and would be of benefit to them if they took good care of them. P5, 30years narrated;

*The child is my asset so if I take very good care of him, he is mine and I will benefit from him one day. (P5).*

P9, a 19-year-old mother also had this to say;

*What is motivating me is that everyone likes me and that as little as I am, I have delivered twins. It amuses people that I have been able to deliver twins [crying] so it has always been my prayer that God should help so that myself and my partner will be able to cater for them well so that they can grow and become responsible adults who will be of benefits to us. (P9).*

## 4.4 Social Support for mothers caring for preterm babies in NICU

This theme was generated from the data and it is in line with the constructs of the model and has four sub-themes; informational support, instrumental support, emotional support, and spiritual support.

### 4.4.1 Informational support

Informational support participants received included education and information which helped participants in their care of the infants. This support was categorized into four which included; support from health professionals and support from peers.

#### 4.4.1.1 Support from health professionals.

This included information and education on the baby's condition as well as medication

#### *4.4.1.1.1 Information and Education on Baby's Condition.*

Participants received some information on the babies' condition though some indicated not receiving the right information. Others also indicated health care professionals should be sincere in giving information. However, others reported not receiving any information at all.

Less than half of the participants reported receiving some form of education and information during the care of their babies which was reassuring.

A mother indicated she was inspired because the doctor made her understand that her baby was preterm and that was the reason for her being in the incubator and at the appropriate time they will be brought out. This is what, P1 a 26years teacher had to say;

> *He (the doctor) told me I have realised that the child's time was not up so I should see that where she (baby) is now, she is in the incubator which is like being in my womb so at the best time she will be brought out and whatever I have to do like breastfeeding her, and doing everything for her just like giving birth to a term child that was what he told me and that I should always be there frequently to see her and that really inspired me a lot. (P1).*

Another participant indicated she asked about the progress of their baby's condition and was given positive responses which allayed her fears. She had this to say;

> *I asked the madam whether my baby will survive and she said yes, he will, I should not be afraid, so when she said that I had faith that my baby will survive so was not afraid anymore. (P12, 42years).*

Meanwhile, a participant narrated that though she was told to take a baby for a procedure to be conducted on her, she did not receive any explanation on the indication of the investigation as such did not understand what they (nurses) said. P4 a 27-year-old mother had this to say;

> *When the child was brought out during the operation the baby was shown to me to identify the sex and the baby was really crying vigorously only for me to be told that the baby has been taken to the NICU. Even if something had happened, they should have even told me about it so that I would know what is wrong with the child, but nobody told me anything all they said was that I should take her for a photo of the chest to be done. I didn't know anything and even after that, they didn't tell me what is in the chest that is making that baby breathe fast. As of now the breathing is even slow, Me, I know a newborn breathes fast but the way they said the breath of my baby is fast is what I don't understand. (P4).*

A few of the participants also indicated health care professionals must be sincere with them when providing them with information on the condition of their babies. P1 26 years narrated;

> *Okay, in life I believe in truthfulness, if it is zero or black tell the person is black when it is white tell the person is white. If it is not going to work tell the person that despite this or that it is not going to work, as they are treating the baby and they brought her out and as they are saying it will work she's going to come out successfully I believe and I always wake up in the morning, in the night and look up to them (P1).*

Participants also reported inconsistency in the information received from the health professionals which left them worried, P4 a 27year old petty trader narrated this;

> *Anytime the doctor came, he kept asking, have you gone for the child to breastfeed I also told him when I go there they don't allow me to breastfeed the child and I come back and the doctor would be staring at me so me I thought something bad had happened to the child and they are refusing to tell me the truth and even if something (dead) like that has happened, they should be able to tell me so I go home. Not that I will just be here thinking that my child is at the NICU. Anytime the doctor came he kept asking have you breastfed your child, when he is done with me I gradually walked to the NICU and the child will be lying down and even sometimes the baby will be crying but they will not let me breastfeed the baby. (P4).*

Many participants reported not receiving any information or education on the babies' condition. These are excerpts from P11, 37years mother narrated;

> *Madam, me I don't know the problem with the babies, they are the doctors and they have admitted them so whatever instruction they give is what I follow and nobody has told me your babies are having this condition or that. (P11).*

P4 a-27-year old mother also recounted;

> *I wasn't told anything, nobody has told me anything that my child is preterm, and no nurse has told me my baby is premature, all they told me was to take a*

*picture of the chest so I didn't understand why my baby was in a machine (incubator), nobody told me anything. (P4).*

Additionally, one participant narrated how she was not given any information on the baby's condition by the nurses but only called on her when something was needed for the care of the child, this was how she put it;

*Oh! They (nurses), will just call my ward that they need something, bring it like your child needs medicine so go and buy it for her that is what they have been doing and one nurse called me yesterday and told me I should come and buy a cup for expression of breast milk so that it will be given to the child that is what they do but sitting you down to talk about your child has not been done. (P1).*

**4.4.1.1.2 Information on medication.**

All participants reported not receiving any information on the medication given to babies, all they were asked to do was to get the medications for their babies. Some excerpts of their responses include;

*As for the medication, I'm always called to go and buy when the need arises but I really do not know the kind of medication whether it is para, B'co I don't know so as I'm taking it to them, I just shake it and it produces a chechecheche sound and I go and give it to them and come back, I am not told anything. (P4, 27years).*

*We were only asked to buy and nothing was said about it. (P15, 22years).*

#### *4.4.1.1.3 Information / Education on NICU (Incubator and General atmosphere).*

The majority of the participants reported that no information or education was given to them about the incubators and the general atmosphere of the NICU. Participants also narrated they were only asked for their names and without any information about the incubator. P13 a 39-year-old narrated.

> *No information was given concerning the machine (incubator), when I entered they asked for my name so when I mentioned my name, then I was taken to where the machine is and they told me this is my baby so I pleaded with them (nurses) to open and take him for me and they opened and took him for me. (P13).*

P5, a-30-year-old mother also reported;

> *I was not told anything, when I got there they asked for my name and I also mentioned my name and I told them my baby is there. Then I was shown where my child was. (P5).*

#### 4.4.1.1.4 Information/Education on breastfeeding.

All participants received information on breastfeeding of the babies, some indicated they were taught to express breastmilk for the babies and what to do to encourage milk production. Some quotations include;

> *One came to interact with me. She thought me how to express breastmilk and how to dewind the child after breastfeeding so that the breastmilk can undergo digestion and be absorbed before they lay in bed. (P5, 30years).*

*She (the nurse) educated me on foods that if I eat will enable me to produce milk and she also said I should be thinking affectionately about my baby and that can help to produce the breastmilk and it encouraged me. (P14, 19years).*

Not only did they receive information from the health care professionals, but a television set in the unit also showed videos on some procedures on the care of babies like the expression of milk, general care of babies and identifying the sick baby, and the need for them to report promptly to the hospital when they are discharged and participant indicated educations helped them. P13 39-year-old and P5 30 years old also had these to say respectively;

*In front of the unit, there is a TV there, when you sit there, it shows videos of how to hold unto babies and others; how to breastfeed, all these are shown on the TV. It also helps. (P13).*

*We were made aware of the clinical manifestation to be observed when the child is not well on the television. It has really helped me. I have accepted all the education and I will take care of my child very well so that any deviation can be identified quickly and he will be brought to the hospital to be attended to. (P5).*

**4.4.1.2 Information Support from Peer.**

Few of the participants also received information from their peers (other preterm mothers). P9 a-19-year old mother reported she was informed by other mothers who also had their babies at the NICU that the incubators help babies. This was her narration;

*I remember that when I was outside with the mothers they said the machine (incubator) helps the babies so as the babies are in it, God will help them to survive. (P9).*

### 4.4.2 Instrumental Support

This sub-theme involves physical aid in the form of services provision, financial aid, or other specific aid or items participants received and the infrastructural support participants received. These supports were given by the facility, health professionals, spouses, family members, friends, in-laws, support groups as well as the church.

#### 4.4.2.1 Financial support.

This consist of all support received in the form of money as mother cared for their preterm babies at the NICU. These consist of supports participants received from spouses, family and friends, in-laws, support groups as well as religious groups.

##### *4.4.2.1.1 Financial Support from spouse.*

Almost all participants indicated their main support was from their spouse, which helped their resilience as they cared for their babies. They recounted that their spouses did well. However, a mother reported not receiving any financial help from her husband These excerpts are narrations from participants who received this support;

*My husband has really done well when it comes to financial support, anytime they tell me of anything concerning money then he makes the payment so I am praying for him to get money to continue to pay for any new ones, which has really helped to build my strength is the fact that anytime they request for anything concerning money the thing is immediately paid for. In fact, what has*

*really helped to build my strength is the fact that anytime they request anything concerning money the thing is immediately paid for. (P15, 22years).*

*My husband, for him his main support has been finances, anytime I am asked to buy something or make payments for the child I tell him and he gives the money, it really strengthens me and sometimes makes me happy (P3, 23years).*

A participant who indicated had no financial support from her spouse narrated.

*Hmmm [giggles] eiii! as for this question it is difficult ooo! Ooh, when I told him (long pulse) he will do it, the most important thing is for us to be discharged, and when we go he will take care of us. As for support from my husband, it is a bit difficult but I know God will do it." (P13,* 39years*).*

***4.4.2.1.2 Financial Support from Family and Friends.***

Participants did not only receive financial support from their spouses but also their families and friends. However, not all participants had this support.

Few participants who received this support from their families recounted;

*My family has been my main source of financial support. (P14, 19years).*

*Since they are twins, everything is bought in pairs. My brother whom I went to stay within (mentions name of a town) also helps me a little and that It helps me, it helps me a lot. (P7, 25years).*

Additionally, few participants voiced that they had some financial support from families as well as friends. Some verbatim quotes include;

*Even today one of my uncles came here and gave me some money (20 cedis). For any of them who come here, I don't get less than 5 cedis. Mmm, they (friends) also do come to see me and when some even come they give 20 cedis to buy food for myself and this has helped me, you may buy water so when it happens like that it makes you sad but by the grace of God I have not asked of money from anyone. (P10, 36years)*

*Sometimes when some of my friends come when she has money she gives, even my mother's family have even realised the man (husband) is struggling so they are also doing the little they can to support me with some money and they are all expecting that the babies will be fine so that they are discharged for us to go home. Even one of my sisters sent us some money today so all their expectation is for the babies to get well for us to come home. (P11, 37years)*

***4.4.2.1.3 Financial support from in-laws.***

A few participants also recounted receiving financial support from their in-laws, they all expressed positive sentiments about the support received. Mothers reported receiving financial support from their in-laws which also helped them in their resilience. These are what they reported;

*Even the last time my husband's elder brother and his wife came here and even gave me some amount of money, in fact it helps to reduce your problems, (P10, 36years).*

*When he (father-in-law) calls, he asks if any medication has been prescribed or there has been any issues relating to money, So, if it is issues relating to money,*

*I inform him and if he has, he sends it to me It is good because when any medicine is prescribed it is that same money I use and some for feeding as well. (P2,19 years).*

***4.4.2.1.4 Financial Support from Church***.

Participants also received some financial support from the church, however, not all participants received this support.

A mother who received financial support from the church had this to say;

*Ookay, the church came here to visit they gave me an envelope. (P1, 26 years).*

However, majority of the participants indicated not receiving support from the church because the church was not aware of their delivery, these are excerpts of their narrations;

*I have not received any help from anywhere. Nobody in the church knows I have delivered and my mother said she will not tell anyone. (P2, 19years).*

*I have not informed them (the church) of my delivery. (P13 39years).*

Meanwhile, P11, 37years mother indicated that a session of the church visited and prayed for her but could not tell them her financial state because they might not be able to offer her any help. This was her narration;

*On Sunday and they prayed for me I couldn't tell them what the problem is, I couldn't tell them because after somebody even hears, the person might not be able to help in any way. (P11, 37years).*

***4.4.2.1.5 Financial Support from Support Group.***

Mothers also received some financial support from a group they belonged to though not all mothers had this kind of support, P12, 42 years reported;

> *I am a farmer into okra and groundnut production so we have an association so yesterday they met and contributed, it is today that they brought it to me. (P12).*

The majority who did not receive any assistance reported that the group was not aware of their delivery and whiles others also indicated they were coming from far away.

> *I have not had help from anywhere else, I am not from anywhere near this place I am from (mentions name of town) a very far place, from here you will have to pick so many cars before you get there, we are on the border, so I don't know anyone here (P13, 19years).*

> *I am learning a trade; how to sew, so I belong to that group but I have not informed any of them. Even my master, I have not informed her because I am not yet discharged. (P15, 22years).*

**4.4.2.2 Physical care support.**

This support after the analysis was categorized into two: firstly, physical care support by health professionals spouse family and friends. No participant received this support from their in-laws.

#### *4.4.2.2.1 Physical support by health professionals.*

The majority of the participants reported that care provided for the babies by the health care professionals was also a form of support for them. Some narrated they appreciated the work done by the health care professionals, some said their babies were alive because of the care rendered by health professionals. Nurses worked on their babies all day long as well as at night, some also said how the nurses provided their babies with toiletries in their absence so they could replace them (toiletries) when they came. They stated these supports helped to build their strength.

> *They (nurses) have really supported me, they are patient with us, had it not been for them I believe my baby would not have survived. They have really helped me so I always pray for them day and night, they have really done well, the nurses are always with the babies in there, day and night caring for them, when they soil themselves, they help to change the diaper, feed them with the expressed breastmilk when crying they come to call you from outside even when you are sleeping they call you to come and check on the child or express breastmilk and put down. Even at night, they don't sleep, when you go there at 12am they will still be awake all because of our babies, they don't sleep. Meanwhile we the mothers will be sleeping and they will call on us when need be so they are doing well on that, madam the supports really help me in building my strength. (P12, 42years).*

> *They (nurses) are helping because once its morning they will be working on the children all day, the doctor will first come and see them and do what he is supposed to do and also write for the nurses and when the nurses also take the*

*book they know what to do. Throughout the day they really work on all the children even when they need anything like a diaper and you are not around they use theirs so you (mother) replace it when you (mother) come. (P10, 36years).*

Meanwhile, a participant described the physical care provided by the nurses as a duty they are carrying out, and she also put it this way.

*They are doing their work so they follow instructions being given to them. They can't do anything contrary to what has been said, if otherwise is done then it is your job that you want to lose so as for them they do carry out their orders as given. (P7, 25years).*

***4.4.2.2.2 Physical support from spouse.***

Few of the participants narrated receiving physical support from their spouses as they ran errands for them during the care of the babies, P3, a 23years mother said this

*Since we are here together, anytime I am called to get something for the child, he (partner) is the one who does the errands. (P3).*

This is what P12, 42years, also narrated about the support from the husband;

*Yesterday, for instance, he (husband) went to collect some medications like that to be used for the child. (P12).*

***4.4.2.2.3 Physical care support from family and friends.***

Some participants recounted receiving physical help from their relatives such as mothers and friends. However, a participant indicated not receiving such support from a family member nor a friend.

Some participants who received support narrated how their mothers' care contributed to their lives as the mothers did everything for them. Some mothers narrated these;

> *For my family, the only person I have had support from is my mother, as for her if she were not here with me I wouldn't have been alive because she does everything for me. Even when I cannot walk she is the one who holds my hand to help me walk as we talk now she is gone home to cook. (P15, 22years).*

> *Apart from God my mum especially, my mum who is here with me, she is not all that fit but bit by bit, I know that God will take us through. (P6, 30years).*

Similarly, a participant recounted how a friend supported her by preparing a meal for her to help her produce breastmilk P11, 37 years twin mother narrated;

> *The last time, for instance, a friend came here and I informed her about the fact that I am not producing milk and quickly she went home to prepare mashed kenkey for me to enable me to produce milk. She even brought me some this morning. (P11).*

On the other hand, a participant reported she was unhappy because she had no physical support from her family. P4, 27years had this to say;

*I am not happy at all because all my mother's sisters are alive but none of them has made up their mind to come to support me, however, if I were a rich person they would have come all day but because I don't have anything no one is coming to support me. (P4).*

#### *4.4.2.2.4 Physical support from in-laws.*

None of the participants received any physical support from in-laws. A mother indicated her mother-in-law was weak and her sisters-in-law too did not stay with her (participant's) spouse, this was her narration. P7, 25years had this to say;

*My mother-in-law is even weaker than my mother. I have to be with my mother-in-law under normal circumstances but she is weak and she has to be held before she is brought out of her room. I have only two sisters-in-law and they don't stay where my husband is, I may not be able to recognise her when we meet. Unless maybe we call each other and meet at a particular place. (P7).*

#### *4.4.2.2.5 Infrastructural Support.*

Participants had infrastructural support as one of the instrumental supports received as they cared for their preterm infants. All participants were provided with accommodation and sanitary facilities. Majority of the participant reported indicated the accommodation and the sanitary places were good while others had some challenges with them. While few indicated they were coping with the situation.

Participants who reported had no problem with the accommodation and indicated the place was good, these were what some mothers reported;

*Ooh, as for the place (place of sleep) there is no problem, once you do what is expected of you as in dressing the bed nicely, you have no problem. (P11, 37years).*

*Where I sleep is good, I don't have any problem there. (P12, 42years).*

*It is okay, it is like home, it is better because even in the house some do not sleep on a mattress but rather sleep on the floor but with this, there is a mattress all you need to do is to cover it with your cloth. Me, I see it's good. (P10, 36years).*

A participant also indicated that though the washrooms were not like the home she needed to cope, this is what she also had to say, P1, 26years had this to say;

*Hmm! that is what I am saying that you will not get it as you want but I still am coping. (P1).*

Participants who had problems with the accommodation and sanitary facilities reported of small beds, disturbances from mosquitoes, no light at the place of sleep, locking of washrooms and inadequate water, and people messing up sanitary places.

Few of the participants reported the place of sleep was not good indicating that the bed was small and not making them able to sleep and they were as well disturbed by mosquitoes, P4, a 27-year-old recounted;

*Where I sleep, I cannot even sleep well, if I don't take care and I fall I will get hurt, someone who has had surgery done, sometimes I can't even get up. That has been my major challenge, the bed is very small I only sleep on one side*

*of my body so when I wake up at midnight am not able to sleep again and there are lots of mosquitoes even in the afternoon you see them in the net. (P4).*

P9, 19years also indicated;

*The place is not good, mosquitoes keep biting us and when you sleep on the bed too you have general body pains, as for the place it's not good. (P9).*

Though majority reported of mosquitoes were where they slept, a few of them recounted they were not disturbed because they were provided with means of protecting themselves such as insecticide-treated bed nets and fun. Below are some excerpts of their narration;

*They also mounted mosquito nets so in the night because of the mosquitoes you tack it in to prevent the bit of the mosquitoes. (P10, 36 years).*

*However, in my place, there is no mosquito net over my bed but glory be to God for fun that drives away mosquitoes. (P11, 37years).*

Few of the participants recounted being disturbed by the mosquitoes, this is what P14, a 19-year-old had to say.

*One major challenge here is, even though there are mosquitoes everywhere however mosquitoes here really disturb us. (P14).*

Some participants reported there was no light where they slept. Some of their quotations were

*Aside from the bed being small, there are no lights the place is dark even if any insect is crawling on you, you will not even see it. (P4, 27years).*

*The only problem there is that there is no light otherwise is good. (P10, 36years).*

A small number of participants indicated that the washrooms were clean however some people messed up as they refused to flush after usage. Some of their responses were;

*Mmm! As for that what can you do madam, because all humans will not have the same mind even someone might use the washroom without flushing so when I go and it is like that I only have to flush before using it, so as for that there is little I can do. (P11, 37years).*

*As for that place sometimes is people who go to mess up the place, someone might use it and afterwards not flush and the person leaves so when you also go there and you want to use then you fetch water to flush so that you can also use it otherwise the place is clean they clean there every day. (P10, 36years).*

Meanwhile, a participant reported of inadequate water for bathing as well as flushing of the water closet which really affecting them, this was how P5, 30 years, mother narrated it.

*It is not good at all it is not good. We don't get water to flush the water closet and even don't get some to bathe. We don't get cold water to dilute our hot water after going to buy them. It is really affecting us. (P5).*

Other participants indicated the washrooms were locked occasionally. Some narrations were;

*This is also a very big problem, last Friday the man in charge locked the washrooms as well as the bathhouse around 3 p.m. so even if you felt like visiting the toilet you wouldn't get access to the place. (P4, 27years).*

*The man who is in charge of the lavatory didn't come to open last Sunday but since I was new, I didn't know what was at stake. (P7, 25years).*

Lastly, a mother narrated that the bathroom got flooded when two people used it, this was what P9, 19 years unemployed, single mother also said;

*For the bathhouse when about two people bathe it gets flooded. (P9).*

### 4.4.3 Emotional Support

This entails words of empathy, encouragement and reassurance the participants received which helped their resilience during the care of their baby at the NICU. Mothers recounted receiving these words from either the health care professionals, spouses, family, and friends as well as the in-laws as well as from peers which helped them build their resilience. However, participants recounted not receiving any form of counselling.

#### *4.4.3.1. Empathy from healthcare professionals.*

About half of the participants recounted that the nurses empathised with them. Meanwhile, few of them indicated not receiving any form of empathy from the health care professionals.

Some participants who received this support narrated they (nurses and midwives) smiled when they were talking to them and were also not screaming at them, P14, 19 years recounted;

> *When someone doesn't empathise you can tell, from the way the person will treat you, someone might even scream at you but the nurses I have met here are not like that, all the people I have met here none has done anything of that sort to me. (P14).*

P15, 22 years also had to say;

> *Madam, they (health professionals) do empathise with us because the way they talk to you (mother), smile at you so, if you are the type who does not like to associate with people, you will be compelled to associate with them because the nurses and the doctors here are really nice people (P15).*

Additionally, a mother indicated that nurses empathised with her because they (nurses) called her whenever the baby cried and narrated that all those actions by the nurses are nice because the nurses used their airtime to call them (mothers), this is what P11, 37 years said these;

> *However, when the babies are crying they call me, if they don't empathise with us they will not even mind the babies when they are crying, they can allow them to cry their heads out but they do call. After all, we the mothers don't buy credit for them but they call the nurses here to call us (mothers) or even send someone to call us to come and attend to our babies, all these are nice. (P11).*

A participant reported not receiving any form of empathy from the nurses at the NICU however she narrated that the midwife who referred her visited the babies and took pictures of them, P9 19years had this to say;

*I have not seen anything(empathy) like that for me to see but the midwife at my place where I came from, she came with all the joy to see the children [tearing] and she took a picture of them. (P9).*

**4.4.3.2. Encouragement and reassurances from healthcare professionals.**

Participants also received words of encouragement as well as assurances from the health professional, few participants also indicated their anticipation for words of encouragement from the nurses.

A participant reported receiving words of encouragement from the nurses through sharing their experiences with her and this is what was narrated.

*At the NICU! Oh, as I said earlier on, they really encourage us and that is making us strong and supporting us to continue with what we are doing because of one or two experiences they have been sharing. Like I said earlier on, sometimes they will say they had babies who were also preterm and their situation was worse than mine but with time baby was able to survive. (P6, 30 years).*

Similarly, one other mother also narrated she was encouraged to stop thinking because it was the reason she was not able to produce milk for the baby and that nothing will happen to the child. She had this to say;

*Mmmm, sometimes they tell me to stop thinking and that it is because I think that is why the milk is not coming and I told her is true, I think a lot even to the extent of crying, after the operation I have been crying since and she said*

*I should stop thinking nothing will happen to the child and I said thank God. (P10, 36years).*

Interestingly, a few participants recounted how they were in anticipation for the health professionals to give them some words of comfort and reassurance on the condition of their babies to help boost their morale. Some responses include;

*Oh (...) for now like I said (...) my challenge is that if I go to NICU sometimes I need some of the midwives there to boost my morale. I just want to talk to them and see that from what I'm doing, is this baby still going to survive? (P6, 30years).*

*As for that, I am still waiting on them to tell me some, as for me I have already encouraged myself that the baby will do well and I want to do all can to make my baby survive. So as for the words of comfort, I am still waiting for the health professional for encouragement and assurances and what to do to help my baby to survive, which is what I need. (P13, 39years).*

**4.4.3.3. Emotional support from family and friends.**

All participants recounted receiving emotional support from their family and friends in varied ways; through visitation, words of encouragement that their baby will survive, and phone calls to enquire about their health which helped them with their strength.

Some participants recounted how family members encouraged them the baby will survive. These were some of their responses;

*My mum and my family members although they have not seen my baby, just coming here morning, and evening anytime they are around, through visitations, and encouragement although they have not seen my baby when they call or anytime they come here they will be telling me everything will be fine and that some people are born prematurely but they grow to become very big and they survive. (P1, 26years).*

*They (family members) call to encourage me, and my mother told me the child will be fine by the grace of God as the child has been put in the machine I should not worry and that he'll be fine. (P3, 23years).*

Additionally, one participant narrated she was called by the uncle enquiring how she (participant) and the baby were faring. P4, 27 years narrated.

*One uncle called me this morning when I was going to dress my wound and he asked me how I am feeling as well as the child. (P4).*

**4.4.3.4. Emotional support from in-laws.**

Participants also received emotional support from their in-laws. More than half of the participants narrated they were emotionally supported by their in-laws and were encouraged. However, other participants indicated not receiving this support.

Those who received indicated the support was good and as they were encouraged. Some mothers said these;

*And even advised me not to be thinking as it is not good and that I need to be strong because whatever happens is good. When they call it is advising and encouragement throughout. (P10, 36years).*

*My sisters-in-law have been here and they talked to me and encouraged me not to think about it and that things will be well. (P12, 42years).*

Conversely, a participant reported who did not receive emotional support from in-laws indicated that she did not tell them about the baby being preterm and wanted to keep the baby indoors even after being discharged till the baby was strong enough. P13, 39 years had this to say;

*As for that, they have not seen the child so they only ask if the child is fine and I tell them yes, and they ask whether we have not been discharged and I tell them yes. Nobody knows how the baby is and I don't want to tell anyone that he is small or he is like that, even when he is discharged I don't want him to be seen by anyone. I wish to keep and cover him till when he is strong enough then I bring him out for someone to even see him. So, I have not told them how he is but when they ask me, I tell them he is fine and that we will be discharged, they said Monday or this day we will be discharged, that is what I keep doing. (P13).*

**4.4.3.5. Emotional support from peers.**

Participants also received emotional support from other mothers who also had their babies on admission at the NICU through their interactions with them.

Majority of the mothers indicated that other mothers supported them and encouraged them that their babies will survive. These are excerpts from their narrations;

*Oh, the last time someone was discharged and I asked her, "so when your baby was brought here was he like my baby?" And she said "yes, he was not even up to yours" and I said, "…and he has become nice like this?" and she said, "yes". So I said, "mine will also be better like yours" and she even laughed. I said again, "this my child, by the time you come to see him again his thighs will be very big even than your baby's own", and we all laughed over it and she said, my baby will be fine nothing will happen to him and I told him I have not seen one before this is my first time and she said hers was not even as big as mine so that even encourages me more. (P13, 39years).*

*Sometimes I can even say that my baby was not term so I don't think she will survive then someone will tell me not to be saying that and that she will be fine once she has been able to survive till this time, she will be fine. So when it happens like that then it strengthens me. It gives me some strength and I am happy about that because if nobody tells you anything or tries to comfort you it is really sad but when they tell you, 'Oh Maame (mother) be strong, don't be sad, nothing will happen to the child', it gives you some comfort and even strengthens you. People here too, they do well, some are just like siblings. (P10, 36years).*

Interestingly, a participant indicated that she was reassured that as her baby was born at seven months she would surely survive and she only needed to take good care of the baby, this was what P15, a 22-year-old lady also said;

*There was one woman whom I asked whether my baby born at 7 months will survive and she said ooh as for a seven-month baby he will do well. What matters is that you will need to take good care of him. What is needed now is for the nurses to discharge him for you to take home. (P15).*

**4.4.3.6 Counselling.**

All participants indicated that they did not receive any form of counselling from any of the staff. Below are excerpts of what they narrated. Some responses were;

*No, no, there hasn't been anything like that, nobody has been assigned to talk to me on anything so I'm always inside and sometimes I'll come out and sit on the pavement. When I'm tired then I go to watch some the TV. (P4, 27 years)*

*There has not been any counselling. (P13, 39years).*

**4.4. 4. Spiritual Support**

Few mothers reported receiving spiritual support from their church as well as their pastors and indicated that the prayer strengthened them. These are what two of them narrated.

*They (church) will come, and pray for me. Anytime they come it really gives me some strength. (P1, 26years).*

*My pastor also called me to pray for me for God to let the babies be strong. (P11, 37years).*

### 4.5. Psychological strain

This theme describes the emotional stress participants experienced as they cared for their babies in the NICU. It emerged after the analysis of the data and had two sub-themes; anxiety and sadness.

#### 4.5.1 Anxiety

Participants were anxious for varied reasons which included anxiety about babies' conditions, separation from the baby as well as the family at home, feeding difficulties as well as the NICU atmosphere

##### 4.5.1.1 Anxiety about babies' conditions.

About half of the participants were anxious. They indicated that they were afraid they might lose their babies as they were preterm. Some narrated these;

*When the children (twin babies) were delivered preterm, I was really afraid and very anxious. I was afraid I will lose the two of them. When they were delivered and taken to the machine the next day then one died. I was really sorry for myself because I was sick throughout the pregnancy and now I am coming to lose my babies too. (P10, 36 years).*

*I was afraid I might lose him since he was very small. I pray to God to give him life anytime I am going to bed. (P5, 30years).*

*My other challenge [crying] has been the health condition of my children and the fear of losing them* because *this dawn someone lost the child so I have been praying that will not happen to my children (twins) (P9, 19years).*

**4.5.1.2 Anxiety due to Separation from Baby and family at home.**

All of the participants expressed that they were worried as a result of separation from the babies. Some indicated that they were worried because other mothers were together with their babies. P14, 19 years old, single, lamented;

> *It's worrying, it really worries me. I am really worried that the child is not with me in the sense that in the ward, where I am everybody's baby is lying by her when you look around, everyone has the baby by them on the bed but me alone my child is not with me. It's really worrying. (P14).*

Other participants were also worried because in their previous deliveries' babies were born to term and they stayed together with them and could monitor their babies and breastfeed anytime. P12, a 42-year-old reported;

> *Sometimes, I really get worried, where he is sleeping, when I go to bed at night I really think about him and wish it is morning because I have not experienced some before. More so all my children were born at term and I sleep with them at night so with this, my eye is on them throughout the night. At night, when they cry, then I just give them the breast to suckle. So, I think about this one a lot. (P12).*

Another participant indicated how it was not easy for her as she could not get the opportunity of picking babies anytime she went to the NICU. This is what P1, 26 years narrated;

> *Hmm! It's not easy. It really worries me; all my two babies were sent there because of their weight; the first one was 4.3 and the second one was 4.4.*

> *They were sent there but I wasn't having any knowledge about it, all they told me was they wanted to check their sugar so when they were sent there, I went to pick them up but, in this case, when I go, I just go to see the baby without picking him or her. (P1).*

A participant also reported her fear due to separation from the baby and indicated she was not certain if the expressed breast milk would be given to her baby. This is how P6 a 30-year-old narrated hers;

> *Oh (…) for that it is not easy all that. My fear is I just want to know that whenever I am with baby and I am breastfeeding, baby will take it. Although we are not at the NICU and sometimes you express the milk and you are going to sleep you might be thinking about it whether breastmilk will be given to baby or not. That is the little fear there. (P6).*

Few participants revealed that the prolonged stay at the facility resulted in them thinking of family, especially the other children left at home. These participants indicated that their stay away from home had affected them since they could not do things they did at home as mothers for their children. This was how P1, 26 years and P10, 36 years narrated it respectively.

> *It has affected me a lot because there are things I should be doing but now my husband is doing them. The kids going to school and how they should be fed, you know men are not like women. I know they have missed me a lot. Last time I allowed them to be brought here so that I can see them (P1, 26years).*

*As of now that I am here, there are so many things that I cannot do as a mother but, I have one girl in the house who takes care of the house, the day she doesn't go to school she does all washing in the house when they are to go to school too, she baths the smaller ones who cannot bath themselves. (P10, 36years).*

**4.5.1.3 Anxiety due to feeding difficulties.**

Most participants were worried due to difficulties with the feeding of the children which ranged from no and inadequate breast milk production to the baby's inability to suckle.

Some of participants who had no breast milk for their babies indicated they had done all they could to enable them to produce milk but still not producing which left them worried because they thought babies may die of hunger. P13, 39 years, had this to say;

*Since I started the care, I have not had breastmilk for him, however, I have done all things I need to do for the breastmilk to come so today by the grace of God when I squeezed it, I saw that a bit of the milk had come in. Since that time that I have not had breast milk for him, I was really worried so I even came to tell the nurses to get him something to eat for him to be strong and they said ooh [giggles] nothing will happen to him and that they have put a drip on him. So, I am doing all I can to get breastmilk for him to take and be strong. (P13).*

P14, a 22-year old mother also narrated;

*I have a problem with the feeding, because I had CS done, I could not get breastmilk for the baby and that was really worrying. I was worried because something could happen to her. (P14).*

Other participants who reported babies' inability to suckle as a source of worry for them also narrated these.

*My main challenge is his inability to suckle the breast but when I express into a cup he is able to take it so even if they want to discharge us and he still cannot suckle, it will really bother me because when I take him home and he still cannot suckle what will I do for him to feed? That has been my major challenge and I do think about it a lot. (P3, 23 years).*

*I met the doctor there in the morning and he asked about their feeding and I told him they are suckling bit by bit but I am surprised today they are not suckling at all. The whole of today they have not suckled mmm! I have become demoralized because yesterday and the day before yesterday each of them suckled on each day and they even looked strong but the whole of today none of them has breastfed and they have been sleeping all day and I am scared hunger might kill them so I have been worried. (P11, 37years).*

**4.5.1.4 Anxiety due to NICU Atmosphere.**

Majority of the participants revealed they were anxious as they entered NICU to see their babies especially during the first time. They indicated the site of small sized babies as well as the incubators made them afraid, scared and taken aback.

Some of the participants indicated they were worried upon seeing the small-sized babies which made them worried and disturbed because these babies appeared too small and cannot be held, this was what P5 30 years mother narrated;

> *In fact, I was worried when I entered for the first time; because when you see the appearance of the neonates, you become worried. It really hurts when it happens that way. When you look at some of the neonates, it is really disturbing. Hmmm, it's an issue. When you see them, they are very small and can't even be held. (P5).*

Few of the participants recounted how they were scared upon seeing babies in the incubators and were contemplating if the babies will survive. This is what two of them reported;

> *When I entered the place, I was scared. When I saw the babies in the machine (incubator), I was really scared. As for that, if I don't mention then I am lying to you because I had not seen some before so I was really shocked to see such small babies and I asked myself if these babies can survive. (P12, 42years).*

> *When I entered, I was a bit scared because I felt my child might or may not survive because I have not given birth before, this is my first child so I do not know that when a child is born they keep him in a machine and I didn't know whether babies kept in the machine survive or not. I didn't even know the machine in which the baby was kept was warm, I thought it was cold and the baby was naked so as I went to sit outside I was worried and was thinking about my child. (P3, 23 years).*

Another participant indicated how shocked she was when she went to see her baby at NICU because that was her first time seeing such a thing and her blood pressure increased sharply when it was checked. She also had this to say.

> *The first day I went there, in fact, I came from the room very shocked because I have never seen such a thing but I came back lying on the bed and when they came to the check BP it was very high so (...) I was thinking it is not going to work but that night (...) I prayed and (...) and as I said, God will surely do it [Crying] (P1, 26 years).*

### 4.5.2 Sadness

About half of the participants' sadness was due to separation from the baby, they expressed that they were not happy, which also affected their spouse, and others were also not able to sleep. Some indicated their unhappiness as they were not together with the babies, some verbatim quotes are;

> *As I am not close to my child I am not happy with it, that is why I keep praying every day that God should help me so that he will be strong enough for him to be discharged for us to be together. It worries me because he's preterm and not together with me. (P3, 23years).*

> *In fact, I am not a happy person, I can't even eat, I don't even have appetite, I am not happy. Even at night, I am not able to sleep but if the kids were with me I believe it would have been different. (P11, 37years).*

Mothers were not the only people affected by the separation but fathers too, and wish the baby could be discharged home for continuity of care. P4, 27 years said this;

> *As the baby is not with me I'm not happy at all, I'm not a happy person. Anytime the father calls me to ask whether the child has been given to me, I tell him no. Even the father is not comfortable where he is, he even said when the doctor comes I should find out from him if it will be possible for them to discharge the baby home to continue the care so we come for reviews he prefers it that way than for the baby to be at the NICU. (P4).*

Not only did the separation made a participant sad, but not being aware of the problems with the babies (twin) also compounded her problem. P11 *37years* lamented;

> *(...) how can I be happy hmmm madam, they are babies. I cannot tell what is wrong with them. I can't tell what is going on in their system. (P11).*

### 4.6. Challenges encountered by mothers of preterm babies at NICU

This theme emerged after the analysis of the data with the following subthemes; financial challenges and distance to the NICU. Participants encountered these challenges as they cared for their babies in the NICU.

#### 4.6.1 Financial challenges

This sub-theme was one of the main challenges participants mentioned as they cared for their babies, almost half of the participants indicated it to be their main challenge.

Participants expressed their inability to get money to settle their bills in case of discharge, money for feeding themselves and purchasing babies' drugs as well. Some of their narrations were;

*If we are not discharged any moment and there is anything I need to buy I might not be able to. I have spent over 900 cedis and it's finished, and my husband has even sent to me 800 cedis, so when that also finishes, I might not get any money. (P4, 27years).*

*My main challenge has been finances. How I will get money to eat so that I can get enough breast milk for the child to feed. (P3, 23years).*

*It is all about the medications, if there is no money how do you get them? Even with their treatment each of the babies should have had two but we bought only two for them so today we have to force and add the other two. (P11, 37years).*

**4.6.2 Distance from NICU**

Few participants reported this as a challenge because they needed to walk to and from the NICU anytime they were needed there. They indicated that the distance was far.

A mother narrated how difficult it was for her to walk to the NICU from her ward and as she tried to go to the NICU one night but after waking up she could not go because the whole environment was quiet so she had to wait for some time. P5 a-30-year old mother narrated this;

*From where we are to where the child is quite far and walking to that place (NICU) has not been easy for me. I find it difficult to go there. So yesterday night, I gathered some courage and I was able to go there. I was very much afraid but I had to try and go there. It was 2 am, when I woke up. When I came out, the whole place was very quiet, then I went to sleep. So, when I heard the bell ring almost at 4 am so I got up, then I set off. I saw one man on*

*my way; I was even afraid when I saw the man who was in a vest. I was terrified and he was also walking briskly. He passed by me to the maternity ward then I got relieved. From here to that place is very far. (P5).*

Another participant also expressed that the experience had been different in her current delivery as she always had to move up and down which was not the case in her previous deliveries, she also said this, P1, 26 years narrated;

*Hmm! moving up and down is one of the big challenges because I have always given birth to my children sometimes even at 40 weeks and at times 39 and now it was 32 weeks so it has changed. (P1).*

### 4.7 The adaptation strategies of mothers during the care of preterm neonates at the NICU

The analysis of the data generated one main theme adaptation which is in line with the constructs of the I-resilience model. Four subthemes emerged which are spirituality, self-efficacy, drawing strength from baby and accepting the situation.

#### 4.7.1 Spirituality

This sub-theme was employed by participants to build their resilience as they cared for their babies in the NICU. Mostly prayer and believing in God were what participants narrated as the strategies employed to help them adapt during the care.

##### 4.7.1.1 Prayer.

All participants narrated prayer helped them to adapt to challenges associated with preterm care at NICU.

Many participants indicated that when they prayed to God to let their babies get well, they were strengthened, encouraged, boost their confidence and help them to better adapt to the situation. P3 a 23-year-old mother said this;

> *As I told you before it has been my prayer that God will help my child to be strong. The prayer does a lot of things, I always pray to God to stretch his hand on my child as he's lying somewhere and I'm also somewhere, my strength cannot do it unless God himself helps me, so the prayer strengthens me. (P3).*

P6 a 30-year-old also had this to say;

> *Sure. I pray I do pray a lot. Any moment I am leaving the baby at the NICU I pray and when I am in the lying-in ward too I pray for baby. Sometimes even when I am breastfeeding, I call my pastor to pray for my baby. This also helps me to stabilize my mind and have faith in God by believing in him that it is going to be well. It helps me very well, as I keep praying, it helps me to adapt and even boosts my confidence that my baby is going to survive. The prayer makes me feel better! Even today the woman who dressed my wound was sharing with me some experiences and prayed with me and I was very excited. Right from there, I came to express breastmilk for baby and baby was taking it and was looking at my face and I tapped baby. That encouraged me so, the prayer makes me feel better. (P6).*

Not only did prayer made mothers feel strengthened, prayer made them comfortable, happy and hopeful of their infants' survival. Some narrated their account as follows.

*Hmmm, prayer! Prayer can do all things. Prayer really helps me, it makes me comfortable and it strengthens me. When I pray, it really works. Hmmm, when I delivered I was not having any money but I prayed and I believe it is the prayer that even helped my brother to get me some money when we called him. The prayer has even given me more hope that my child will surely survive. (P8, 19years).*

*Prayer helps me, during his time in the machine (incubator) and oxygen was set up, he could not eat but he can eat very well now, with no oxygen, and able to breastfeed. Prayer has made me very happy, that he is able to eat and there is no oxygen setup. (P2, 19years).*

**4.7.1.2 Belief in God.**

Participants believed in God to help them adapt to the challenges.

Few expressed their belief in God as they reported that God is capable of making their babies survive.

*What I believe is, even a bone that has no flesh on it, God was able to make it come to life and my baby is not a bone, she can breathe, do some actions (moves her body), and cries, so if God was able to bring a bone back to life, then my baby's own is very small. (P1, 26years)*

*I go to church and I believe that God will help my baby to survive I know that the condition in which my baby is at the moment, God will help the baby to be stronger. (P14, 19years)*

### 4.7.2. Self-efficacy

About half of the participants also believed that their personal beliefs and ability to withstand challenges helped them to adapt as they care for their babies in the NICU. Some mothers indicated they had positive mindsets and always ensured things worked out well, others also narrated that the ability that enabled them to encourage friends in trying times was the same personal ability helping them. Some of them narrated they were worried initially but realised had to have faith in themselves and be strong. These are some of their narrations;

> *When I was told my time is not due for delivery but I will be operated on, I was worried initially, but later I got relieved. I had that strength and had faith that I will stand firm to care for my child. (P5,* 30 years*).*

> *When I encounter any challenge, I don't entertain fear at all and I know nothing unfortunate will happen to me. (P4, 27 years).*

> *I am someone who doesn't accept defeat. I work things out to stop that thing before it gets worse. At any time, I think positively, as I said earlier. Before you will hear me arguing with someone, then it would be that that person has said something negative about me. So, I am someone who doesn't accept defeat at once (P7, 25 years).*

### 4.7.3. Drawing Strength from Baby

Participants adapted by drawing on strength from the baby. Mothers narrated that seeing the babies alive and active, breastfeeding babies, mother-baby interaction as well as participating in the care of babies helped them to adapt.

*What is keeping me is the fact that my baby is alive and active and I am looking forward to a discharged home. (P4, 27 years).*

*At the NICU sometimes, you think whether you are a mother or not but like I said as you go there, you take baby, you try to express bit by bit, baby tries to even look at your face, tries to open his eyes, takes breastmilk and it also makes you feel better at least. The joy of seeing my baby alive and active. (P6, 30 years).*

*I just get up to go and see him for a while before I come and sit and when it is time for the nurses to work on her and they need anything then I provide for them, since I went there they have not even given me any cloth of the child to but this morning they gave me two pieces of clothes soiled with faeces (meconium) it has even given me more strength and so I know as I have started washing baby's clothes God will see me through. (P10, 36years).*

### 4.7.4 Accepting the situation

Some participants also indicated that acceptance of the situation helped them to adapt. They narrated that was the situation at hand and they needed to cope at all costs whiles others also recounted babies were separated from them for a reason. These are some narrations;

*Now with this situation, you must at all cost cope. The other children at home no matter what, you cannot bring them here. The only thing is to pray for the quick recovery of the baby here so that you can go home and take care of the rest at home too. That's what I have faith in. (P5, 30 years).*

*Ooh! Me, I see it is because of the prematurity that is why the child is somewhere and where he is I believe is safe and they are taking good care of him so that he can be strong for me (P13, 39years).*

P11, a 37 years old twin mother also narrated

*I am not comfortable at all, however, if there is no problem with them (babies), they would not be at the NICU, all those who delivered and babies had no problem though they had surgery done, babies are with them. (P11).*

**4.8 Summary of findings**

This study was guided by the I-resilience model which explored maternal resilience in caring for preterm neonates at the NICU at Presbyterian Hospital, Dormaa Ahenkro. The analysis of data from which six main themes and 18 sub-themes emerged which discovered the resilience of these mothers as they cared for their preterm infants at the NICU. These themes and sub-themes included; confidence, with optimism and hope as the sub-themes; mothers' sense of purpose of care included, child survival, love for the child, gender preference, and children being assets as the subthemes, social support which was the next main theme also had its sub-themes as informational support, instrumental support, emotional support and spiritual support, adaptation strategies, which was the fourth theme, had spirituality, self-efficacy, drawing strength from baby and accepting the situation as the sub-themes. The emerging themes from the analysis of data included psychological strain, with its subthemes as anxiety and sadness, and lastly, challenges associated with preterm care at NICU, which was an emerging theme, had its sub-themes as financial challenges, and distance from NICU.

All participants indicated that they were optimistic about their babies' survival and expressed hope in God and the care provided by the health care professionals. Participants also indicated how they were purposed to care for the baby to survive and be strong enough to be discharged home, others reported their love for the child, the joy of having a male child, as well as seeing the child as their asset enabled them to be resilient as they cared for the infants. Participants recounted receiving various social supports which included financial which was provided mainly by their spouses and some support from families, friends, church and support groups. participants narrated how they appreciated the physical care provided by the health professionals, emotional support in the form of empathy, words of encouragement and reassurance also helped to encourage and built their strength, as well as spiritual support from their pastors and some session of the church, also gave them more hope for their babies' survival. However, some participants expressed dissatisfaction about the fact that there was incomplete or no information given to them on the condition of their babies.

Notwithstanding, the various supports received, participants narrated having psychological strains due to separation from baby and family, feeding difficulties as well as during their first entry to the NICU which most of them indicated they were scared because of the small sizes of their babies and some challenges as they care for the babies. Some indicated having financial challenges as their husbands alone could not meet all their financial needs, and movement from their wards to the NICU was also a challenge to some participants. Some mothers also had problems with the place of sleep as well as the washrooms. In the face of all these challenges participants remained resolute through prayer and believing in God that their babies will survive. Some expressed their ability to withstand challenges that they encountered as such did not entertain

fear, while others accepted the situation as it was, and others too drew on the strength from their babies to help with their resilience.

# CHAPTER FIVE

## 5.0 DISCUSSION OF FINDINGS

This section discusses the study's key findings in relation to the broader literature. This study aimed to explore maternal resilience as they care for preterm babies in NICU. The discussion was organised as per the themes and sub-themes in chapter four. The key areas discussed were Maternal confidence in the care of preterm babies at NICU, sense of purpose of mothers during care at NICU, Social support systems for mothers caring for preterm babies at NICU, psychological strain and challenges encountered by mothers of preterm babies at NICU and adaptation strategies employed by mothers to cope with challenges associated with the care of preterm at NICU. The study was guided by the I-resilience model (Cooper, 1999).

### 5.1 Maternal Confidence in the Care of Preterm Babies at NICU

Maternal confidence is identified as one factor that influences maternal resilience as they care for preterm infants in the NICU. Optimism and hope were identified as individual traits that influence the confidence of mothers. This agrees with other previous studies (Heidari et al., 2017; Kestler-Peleg & Lavenda, 2021; Kozel et al., 2022; Nazari et al., 2020; Steyn et al., 2017). For example, the studies of Kestler-Peleg and Lavenda, (2021) in Israel found that the higher the levels of prevailing optimism, the fewer postpartum depression symptoms are reported. reported. The researcher found that optimism positively influenced how mothers of infants dealt with difficult circumstances in the NICU as the participants in this current study mentioned that they were emotionally strong which reflected in their optimism and confidence in God that their babies would survive. This is similar to the findings of a quantitative study by Kestler-Peleg and Lavenda, (2021), who reported a negative associations between optimism and postpartum depression.

Maternal optimism and confidence in God find expression in the fact that Ghana is a religious country, dominated by Christians of about 71 % (United States Department of State, 2021) and may quickly resort to relying on the supernatural in the phase of any medical challenge.

The findings of this study indicated that some participants were optimistic as they had a positive mindset, and as such tried to calm themselves down no matter the circumstances surrounding the care. This is congruent with the findings of Alinejad-naeini et al., (2021) discovered that mothers sought to create optimism within themselves to cope with and control the present predicament as they cared for their preterm babies. Also, Arzani et al., (2015) in the study revealed that mothers tried to adjust their psychological traits to see the current circumstance positively. They tried to act as though everything was going smoothly concentrating on the good things and were optimistic about more favourable circumstances and days in the future. The researcher in the current study found that mothers became optimistic as there were changes in the activity level of babies indicative of improvement which agrees with the findings of Mengesha et al., (2022) in Ethiopia who came out that mothers became more optimistic upon improvement in their infants' conditions. This could be so because every mother wishes the sick child to fully recover and be strong and therefore would be optimistic about the slightest sign of improvement.

Additionally, as the participants in the study included both Christians and a Muslim they expressed hope in God as well as in Allah for the survival of their neonates. This agrees with the findings of Hanson et al., (2020) where participants had hope in God for the survival of their infants as they indicated God gave them the child and He would surely take care of the babies. Unlike the current study, the findings of Heidari et al., (2017) came out that most parents highlighted hopelessness as one of the most traumatic features, and longed for the slightest sign of

hope to strengthen them emotionally. This disparity could be attributed to differences in the conditions of babies as a study by Green (2015), confirmed that parents of very premature infants displayed both hope and sorrow. This could as well be due to individual differences between the mothers.

In the present study, participants also expressed hopefulness of their babies' survival in the care being given by the health professionals. This confirms the findings of Hanson et al., (2020) a study conducted in the United Arab Emirates, who also reported that parents indicated the care provided by the healthcare professionals was good. Also, the findings of Bry and Wigert, (2019) found that mothers had a feeling of assurance in the staff's medical knowledge and the quality of the care they provided for their babies. However, individuals in their study indicated that when this hope was compromised, their anxiety increased. Although in the current study, mothers did not mention compromised hope, it could be inferred that when hope is compromised participants could be anxious and have less hope.

An integrative review indicates that the need for reassurances from healthcare providers about the health state of babies at NICU is vital. As they reported, parents feel more confident when healthcare providers give them encouragement and reassurance about the health of their babies and as well give them a positive feeling (Adama et al., 2022). This is confirmed in this present study as participants indicated they were hopeful as a result of reassurances and encouragement from the doctor. In addition, the findings of Im and Oh, (2021) in South Korea who reported that nurses were friendly, attentive listeners who provided appropriate responses, and they spoke encouraging words like assurance to mothers caring for preterm at NICU confirms the findings of the current study. However, it contradicts the findings of a study in Iran which

investigated stress management of NICU parents where health professionals are unable to give parents hope because of the unstable and fragile health status of NICU infants, which causes frustration among parents who are too anxious to comprehend the answers given by the medical staff (Heidari et al., 2017). This implies that mothers caring for their infants expect reassurance and encouragement from the healthcare professional to enable them to build their resilience. As such it is imperative for nurses and midwives at NICU to do their possible best to encourage and reassure parents caring for their babies at NICU.

Furthermore, the present study found that few participants were hopeful of their babies' survival as they saw other smaller babies survive. This is congruent with the findings of a study in Ghana where a mother indicated she was hopeful because others had delivered preterm babies who survived (Lomotey et al., 2020). The implication is that mothers are most hopeful of their child's survival upon seeing other babies with similar conditions survive. As such, it is imperative for healthcare professionals to expose newly admitted cases to surviving ones so that mothers would be hopeful of the child's survival, hence more resilient as they care for their babies.

**5.2 Maternal sense of purpose of caring for their preterm babies at NICU**

Purposefulness also influences maternal resilience in the care of preterm babies in the NICU. The findings of the current study indicated that mothers' sense of purpose of care was for them to have their babies survive and be discharged home. This is consistent with a study in Cape Town in South Africa, mothers prayed for God to help their babies to survive as a reason to help them cope (Sih et al., 2019). Sih et al., (2019) continued that mothers were emotionally attached to their newborns, which involved a want to be with them (newborns) constantly and for as long as feasible helped them to cope. This agrees with the findings in the current study as participants

indicated they always longed to be with the babies as long as it was permitted. A mother also recounted that she desired to care for her babies (twins) as a mother, coupled with the love and joy of having twins, she would do everything in her power to ensure the survival of the babies and this corroborates with the findings of a previous study also in Ghana where a mother and the family were overjoyed because of the delivery as there were no twins in in her family (Lomotey et al., 2020). This similarity could be suggestive of how twins are treasured in the Ghanaian culture hence the reason for the excitement which helped her to be resilient in caring for her baby.

In this study, the researcher found that the preferred gender (male) of the child influenced the resilience of mothers. In the typical traditional African society such as Ghana, men are most often perceived as having superior strength, intelligence, leadership skills, and the capacity to ensure safety, sustenance, and livelihood (Gyan, 2018) and failure of a couple to give birth to a male is usually blamed on the woman (Idang, 2015). Mothers in this study revealed having a male child gave them joy and encouraged them to care for their babies and this is in agreement with the results of Sih et al., in their study in 2014 which disclosed that mothers could not hide their joy of having the preferred gender of the babies and made them more resilient.

### 5.3 Social Supports for Mothers caring for Preterm Babies at NICU

Mothers caring for their preterm babies at the NICU received several social supports which helped their resilience. The social support received consisted of informational support, instrumental support, emotional support, and spiritual support. This is confirmed in many studies (Bry & Wigert, 2019; Apedani et al., 2021; Kozel et al., 2022; Mohagheghi & Khosravi, 2021; Nazari et al., 2020; Negarandeh et al., 2021) revealing that these supports received by parents caring for their preterm babies were helpful in building their strength. For instance, the findings

of Mohagheghi and Khosravi (2021), a study conducted in Iran showed that instrumental, informational, emotional and appraisal support as effective support approaches to mothers in the NICU. However, this study did not look at appraisal support.

### 5.3.1 Informational support

Participants in this study received education and information about the medication, condition of the baby, as well as breastfeeding as they cared for their preterm newborns at the NICU. This is evident in the literature (Alinejad-naeini et al., 2021; Hanson et al., 2020; Yu et al., 2020). For instance, in a study in Iran, Alinejad-naeini et al., (2021) discovered that participants received accurate information from nurses on their newborns' conditions and medication. Nurses offered mothers the information they needed which led to a reduction in anxiety among these mothers. This is consistent with a report a mother gave in this current study as she indicated the doctor explained the condition of the baby to her and the reason for the baby in the incubator and she was inspired.

Another participant also indicated she sought information about the progress of their baby's condition and was given a positive response as she was informed the baby would recover which allayed her fears. This is congruent with the findings of Heidari et al., (2017) who indicated that the majority of parents received information from the health care professional about the health of their infants, recovery time, hospital discharge date, the efficacy of the treatment, and the prognosis after they enquired. Also, the study results of Arzani et al., (2015) revealed that gaining information is one of the mother's efforts to satisfy their informational needs in their study of maternal strategies in handling preterm infants. Mothers throughout all these studies sought to

know how their preterm newborns were faring and it could be ascribed to the need for them to reduce the level of psychological distress they might be experiencing from the fear of the unknown.

However, the researcher came out that participants in the current study did not receive adequate information from the nurses as a participant who was tasked to take the child for an investigative procedure did not receive any explanation on the indication and she was only asked to take the baby for the investigation to be done which left the mother confused. This confirms the findings in a study in a tertiary hospital in Ghana where mothers reported that although they were frequently notified of procedures to be performed on their newborns, these were not explained, which caused them anxiety, especially when they thought the procedures were being done because their baby's condition was getting worse (Lomotey et al., 2020). The findings contradict the findings of Alinejad-naeini et al., (2021) where nurses gave explanations for every procedure done. The differences in the findings could probably be due to differences in the settings of study as the most of the participants in the current study had a lower formal educational background as such the nurses may think the procedure may be technical and mothers may not understand those technicalities as compared to the study in Iran which was conducted in a university medical centre which may have more of the participants to be elite.

Again, it was found in this study that healthcare professionals at the NICU were not open and sincere in their provision of information as the mother narrated that she believed in truthfulness and as such if the baby was not going to survive, she should be informed that due to this particular reason, the neonate will not survive. This aligns with the findings of Franck et al., (2017) who indicated that parents felt bad about how information was not properly delivered as parents reported that the doctor held back some information thinking the mother will have an increase in blood pressure when a parent was being given information about the possibility of preterm

delivery. Though the previous study was on pregnant women the information delivery process is similar. However, in this study, though the mother did not indicate the reason the health care professionals were not open in their delivering of information, it could be inferred that the health care providers were considering the psychological trauma participant may experience considering the baby's condition. This in turn contradicts the findings of a previous study where participants indicated were always disappointed by the doctor as the doctor did not consider or understand their feelings and always open up frankly about their baby's condition (Heydarpour et al., 2017). The disparity in findings could be attributed to individual differences among the healthcare professionals

It was also brought to light in this current study that there was a lack of consistency in the provision of information to mothers as a participant indicated that the doctor who conducted the caesarean section asked her to breastfeed her child meanwhile anytime she went to the NICU she was not allowed to breastfeed the neonate even though neonate might be crying and this is similar to the findings of Franck et al., (2017) in California who found in their study that parents complained about the inconsistent in communication from medical staff while in the hospital.

As feeding challenges happen to be among the major challenges with preterm infants (Kamity et al., 2021), mothers caring for preterm newborns need education to help them in the care. All participants in the current study received education on breastfeeding the newborn this concurs with the findings of Mörelius et al., (2022) in Australia who reported that nurses intended to educate mothers of preterm mothers on breastfeeding practices as soon as babies were born. The studies may have consistent findings signifying the vital role of education on breastfeeding in the care of preterm newborns. In addition, participants in the current study reported they were informed of foods and behaviours that encourage milk production.

Moreover, mothers in this current study had the opportunity to learn through the use of technology as many mothers narrated that they watched videos about some of the education concerning milk expression, care of the baby and general care of the baby, identifying the sick infant and the need to report to the facility promptly if any sign of sickness is noticed, and participant indicated was helpful. This is similar to the report in a study by Yu et al., (2020) in China where parents received helpful information on the care of their preterm infants as well as signs and symptoms of sickness to observe their babies through a social media platform (WeChat) created by the nurses at NICU. The source of information transfer was through different electronic means probably because of disparities in the settings and the socioeconomic status of the participants however, both were through modern technology. Additionally, participants in this current study received information from their peers and were very helpful as participants narrated they were informed that the incubators help babies. This is congruent with the finding of Apedani et al., (2021) in Ghana where participants narrated how other preterm mothers at the NICU were informed and introduced to kangaroo mother care (KMC). This congruence in findings could probably be a result of the fact that both studies were conducted in Ghana where most mothers caring for their babies at the NICU shared common accommodation as such could easily interact with each other

However, many of the participants in this study did not receive information about the condition as well as the treatment of their neonates. This is confirmed in the findings of Heidari et al., (2017) who indicated the lack of information to parents on the condition of the baby, the NICU environment, and uncertainties about the baby's prognosis as one of the main reasons for parental psychological stress experienced at NICU. This contradicts the findings of Im and Oh, (2021) in

their study in South Korea which reported that nurses provided information related to the condition of the baby, its characteristics, and day-to-day activities in the NICU and the treatment process of the baby. The findings of Arzani et al., (2015) also indicated that women received information concerning the condition and treatment of their babies and were as well provided with books and leaflets to read as opposed to the findings in the current study which indicated that mothers received no information about baby's condition as well as treatment and were only requested to purchase the drug Mothers in the current study may not have been given information as well as not provided with a book or leaflet to read probably because of differences in the study setting and may not be the usual practice as the majority of participants have a lower educational background. Moreover, in the current study, it was revealed that some participants did not receive any information about their baby being premature and the need for separation. This is congruent with the findings of a quantitative study by (Nakphong et al., 2021) in Kenya who reported that some mothers were not informed about the reason for separation from their babies. This similarity in findings could be suggestive of time constraints and work overload at the unit resulting in burnout hence staff not being able to work efficiently.

The NICU environment happens to be totally new and usually stressful for parents during the care and need some form of education as they care for their preterm infant (Adama et al., 2022). The researcher of this study found that the majority of the participants received no information about the NICU environment as well as the equipment at NICU involved in babies' care. They indicated they were asked to identify themselves on their first entry to the NICU. This opposes the findings of Im and Oh, (2021) in their study of nursing support perceived by preterm mothers at NICU in South Korea which disclosed that mothers were given information about the baby unit as

well as an explanation of some of the equipment such as the oxygen delivery tubing as well as incubator and its function. These disparities in the findings here could be due to differences in the settings of the study and individual differences among the nurses and midwives.

### 5.3.2 Instrumental Support

Instrumental support available to participants can be rated as vital support to help maternal resilience. Instrumental support is rated the highest of all support needs of mothers in the NICU (Mohagheghi & Khosravi, 2021). Instrumental support included financial support physical care and infrastructural support. These supports were provided by the hospital facility, the health professionals, spouses, family and friends, in-laws as well as support groups this is congruent with many studies (Adama et al., 2022; Im and Oh, 2021; Maleki et al., 2022 & Mariano et al., 2022). For instance, a systematic review by Maleki et al., (2022) reported on practical nursing support for mothers caring for their preterm babies at the NICU and Akum (2018), a study in Bawku in the Northern part of Ghana revealed that mothers received assistance from family and friends, their husbands, religious organisations as well as their in-laws.

Husbands have a core function of providing for the financial needs of the family as a study reported that even before a man prepares to get married great care is taken by the elders to ensure that the man can take care of the family (Okiya, 2016). Almost all participants in the current study received financial support from their husbands or spouses which they indicated helped them in the care of the infant as a participant narrated that her husband provided money for anything whenever it was requested. This could imply that it is the husband's sole responsibility to bare the financial burden of the family (Dougherty et al., 2020) and in low socioeconomic settings, mothers are likely to be unemployed or may not be engaged in any meaningful income-generating activity and may

have to solely depend on their husbands for financial support. The family plays a significant function in settings in Africa (Mafumbate, 2019) and most Ghanaian communities. Some participants received financial support from their families and this is confirmed in the findings of Lomotey et al., (2020) who discovered that some mothers of preterm infants had their parents supporting them financially.

African culture places so much value in the extended family system as in certain cultures in-laws do play important role in the life of sick children. In a Nigerian-based study, it was reported that family members like the husband's brother, may be tasked with caring for the sick child if there is a problem assisting the wife while the father is not available (Dougherty et al., 2020). This is similar to the findings of the current study as participants reported receiving some financial support from their in-laws as a participant indicated that her father-in-law took charge of the financial responsibility as the husband was indisposed at the time of care of the baby at the NICU.

Additionally, few participants in this study acknowledged the financial support given by the church. This is in line with the findings of a previous study which reported that mothers could not hide their joy after they received financial support from the church as well as the reverend minister of her church (Akum, 2018). Very few participants in the current study reported receiving financial support from a support group they belonged to. This is similar to the findings of a previous study in Rwanda that reported that mothers caring for their babies at the NICU appreciated support provided by a group of catholic sisters as they brought them food in the course of the care (Byiringiro et al., 2021). Though the support by the catholic sisters did come in the form of physical cash it relieved the mothers of some financial burden during their stay at the

NICU. This brings to bare the importance of support groups to mothers caring for preterm babies at the NICU.

Provision of physical care by the health care team happens to be the main reason for the admission of the preterm child to ensure its survival. The majority of participants reported the care by the health care professionals was good and was the reason for the survival of their babies. This is consistent with many studies (Abuidhail et al., 2017; Hanson et al., 2020; Kim, 2020; Negarandeh et al., 2021). A systematic review by Wang et al., (2021), also reported how mothers were appreciative when nurses provided physical care for their infants. Again, Hanson et al., (2020) in their studies reported that parents were content with the nursing staff's care and the baby's accessibility to the knowledgeable staff at all times. They continued to report that nurses in the NICU cared for babies including changing diapers. This agrees with this study as participants indicated nurses worked all day as well as night on the babies and changed their diapers for them. This similarity is suggestive of the fact that the personal hygiene needs of the newborn are integral part of the nursing care of the neonate. Few of the Participants in the current study recounted their husbands helped them physically as they were at the NICU. This agrees with the findings of many studies by Loewenstein et al., (2019) and Noergaard et al., (2017), who reported that the support of the husbands could not be overemphasised during the care of their preterm infants in the NICU.

The importance of the support of family and friends to the mother at the NICU during the care of the preterm newborn cannot be overemphasised. Some participants in the current study also received physical care support from members of their families as participants reported that their mothers contributed significantly to their life as she did everything related to physical care during the care of their babies at the NICU and this is congruence with many studies Premji et al.,

(2017) and Steyn et al., (2017). In the studies of Premji et al., (2017) in Canada, mothers reported of immersed support of the family and friends during the care of the preterm newborn.

On the other hand, a mother in the current study reported not receiving any support from her family which corresponds with the findings in the studies of Steyn et al., (2017) in their study in Johannesburg, South Africa found that some parents who had premature infants in the ICU felt alienated and alone because they found it difficult to describe the unique environment that they and their premature newborns spent so much time in. They were cautious of how their friends and family would react to whatever was happening to their premature baby because these reactions frequently caused the parents more stress and worry.

The findings of the present study indicated that none of the participants in the present study mentioned receiving physical care support from their in-laws in the care of their preterm infants at the NICU. on the contrary, the findings of Akum, (2018) as they indicated that majority of the mothers in their study received physical support from their mothers-in-law as they care for their neonates. The contradiction in the findings could be due to the differences in settings as the current study was in the southern part of the country which is Akan-dominated and families see the children as belonging to the mother's family as compared to the northern part of Ghana where the patrilineal system of inheritance is predominantly practised.

As the care for preterm newborns at the NICU is associated with so many stressors (Hendricks et al., 2020; Ong et al., 2019) it is imperative that mothers have comfortable accommodation as well as places of convenience though it is not among the top priorities of mothers it contributes to their resilience as they care for their preterm babies (Adama et al., 2022). The responses from the current study indicated all mothers had accommodation provided by the

facility. This contradicts the study findings of Bry and Wigert, (2019) who reported that some mothers did not have accommodation. The differences in the findings may be suggestive of differences in the settings of the studies as some participants in the previous study had single rooms to themselves which could be more expensive in providing for all hence some not having accommodation as compared with the current study where participants were housed in one big room.

The current study also came out that other participants reported the accommodation as well as the toilet facilities were not like that of the home but was coping. This is similar to the findings of a previous study which reported that the toilet facilities available to mothers were not good enough however they were managing (Apedani et al., 2021). These infrastructural challenges in the various study settings is suggestive of the high cost of managing the health system (Novignon et al., 2012) hence the provision of substandard facilities. Other participants in the current study described the washrooms to be good as there were people always assigned to cleaned the place which contradicts the findings of Apedani et al., (2021) where participants described the washrooms as appalling. However, some participants in the current study complained of the washrooms being locked occasionally whiles other mothers acknowledge that people among them as clients messed up the place, this could be the reason the place was locked sometimes. Some participants in the current study also complained of inadequate water for their hygiene purposes. This is similar to the findings of a study carried out in Ethiopia where parents complained of a lack of water to maintain their personal hygiene and for the toilet (Mengesha et al., 2022). This could be attributed to the general shortage of water sometimes experienced in low-income country like

Ghana, as indicated by (Livingston, 2021) the continuous shortage of water some supply in some part of the country.

Ghana, among other Sub-African country, happen to be endemic to mosquitoes hence the presence of mosquitoes in most facilities are undeniable. It is no doubt that all participants reported the presence of mosquitoes. This is consistent with the findings of Yakubu and Yidana (2022) in their study in the northern part of Ghana reported that mosquitoes are found everywhere in the country and the hospital is no exception.

### 5.3.3 Emotional support

The psychological health of mothers at the NICU is suggested as one of the priorities of preterm baby care by supporting them emotionally as reported in previous studies emotional needs of parents during NICU care ( Gutiérrez et al., 2020; Kozel et al., 2022; Loewenstein et al., 2019; Wang et al., 2021). All participants in the current reported that they received some emotional support from healthcare professionals, spouses, family, friends, in-laws as well as peers which helped them to build their resilience as they cared for their preterm newborns. This agrees with the findings of a systematic review by Wang et al., (2021) which discovered that NICU mothers received emotional support from healthcare professionals, husbands, families as well as religious heads. The findings of the present study showed that about half of the mothers received some words, as well as expressions of empathy, encouragement and comfort from the healthcare professionals which helped their resilience as they care for the infants at the NICU. This is corroborated by the findings of San et al., (2020) who indicated the various ways participants received emotional support from the healthcare professionals.

Again, the current study is similar to previous study findings in South Korea which reports that the most typical form of support that nurses give is emotional. It requires exercising empathy, which includes hearing patients out while maintaining an attitude of attention and understanding (Im & Oh, 2021). This similarity in findings could probably be due to the skill of therapeutic communication health professionals receive as part of their training to take up this profession. However, the findings of the current study contradict the findings of another study in South Korea where a mother complained bitterly about ill-mannered attitude towards her by the healthcare professional which in turn added to her already existing stressors of NICU care (Kim, 2020). The disparity in the findings could be attributed to individual differences in the attitudes of the health care providers.

Participants in the current study reported of varied ways in which the nurses empathised with them. For instance, a participant indicated that whenever any nurse was on duty, she greeted them (mothers) warmly, she never saw any nurse portraying a weird attitude or any nurse shouting and indicated the nurses always smiled when talking to them. This aligns with the findings of previous studies in Jordan by Rihan et al., (2021) who reported that nurses were always kind and smiling with mothers. This disagrees with the findings where nurses were seen as disrespectful and disregarded the feelings of parents (Mengesha et al., 2022). The opposing findings here could be related to disparities in settings hence different working conditions of the health care professionals as well as individual differences in attitudes of the nurses and midwives. Other participants also indicated in the current study that the nurses called on them any time their babies cried and whenever something was needed for the baby. This contradicts the findings of a study where mothers and nurses and midwives at NICU always had to quarrel whenever babies cried as

they were not called upon or even allowed into the baby unit due to a 2 hourly restricted visit to the baby unit (Lomotey et al., 2020). This could be associated with differences in study settings as the previous study was a tertiary hospital and may have more babies hence more workload at the unit leading to nurses not calling on them any time baby cried. Also, the tertiary facility may have more restricted policies the health care professional adhered to as compared to the municipal hospital where this present study was conducted. However, it could have been more bearable for mothers if nurses were more empathetic and petitioned management on a restricted visiting policy on behalf of mothers to prevent the worsening of maternal emotional stress as nurses demonstrating empathy brings lots of relief and comfort to mothers (Tan et al., 2020)

Additionally, other participants in the current study also expressed that nurses encouraged and reassured them not to worry and that nothing would happen to their babies, meaning babies will survive. Meanwhile, few participants indicated their anticipation for such encouragement from staff to boost her strength. This is congruent with the findings of (Heidari et al., 2017) who reported that parents at the NICU sought out encouragement and speak with the nurses and doctors. This agreement in findings could be probably attributed to the severity of the baby's condition. It reveals the value of emotional support and reassurances by health care professionals particularly nurses and midwives on the psychological health of mothers caring for preterm babies at the NICU. This support needed by mothers from studies seems unmet (Kim, 2020)

Emotional support from the family, as well as friends, had much impact on the resilience of mothers as they care for their babies and this is supported by literature ( Shiba et al., 2016; Turner et al., 2015). In the findings of the current study, participants disclosed that the family strengthen her through visitation, words of encouragement that their baby will survive, and phone

calls. This supports a study finding in Australia which revealed that family support was crucial for families, and those who were separated from their loved ones felt bolstered by phone calls and visits and they indicated it was great to know that the family cared (Turner et al., 2015).

In another study, it was found that all of the family members were really helpful to the health of the newborn and the reduction of the mother's stress is significantly influenced by family support (Hanson et al., 2020). This support the findings of this study as a participant indicated that her mother always encouraged her not to be worried about the baby's condition and that child would be fine. This disagrees with the findings of a previous study in Chicago on the resilience of mothers of low birth weight babies where mothers reported that they frequently felt as though their traditional family and friends did not understand what it was like to be a NICU mother as such had no support from them (Rossman et al., 2017). The opposing findings could probably be due to differences in study settings hence different cultural backgrounds as the previous study was in Chicago and the family ties may not be as strong as that in the African setting where the current study was conducted.

The emotional support role of the in-laws was also recognised by mothers to help their resilience, more than half of the participants received this kind of support. This agrees with the findings of (Abuidhail et al., 2017; Acharya et al., 2021). For instance, Acharya et al., (2021) in their study in India reported that participants were supported emotionally by their in-laws, though they were not able to visit them at the health facility, the in-laws consoled them through phone calls and this is similar to the findings of this study where a mother narrated that her in-laws called her advising and encouraging her to stop thinking. Conversely, a mother in the current study reported not receiving any emotional support from her in-laws because she refused to tell them

about the baby's condition because of perceived stigma associated with the delivery of preterm infants in her community so she indicated she would keep the baby indoors even after discharge till baby was big and healthy enough. This is similar to a study in Rwanda, where the mothers with low birthweight babies felt ashamed to go out with their babies because they were discriminated against and stigmatised as they associated such babies with maternal disease conditions such as HIV (Koenraads et al., 2017). Though the current study was on preterm the findings are similar as most preterm babies are low birth weight and though the mother in the current study had not yet taken the baby into the community it could be inferred that she may encounter the same mockery in her community which prevented her from making baby's condition known to her in-laws.

Another source of emotional support of mothers was from their peers (other preterm mothers) at the NICU, this is supported by (Bry & Wigert, 2019; Rossman et al., 2015). Bry and Wigert, (2019) reported that mothers caring for their babies at the NICU acknowledged the consistent emotional support from each other. This agrees with the findings of this study as some mothers indicated they were encouraged and strengthened by other mothers. However, it is contradictory to the findings of a previous research work in Sweden by Schmöker et al., (2021) who indicated that mothers did not have the opportunity to meet with other mothers at the NICU as they were in separate rooms and spent most of their day with their infants and that created the feeling of loneliness. The contradiction in findings could because participants in the current study shared rooms with other mothers as against participants in the previous study who had separate rooms hence the greater chances of interacting with each other. Other participants in the current study also had the opportunity of meeting other mothers who had preterm babies but had grown and were doing well. This is congruent with a previous study's findings that indicated that mothers

had support from NICU-based support counsellors who were mothers who previously had their babies at the NICU (Rossman et al., 2015). Though the participants in the previous study were by a group of previous NICU mothers they could probably share the same experiences since they all had preterm infant managed at the NICU.

Counselling services for caregivers especially mothers in the NICU is an integral part of support to mothers as it helps to reduce the stress experienced (Dwivedi et al., 2021). However, mothers in the current study reported not receiving any counselling sessions from the nurses during the care of their infants at the NICU. In contrast, the findings of Akua and Afutu, (2022) a study conducted in the western region of Ghana indicated that some mothers received some form of counselling from the healthcare workers at the NICU. This disparity could be attributed to differences in hospital policy as well as individual differences in health care professionals as usually in Ghana, preterm NICU care is mostly centred on the infant on admission with little or no attention paid to the mother's health both physically and mentally. Professional counselling services would therefore be of tremendous benefit to the psychological health of mothers at NICU and can probably be considered a policy in Ghanaian facilities as Martins et al., (2022) confirm in their study the benefits mothers derived from the professional psychologist in relieving their emotional turmoil.

### 5.3.4. Spiritual Support

Few participants in the current study indicated receiving spiritual support to help them in their resilience at the NICU. This is supported by related studies (Buys & Gerber, 2020; Maleki et al., 2022). For instance, a systematic review and a meta-analysis indicated that spiritual care was very significant in the reduction of stress of mothers caring for their babies at the NICU (Maleki

et al., 2022). This is evident in the findings of the current study where mothers narrated that the prayer offered by their pastors helped to build their strength.

### 5.4. Psychological strain associated with Preterm baby care at NICU

Participants in this study experienced some psychological strain, which included anxiety and sadness. The emotional stress was expressed by mothers in the form of worry, fear, scared, shock, unhappiness and uneasiness associated with the condition of the baby, separation from baby and family, breastfeeding difficulties and unfamiliar NICU atmosphere. This aligns with many studies by Boateng and Amadu (2022), Gutiérrez et al., (2020), Mahfouz et al., (2022), Malouf et al., (2021) and Mautner et al., (2022) described in the studies of emotional distress experienced by mothers or parents in the care of their babies at the NICU. For instance, in the northern region of Ghana, it was gathered that mothers experienced emotional turmoil as they cared for their preterm infants which they narrated as fear, anxiety, sadness, and shock, which is in consonance with the findings of the current study. About half of the participants in the current study reported fear of losing their baby (Boateng & Amadu, 2022).

Additionally, the findings of Offer and Taubman–Ben-Ari (2022) and Namusoke et al., (2021), studies conducted in Israel and Uganda respectively, reported the fear of mothers about the uncertainties of the child's condition and the possibility of losing the babies which is similar to the findings of the current study. Mothers' similar feelings could be attributed to the severity of the condition which could imply a smaller gestational age as smaller gestational age preterm babies are at higher risk of dying (WHO, 2018). The current study also showed that the death of a baby at the NICU worsened the fear of a 19-year-old mother to thinking of losing her baby. This is supported by the findings of a quantitative study in Italy on identifying maternal and paternal stress

and feeling in the NICU for early intervention where it was revealed that maternal young age is a predictor of maternal stress level (Ionio et al., 2019). Maternal young age can add to mother' stress as she may not be privy to certain common analogies, hence the death of a baby in the unit may not necessarily imply the same may happen to her child.

All participants in the present study described how worried they were as a result of separation from their baby. This is supported by Yu et al., (2020) who reported how parents were worried as they did not know what their babies were like as a result of separation. Some mothers brought to light their worry as they saw other mothers together with their babies. This is similar to the study done by Gonçalves et al., (2020) on maternal pre and perinatal experiences with full term, preterm babies in which it was recounted that almost (96%) of full term mothers had their babies with them and suffered no separation as compared to the preterm mothers who virtually all of them suffered separation with feelings of anxiety, pain and guilt. Though no mother mentioned guilty feelings in this study, mothers of preterm infants suffered all the other emotional feelings mentioned. Also, the study findings of Fowler et al., (2019) in Australia recounted that mothers had the feeling of loss when they saw other mothers with their full term babies with them which is in line with the current study findings. The similarity in the findings could perhaps be due to the fact that the other mothers in the current study also had full term neonates who may not need admission to NICU.

Few mothers in the current study also indicated their worry had to do with their first-time experience at the NICU, not having access to their baby, especially at night when they could monitor and breastfeed the babies and that left them thinking. This is similar to the study findings of Rihan et al., (2021) in Jordan where mothers always thought of their babies and indicated the

desire to stay all day long with the babies at the NICU and sometimes felt babies were at not safe in the NICU. The similarity in findings could be attributed to the fact that it was a first-time experience for mothers in both studies, though was not stated by the previous study however the study reported majority of the participants were experiencing NICU admission for the first time. The current study also reported mothers expressed her worry because they did not trust the nurses to feed their babies with the expressed breastmilk. On the contrary, a systematic review reported of a finding in which mothers were confident and trusted that nurses would take good care of their neonate because they had established good rapport with the nurses (Tan et al., 2020). This is also corroborated in the study of (Mariano et al., 2022) who reported that mothers feel more supported knowing that their babies are taken good care of by the nurses. Though the previous study did not report on breastfeeding, child care encompasses breastfeeding. This implies that a good interpersonal relationship between mothers, nurses and midwives is paramount hence nurse should endeavour to establish one with mothers at NICU to reduce their stress level. More so, a mother in the current study expressed how the separation was not easy for her as she could not have physical contact with her child as the baby was always in the incubator. This is in agreement with the findings of Rossman et al., (2017) as they reported that a mother's dream of holding and touching her baby was shuttered and replaced by a loss feeling, and anxiety as they thought the baby was too fragile to be handled. In contrast, in the study findings by Treherne et al., (2017) in Canada on parental perspectives of closeness and separation with their preterm infants in the NICU, mothers described their joy of having close physical contact with their babes during moments of diaper changes, temperature taking and feeding moments whether the feeding was successful or not. The distinction in findings could probably be due to differences in gestational ages as babies with small gestation ages have less survival chances, as a ten-year review in Ghana indicated that smaller

gestational ages as well as low Apgar score, had a significant association with the survival of preterm babies (Agbeno et al., 2021). The differences could also be attributed to study settings and the policy of the NICU as parents in the current study did not have the opportunity of taking their babies' temperature while on admission, as it was with mothers in the previous studies.

Breastfeeding of a preterm baby may be compromised due to medical reasons that may have led to early delivery (Meier et al., 2013). Most participants in the current study were worried due to difficulties with the feeding of the child. This is congruent with findings of previous studies by Fowler et al., (2019) and Namusoke et al., (2021) where mothers expressed their worry as a result of feeding challenges associated of the preterm newborns. Some mothers who were not producing breastmilk indicated their worry because they thought the babies would die of hunger or something undesirable would happen to them out of starvation. This corroborates the study findings where mothers were also worried about babes' chances of survival because of feeding challenges they encountered (Namusoke et al., 2021). Other mothers were also worried due to the inability of the babies to suckle, which left them thinking as they would not know what to do with baby if the problem persisted even after being discharged home. This is similar to the findings of a study which reported that mothers were requested to pump large amounts of breastmilk for the baby, which was difficult (Rihan et al., 2021). Though the previous studies did not indicate babies' inability to suckle, it could be inferred that babies' inability to suckle led to pumping of the breast.

NICU atmosphere poses a threat to the emotional state of parents caring for their newborns (Deshwali et al., 2022) and mothers in this current study were not exempted. The majority of the mothers revealed the anxiety they experienced during their first entry to the NICU. This finding agrees with Offer and Taubman–Ben-Ari (2022) and Syamsu et al., (2021) described some of the

emotional trauma experienced by parents from the NICU atmosphere. Few mothers in the current study made known their worry upon the sight of the small-sized babies and indicated she was disturbed as these babies were too small to be handled. This concurs with the findings of a previous quantitative study where maternal stress levels increased with the appearance such as the size of the baby (Syamsu et al., 2021). This is supported by the findings of a systematic review which also gathered that parents of preterm babies expressed a sense of fear upon their entry at the NICU as a result of the baby's small appearance (Wang et al., 2021). Small-sized babies are reported to be highly vulnerable and susceptible to illness and harm (Buys & Gerber, 2020) which could be the reason for the participant sentiment.

The sight of the equipment such as the incubator equally posed a challenge for few of the mothers in the current study as mothers were uncertain about the survival of babies kept in the incubator. This finding corroborates with previous studies where mothers were concerned and worried about the sophisticated machines attached to their babies (Abeasi & Emelife, 2019; Buys & Gerber, 2020). The findings of a previous quantitative study in Rwanda also reported that a significant number of (79; 80.6%) mothers were stressed upon the sight of the equipment at the NICU (Musabirema et al., 2015) which is also in agreement with the finding of the present study. The sense of fear in the mothers concerning the equipment could probably be attributed to the poor educational background of mothers and hence a deficit in knowledge concerning functions of that equipment, or mothers might probably think the equipment would also pose a threat to their infants (Gowda et al., 2019). Few participants also expressed worry as a result of a prolonged stay at NICU as they had other responsibilities. They recounted it affected them negatively since they had other things to do at home as mothers, including care of other children. This supports the study findings

where participant also expressed their worry as they had left other children home and could not carry out their other household responsibilities as expected of them (Rihan et al., 2021).

Separation as a result of NICU admission did not only make mothers anxious, others expressed they were sad. About half of the participants in the current study reported unhappiness as a result of separation. These findings concur with the findings of Gul and Hulya (2020) reported how mothers were sad as a result of their babies at the NICU. This is consistent with the findings of this study as a mother indicated she was unhappy due to the NICU admission. This implies that as separation of mothers and babies during care of the preterm newborn has a psychological effect on mothers. Perhaps, mothers and babies could be managed in a new care model where there will be constant access to the babies which in a way will ensure the quick recovery of babies. Duggan (2017) reported that mothers and babies can be managed in the integrated neonatal care unit known as the couplet where mother and baby are kept together with no separation.

### 5.5 Challenges Associated with NICU Preterm Baby Care

The care of preterm neonates at the NICU can barely happen without challenges to the parents and the same was the experiences of mothers in this study. This agrees with the study findings of Acharya et al., (2021) and Lakshmanan et al., (2022) as they reported on some of the challenges mothers encountered as they cared for their preterm neonates at the NICU. About half of the participants in the current study brought to light the challenges they had with finances. Few Mothers lamented that prolonged NICU stay would be difficult for them as they reported they had spent all the money they had on the child's care and might not get any more money to settle their bill when discharged. This is in agreement with the findings of a study where it was found that the cost of care after NICU discharge was a worry to parents (Lakshmanan et al., 2022). This

agreement in findings could be associated with the low economic status of parents in both studies or the high cost of NICU care as participants may have incurred a lot of costs already. Few mothers also were challenged with getting money to feed themselves so they could get adequate milk for their babies. This resonates with the findings of a study where a parent was spending more than she received as maternity wage and could not ask for a food voucher and her colleagues as well did not make provision for the voucher for her even though her need was obvious (Franck et al., 2017). Additionally, few mothers in the current expressed their inability to purchase all dosages of the medications for their babies. This is similar to the study findings of Abeasi and Emelife, (2019) a Nigerian-based study where it was reported that mothers had a financial strain purchasing the medications for their babies. This could be attributed to the low economic status of participants in both studies as both studies are in sub-Saharan Africa where economic status is generally known to be low. Abeasi and Emelife (2019) continued to report that the distance of the NICU was far from the homes of some parents which prevented them from visiting babies as they expected. This is similar to the finding of this study where few mothers disclosed the distance from their unit to the NICU was a challenge as they indicated it was far and they could not visit the babies as they wanted.

### 5.6 The adaptation strategies of mothers caring for preterm babies at the NICU

Adaptation strategy is an empirically proven way mothers caring for their preterm infant at the NICU become resilient. This is evident in previous studies (Ramos et al., 2017 & Veronez et al., 2017). The strategies mothers in the current study adapted to help their resilience included spirituality. Most participants indicated that being spiritual through prayer to God strengthened them and made them resilient. This is in consonance with the findings of prior studies by Ramos

et al., (2017) in which they reported parents overcame the stressful nature of NICU through spirituality as parents indicated the importance of religion in coping. Some parents indicated they prayed and while others cling to their belief in God. This is supported by a previous experimental study conducted in the northeast part of Turkey where it was reported that prior to parents being given spiritual care, there was no obvious change in the mothers' parental stress scale (PSS) and NICU ratings between two groups. However, after parents received spiritual care, the mothers' PSS and NICU scores significantly differed from those of the control group, favouring the spiritual care group (Alemdar et al., 2018).

Other participants in the current study indicated that prayer stabilized their minds and helped them to adapt and made them feel better and had faith in God that everything was going to be fine and that their babies will survive. This is corroborated by the findings of a previous study where participants indicated praying to God for strength and grace and for the baby's survival as one of their coping strategies (Sih et al., 2019). The similarity could find expression in the fact that both studies were conducted in Africa and Africa is considered a religious continent where everything is linked to spirituality also the uncertainties regarding babies' condition could account for the mothers' reliance on prayer. Other participants also reported that prayer made them comfortable and hopeful of their baby's survival. This is similar to the findings of a previous study in India which recounted that all the mothers in their study stated that they made an effort to cope with their circumstances by employing a variety of coping mechanisms, such as faith in God as a mother indicated that children are gifts from God, hence baby's survival and health dependent on him (God) (Acharya et al., 2021).

Many of the participants in the current study also indicated they adapted because of their belief in God which they associated with their baby's survival. This is in congruence with a systematic review that revealed that mothers' belief in God helped them to cope during the NICU care for their babies (Kapti et al., 2022). This implies that spiritual care for mothers or parents of preterm infants at NICU provides comfort and strength and makes them more resilient, hence, incorporating it into the care will go a long way to help ease their stress (Reihani, Pour, Heidarzadeh, et al., 2014). Healthcare professionals could probably consider it in their management strategies for preterm baby NICU care.

Self-efficacy was another strategy employed by mothers with their adaptation as they reported that their personal beliefs and ability to withstand challenges helped them to adapt as they care for their babies in the NICU in this study. This is supported by literature (Heydarpour et al., 2017; Kapti et al., 2022). For instance, Heydarpour et al. (2017) indicated that one element that influences mothers' ability to successfully adapt to their new roles as mothers are their level of self-efficacy. Mothers claimed that their high self-efficacy helped their ability to adapt to motherhood. This is similar to the findings of the current study as a participant reported that she was worried initially however she realised she had to have faith and be firm for her baby. Heydarpour et al., (2017) continued to report that a participant indicated that never in her life had she ever said never rather, she was always positive. This confirms the findings of this study where a mother indicated that she is a positive-minded person and never accepted defeat in whatever she did.

Babies are a source of joy for most mothers and so was the case of some mothers in the current study. Mothers adapted to the condition of NICU care by drawing on the strength of baby

which consisted of seeing the babies alive and active, breastfeeding babies, mother-baby interaction as well as participating in the care of babies helped them to adapt. This is supported by many studies (Kapti et al., 2022; Negarandeh et al., 2021). In the current study, some mothers made known that seeing their babies alive and active and looking forward to their discharge was what kept their resilience. This is similar to the findings of a systematic review that discovered that mothers coped during the baby care at NICU as they saw progress in their baby's condition helped them to cope with the condition (Kapti et al., 2022). Breastfeeding as a gift for every baby is also good for the mother (UNICEF, 2018) to be resilient in the care of their infant. A participant in the current study reported that breastfeeding the baby was a moment of joy for her. This is congruent with the findings of a previous study as it was reported that it was a joyous moment for mothers as they had physical contact with the baby through feeding, touching and changing of diapers because it encouraged mother-infant bonding (Rossman et al., 2015). This finding contradicts a study in Ghana where mothers found it challenging to adjust because they could not get to hold their babies or make physical contact with them making mothers extremely stressed as a result (Akua & Afutu, 2022). The disparity in the findings could probably be due to the differences in the NICU policy as certain NICU policies are very restrictive (Loewenstein et al., 2019) or the severity of the conditions of the neonate.

Additionally, a participant also indicated their participation in the care of the infant was an adaptation strategy for her. This is congruent with findings from previous studies, (Byiringiro et al., 2021; Mautner et al., 2022). For instance, in a previous study, a parent reported that being part of the newborn's care, such as getting materials for the care or bathing the baby was a source of coping for her (Byiringiro et al., 2021). This is confirmed in the findings of this current study where a mother indicated that she always made sure to provide what the healthcare professionals

needed for the care of the baby and was strengthened more when she was given a cloth of the baby to wash. Conversely, a study in Brazil by (Martins et al., 2022) indicated that mothers did not get the opportunity to participate in the care of their babies such as dressing of babies, cleaning and carrying them, which posed much threat to the emotions of the mothers. The above findings imply that mothers caring for premature infants at the NICU obtain strength from babies through mother-baby bonding. Participating in baby care helps their resilience, hence, health professionals have a duty of ensuring good mother-baby bonding as well as encouraging them to participate in the care.

Finally, participants adapted to NICU care challenges by accepting the situation. This has been reported in previous findings of (Akua & Afutu, 2022 & Loewenstein et al., 2019). For instance, Loewenstein et al., 2019, in their integrative review reported that parents adapted successfully to the circumstances surrounding preterm infants and the care at NICU, by finding a way forward, aiming for normalcy and eventually returning home. This is consistent with the findings of this current study where a mother also stated that the baby care at NICU was the situation at hand and all she could do was to pray for early recovery and to be discharged home. This is confirmed in another study's findings where a mother narrated that the way to go with preterm delivery was to accept the situation because there was nothing she could do and only needed to be strong to go through it (Sih et al., 2019). This similarity could be attributed to the fact that in all cases, there was nothing more parents or mothers could do to have the situation changed, so they only needed to accept the situation. Hence, reliance on prayer is predominant among mothers, especially in the African context. Few participants indicated they had to accept the separation because the babies were separated for a reason. This is in agreement with the study carried out in a tertiary hospital in Nigeria where participants, though not happy with the limited access to the babies, indicated they wanted the best for the baby (Abeasi & Emelife, 2019). As the

mothers in the previous study indicated they wanted the best for the baby, it showed their acceptance of the situation.

**5.7 Experience of researcher with the I- Resilience model.**

The I-resilience model developed by Cooper, (1999) was originally developed for business organisations to provide consulting services related to stress and resilience to know why some businesses fail and collapse, while others make profits in the face of economic downturns. The model was used to guide the study as the purpose was to explore the resilience of mothers caring for preterm babies at the NICU in spite of the challenges associated. The model has four main constructs; confidence, purposefulness, social support and adaptability. This guided the objectives of the study which in turn informed the review of literature as well as the research instrument for data collection.

The construct's confidence enabled the researcher to explore the confidence of mothers, which enabled the researcher to have the first main theme as maternal confidence, in line with the model, with optimism and hope as subthemes, though not in the model but consistent with available literature. The sense of purpose of mothers was explored by the researcher and brought the main theme, maternal sense of purpose on resilience, which is consistent with the model, with subthemes, survival of baby, love for baby, gender preference, and children are assets. Social support systems available to mothers was also explored to know the available social support to mothers caring for their preterm babies at the NICU that led to the main theme, social support which had informational support, instrumental support, emotional support and spiritual support as its sub-theme, and lastly, the adaptation strategies employed by these mothers to help in their resilience was also explored. That generated the theme, adaptation strategies, which is in line with

the construct of the model. Its subthemes were spirituality, self-efficacy, drawing strength from baby, and accepting the situation.

The model had no concepts so all sub-themes were from literature and it revealed that all the subthemes generated helped mothers with their resilience as they cared for their babies at the NICU. Overall, six major themes were generated from the study. Four were consistent with the constructs of the model which are, maternal confidence, purposefulness, social support and adaptation strategies. The other two are psychological strain and challenges associated with preterm care at NICU which were all from the data. The two themes which were not part of the model emerged from the analysis of the data, which included psychological strain, with anxiety and sadness as its subthemes, and challenges associated with preterm baby NICU care, which also had financial challenges and distance from NICU as its subthemes.

### 5.8 Suggestions to the Model

The I-resilience model, though made for business entities, is beneficial in nursing research. However, the constructs of the model may be more understood for further research with the following modifications. Though the model provided explanations for the various constructs, it would be helpful to clarify concepts such as optimism and hope which were subthemes for confidence in the study are added. The same modifications can also be made to the other constructs of the model as all concepts used in the study were derived from literature. Lastly, the model looks at adaptability, however, it lacks the constructs which depict what an individual will encounter before adaptation. It will therefore be necessary that constructs such as challenges and psychological strain experienced can be added to the constructs of the model.

# CHAPTER SIX

# 6.0 SUMMARY, IMPLICATIONS, LIMITATIONS, CONCLUSION AND RECOMMENDATIONS

This section comprises the summary of the study, its implications on Nursing practice, education, administration, as well as research, acknowledged limitations of the research work, the conclusion as well as recommendations for the Ministry of Health, Ghana Health Service and Christian Health Association of Ghana, the Nursing and Midwifery Council of Ghana, Ghana Registered Nurses and Midwives Association, Nursing administration as well as the clinician based on the key findings of the study.

## 6.1 Summary

Preterm newborns' chances of survival frequently depend on critical facets of maternal care as well as the healthcare system. Throughout the period of admission, factors including mother-baby bonding, resiliency, the availability of proper neonatal care equipment and skilled neonatal care staff have been noted to have supportive care for both mothers and their neonates. This study aimed to explore maternal resilience in caring for preterm babies at the neonatal intensive care unit at the Presbyterian hospital Dormaa-Ahenkro. The study was guided by the I-Resilience model by Cooper (1999), used for the objectives of the study per the given constructs. A literature review was conducted based on the objectives of the study to give a clear understanding of the topic and what others have done in related studies which provided good information for discussion of the findings.

An exploratory descriptive qualitative study design was employed. An interview guide which was based on the objectives of the study was used to take data which was then transcribed verbatim, transcribed and analysed which generated six themes, including the confidence of mothers, the maternal sense of purpose, the social support, psychological strain, challenges associated with the care of preterm at NICU and the adaptation strategies employed by mothers.

All participants indicated they were optimistic about their babies' survival and expressed hope in God as well as the care provided by healthcare professionals. Participants recalled getting a variety of social supports, including financial help from their spouses and varying support from their families, friends, churches, and support groups. Participants described how they valued the health care professionals' physical care as well as their emotional support, which came in the form of words of empathy, encouragement and reassurances as well as spiritual support from their pastors and the church, which gave them more hope for the survival of their babies. However, some participants registered their displeasure over the fact that they received either insufficient or no information regarding the health of their infants.

Regardless of the various forms of support they received, participants reported experiencing psychological strain such as anxiety and sadness as a result of separation from their babies and families, having problems feeding, and during their first entry to the NICU. The majority of them reported they were afraid because the babies were so small. A notable challenge encountered by mothers while caring for their infants was financial. Some also participants mentioned that distance from NICU was a challenge for them.

That notwithstanding, participants adapted to the stressful situation associated with care by praying and believing in God for the survival of the infants, they also exhibited inner ability (self-

efficacy), some drew their strength from the baby, while others accepted the situation to help their resilience.

### 6.2 Implications of the study

The findings of the study have some implications for nursing practice, nursing administration, nursing education, as well as nursing research that must be given attention.

#### 6.2.1 Nursing and Midwifery Practice

Nurses and midwives in the NICU are in a unique situation to study mother-infant relationships, evaluate mothers' use of health-promotion skills, resources, and coping mechanisms and devise interventions that draw on mothers' specific strengths to help them develop resilience to the NICU experience. Nurse and midwife-delivered interventions are well received by NICU mothers and they offer support at vital moments. Nurses and midwives can welcome mothers to learn about their infants by guiding them through baby assessments or other educational opportunities. Nurses and midwives can also help with identifying mothers who are at risk of preterm delivery and provide the appropriate support. Lack of social support, lack of information and education related to baby's condition medication, NICU environment, separation from baby, etc are all predictors of distress reactions to a traumatic experience that need a screening referral. Mothers can be confident that feelings of bereavement, helplessness and worry are common reactions to having a premature baby in the NICU.

#### 6.2.2 Nursing Administration

These findings also have some implications for nursing administration. When nurse managers are aware of how mothers build up resilience during care for preterm babies at the NICU, appropriate measures can be instituted to help mothers to be more resilient during the care.

The findings of the research will help in the development of policies to provide mothers with the needed support from the hospital family as well as social support groups. It will also enable enactment of policy on the need to strengthen education on the chances of survival of preterm babies, to help mothers to be more resilient.

### 6.2.3. Nursing and Midwifery Education

The study findings will add up to the existing body of knowledge in nursing education. The findings confirm that there is little or no attention given to the psychological state of mothers as they care for preterm babies in the NICU. It therefore is imperative for the inclusion in the curriculum, the care of mothers caring for preterm babies at NICU which includes education of mothers on infant care as well as conditioning and counselling sessions for mothers to enable them to be resilient as the health of the infant depends largely on that of the mother. The curriculum can also include preterm baby care and postnatal family support. Training programmes on preterm NICU care and maternal health should also be established for nurses and midwives at the NICU for continuous professional development.

### 6.2.4. Nursing research

In this era of evidence-based practice, it would bring more credit to the nursing and midwifery profession if nurses continue to engage in research to inform practice. Further research could be done in the area of;

1. resilience of mothers in the care of preterm babies at home after discharge.
2. interpersonal relationship between nurses/midwives and mothers having babies on admission at the NICU
3. parental satisfaction with care provided at NICU

### 6.3. Limitations of the study

This study has some limitations. Mothers who are seriously ill were not included in the study as they may receive different support which may affect their resilience. Another limitation is that the study was restricted to mothers with preterm babies on admission and therefore the resilience of mothers caring for preterm babies after discharged home could not be assessed. One other limitation is that most interviews were conducted in the Akan language and directly translated verbatim to English. However, certain words in the Akan language do not have direct translations in English.

### 6.4 Recommendations of the study

Recommendations of the study were based on the findings of the study to regulatory bodies, nurses' association, nursing administration as well as the clinician.

#### 6.4.1 Ministry of Health (MoH)

The ministry can allocate more resources for the expansion of the NICUs so that integrated neonatal care where both babies and mothers stay together at the unit can be instituted.

Formulate policies which will incorporate the mental health of the mothers caring for their babies at the facilities.

There should be measures put in place to incorporate into the curriculum, the mental health of mothers caring for preterm babies at the NICU.

Develop a structured programme for in-service training on interpersonal relations between healthcare professionals and mothers.

### 6.4.2 Ghana Health Service (GHS) / Christian Health Association of Ghana (CHAG)

1. Ensure implementation of integrative neonatal care where babies and mothers are kept in the same room at NICU during the care.
2. There should be continuous professional training on nurse/mother relationships.
3. There should be a restructuring of the NICU set-up to allow mothers to spend more time with babies.
4. The should also be the establishment of family support groups to give appropriate support to mothers.
5. There could also be the establishment of virtual support groups for families for provision of necessary information.
6. Breastfeeding support groups can also be established to provide support for mothers with preterm neonates.
7. GHS as well as CHAG can partner with the social welfare or psychologist to provide the needed support to mothers.

### 6.4.3 Nursing and Midwifery Council (NMC) of Ghana

1. The Nursing and Midwifery Council of Ghana being one of main the regulatory bodies of the profession can include in the curriculum for training nurses and midwives on the health, especially the mental health of mothers with preterm infants on admission at the NICU, so that they can properly be inculcated in the care as they also care for their infants on admission.
2. NMC should emphasize the teaching of good interpersonal relationships with the mothers with babies on admission and the client at large.

3. The NMC should collaborate with organisers to make training on interpersonal relationships with client mandatory for all nursing and midwifery staff at least once every year.

### 6.4.4. Ghana College of Nurses and Midwives (GCNM)

1. The college can include in its curriculum of Neonatal intensive care a course on maternal care as well as maternal resilience while caring for their newborns at the NICU.
2. NICU set-up where mothers are allowed to be with babies for longer hours can be included in the curriculum for the training of professionals.

### 6.4.5 Ghana Registered Nurses and Midwives Association (GRNMA)

1. The union should entreat members not to only be concerned about the care of the preterm infant on admission, but also the mother, as the health of the baby is greatly dependent on the health of the mother.
2. The leaders should periodically undertake a supervisory role in the various NICUs nationwide to monitor the relationship of nurses and mothers with preterm infants on admission.

### 6.4.6 Presbyterian Hospital, Dormaa-Ahenkro

1. The head of the nursing administration can also assist to achieve good maternal health by engaging nurses and midwives to take mothers through counselling sessions to provide mothers with adequate information as well as emotional support as they care for their preterm infant at the NICU.
2. The nurse manager can also work hand in hand with the hospital management to help employ the services of a professional counsellor for mothers caring for their preterm at the NICU.

3. The nurse manager can, in collaboration with the hospital management, help mothers to identify support groups if available. Support groups for mothers can also be made available if not already in existence and functional, an example is the NICU support group programme.
4. The nurse manager can also collaborate with hospital administration to organise in-service training on interpersonal relationships for nurses and midwives and ensure there is a good interpersonal relationship between the mothers caring for their babies and the nurses as well as the midwives.

### 6.4.7 Clinicians

1. Nurses and Midwives at antenatal units should help identify mothers at risk of preterm delivery to intensify their education on preterm and the possibility of having one to reduce the psychological shock experienced by mothers.
2. NICU nurses and midwives should educate mothers on the condition of their babies and keep them updated about the baby's condition.
3. Nurses and midwives at the NICU should also give appropriate and complete information about the baby's condition and be sincere in giving information to mothers.
4. Nurses and midwives should do well to orient mothers to the NICU.
5. Nurses and midwives at the NICU should establish a good interpersonal relationship with mothers with babies on admission in order to win the trust of the mothers

## 6.5 Conclusion

Mothers with preterm babies admitted to the NICU for vital monitoring and specific medical care frequently experience numerous challenges, including, sadness, anxiety, and fear of losing their

babies, decreased maternal self-belief and confidence, which may eventually cause the mother's inability to bond with her child and provide the preterm baby with the necessary care.

This study explored maternal resilience as they cared for their preterm infants at the NICU. Though mothers were initially scared of losing babies they gathered courage and were confident of their babies' survival by being optimistic and hopeful in God. Mothers remained purposeful as they provided the care. Social support available to mothers included financial, physical care, emotional, spiritual and informational though some participants registered their displeasure as they received little or no information on the babies' conditions, as well as the medication. There is therefore the need to provide mothers with appropriate information to enable them to be more resilient. Despite of the plethora of challenges associated with care, mothers prayed and believed in God to help them to adapt, they also believed in their inner strength and abilities to go through the challenges, while others drew strength from the baby and others accepted the situation as it was to help their resilience. The findings were consistent with the I-Resilience model as the objectives of the model were obtained from the constructs of the model.

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## Appendix A: Ethical Approval

**CHRISTIAN HEALTH ASSOCIATION OF GHANA (CHAG) RESEARCH UNIT**
**21 JUBILEE WELL STREET, LABONE, ACCRA. TEL. 0202904777**

**INSTITUTIONAL REVIEW BOARD**

1st June 2022

**ETHICAL CLEARANCE**

**CHAG IRB PIN :** CHAG-IRB03022022

On **1st June 2022,** the Christian Health Association of Ghana (CHAG) Institutional Review Board (IRB) reviewed and approved your protocol detailed as follows,

TITLE OF PROTOCOL: **Maternal Resilience in caring for Preterm Babies at the Neonatal Intensive Care Unit (NICU) at Presbyterian Hospital, Dormaa-Ahenkro.**

PRINCIPAL INVESTIGATOR: **Sabina Eduku**

Please note that a final review report must be submitted to the Board at the completion of the study. Your research records may be audited at any time during or after the implementation.

Any modification of this research project must be submitted to the IRB for review and approval prior to implementation.

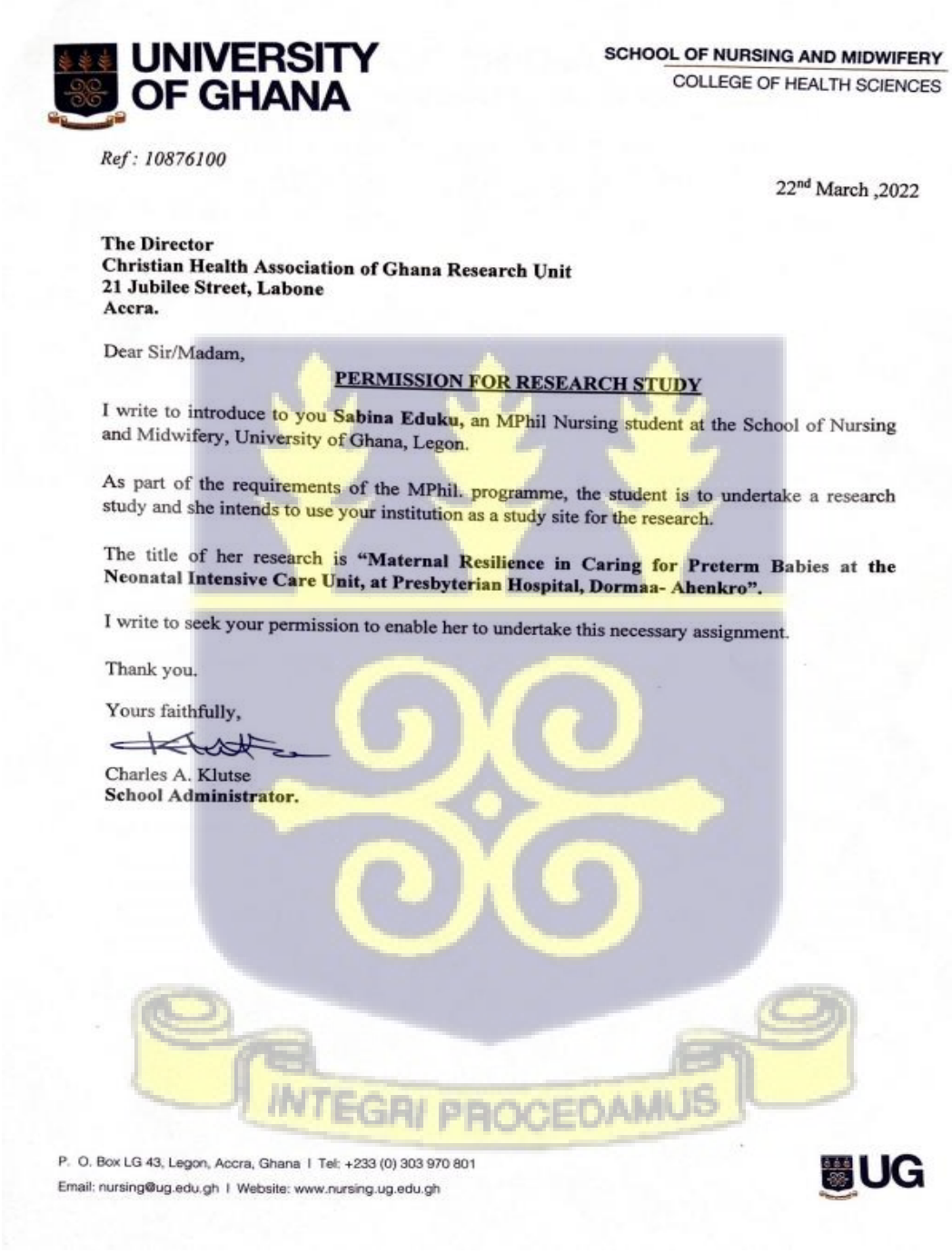
Please report all serious adverse events related to this study to CHAG-IRB within seven days verbally and fourteen days in writing.

This certificate is valid till **30th June 2023**. You are to submit annual reports for continuing review.

Signed by .....

Mr. Okyere Boateng
CHAG - IRB, Chairman

**Appendix B: Introduction Letter**



UNIVERSITY OF GHANA

SCHOOL OF NURSING AND MIDWIFERY
COLLEGE OF HEALTH SCIENCES

*Ref : 10876100*

22nd March ,2022

**The Director**
**Christian Health Association of Ghana Research Unit**
**21 Jubilee Street, Labone**
**Accra.**

Dear Sir/Madam,

**PERMISSION FOR RESEARCH STUDY**

I write to introduce to you **Sabina Eduku,** an MPhil Nursing student at the School of Nursing and Midwifery, University of Ghana, Legon.

As part of the requirements of the MPhil. programme, the student is to undertake a research study and she intends to use your institution as a study site for the research.

The title of her research is **"Maternal Resilience in Caring for Preterm Babies at the Neonatal Intensive Care Unit, at Presbyterian Hospital, Dormaa- Ahenkro".**

I write to seek your permission to enable her to undertake this necessary assignment.

Thank you.

Yours faithfully,

Charles A. Klutse
**School Administrator.**

INTEGRI PROCEDAMUS

P. O. Box LG 43, Legon, Accra, Ghana I Tel: +233 (0) 303 970 801
Email: nursing@ug.edu.gh I Website: www.nursing.ug.edu.gh

UG

**Appendix C: Institutional Approval**

**PRESBYTERIAN HEALTH SERVICE**
(Brong Ahafo Area Presbyterian Health Service)
**DORMAA HOSPITAL**

**BANKERS:**
GCB Bank, Dormaa Ahenkro Branch
Barclays Bank, Berekum Branch
Wamfie Rural Bank, D/Ahenkro Branch
Teachers' Credit Union, D/Ahenkro

P. O. BOX 47
Dormaa Ahenkro
Bono Region,
Ghana-West Africa
**TEL:** +233 (0) 3523-22094
**FAX:** +233 (0) 3523-22096
**Website:** www.dormaapresbyhospital.org
**E-mail:** info@dormaapresbyhospital.org
**Digital Address:** BD-0002-5225

**Our Ref:**
**Your Ref:** BAPHS/DH/GAF/059

**Date:** May 16, 2022

THE HEAD
DEPARMENT OF MATERNAL AND CHILD HEALTH
SCHOOL OF NURSING AND MIDWIFERY
UNIVERSITY OF GHANA
LEGON

Dear Sir/Madam,

APPROVAL FOR RESEARCH

I write to inform you that management has approved your request for Ms. Eduku Sabina to do her research at the Presbyterian Hospital, Dormaa Ahenkro.

The research exercise is on the topic "Maternal Resilience in Caring for Preterm Babies at the Presbyterian Hospital, Dormaa Ahenkro."

We wish her all the best.

GENERAL MANAGER
BRONG AHAFO PRESBY.
HEALTH SERVICE
DORMAA AHENKRO

REV. DR ISAAC APPIAH
GENERAL MANAGER

## Appendix D: Consent Form

### CONSENT FORM

**General Information about Research**

This study seeks to explore your resilience in caring for your preterm baby at the neonatal intensive care unit (NICU). The information you provide in this research process is for research and academic purposes only. The duration of the interview is estimated to be 45 to 60 minutes. The interview will be recorded using audiotape recorder for the purposes of analysis. You are encouraged to respond to questions asked by the interviewer and you are also free to offer further explanations to your responses. You are also free to remain silent or refuse to answer certain questions. The interview will be conducted at a place chosen by you and at your convenience.

**Possible Risks**

Participating in this research has no risk whatsoever to you. Participating in this study would not implicate you in any form in your next visit to this hospital in any form. There is no foreseeable risk or discomfort whatsoever if you choose to take part in this study.

**Possible Benefits**

Your participation in the study offers you the opportunity to talk about your resilience in caring for your preterm neonate at the NICU. Knowledge of how you develop resilience will help in shaping nursing practice with regards to care of neonate at the NICU. Your participation in this study is free (you will not pay for participating in this study). You will be reimbursed with an amount of money to cater for the cost of transportation if the interview is to be conducted outside your home, facemasks and hand sanitizers will also be given.

**Confidentiality**

All information about you in the study will be protected with the highest ethical standards to ensure your privacy and confidentiality. Your name will not be included in the study. During data analysis and transcription, no identifiable feature on you will be described that will single you out to be identified in the study. All information from all participants of this study will be put together as a report and no participant will be separated. In the research process, the supervisors may have access to data collected if requested but it will be used solely for academic purpose.

**Compensation**

This research is mainly for academic purpose and does not reward physical payment of monies, but participants will be appreciated with snack.

**Additional Cost**

You will not incur any financial cost for participating in this research.

**Voluntary Participation and Right to Leave the Research**

Your participation in this research is voluntary. You have the right to withdraw from the study anytime with personal reasons and you will not suffer any penalty.

**Contacts for Additional Information**

If you have any concerns or issues regarding this research, kindly contact the following people
Sabina Eduku (Principal Investigator)- 0242570725/0207613994. Email: sabeduku@gmail.com

**Your rights as a Participant**

This research has been reviewed and approved by the Institutional Review Board of Christian Health Association of Ghana (CHAG-IRB) and the University of Ghana, School of nursing. If you have any questions about your rights as a research participant you can contact the IRB Office between the hours of 8am-5pm through email addresses: chagirb@chag.org.gh.

THE ADMINISTRATOR
INSTITUTIONAL REVIEW BOARD
CHRISTIAN HEALTH ASSOCIATION OF GH.

**Appendix E: Interview Guide**

**Date / Time…….**

**SECTION A: BACKGROUND INFORMATION FORM**

**Demographic Information**

Pseudonym…….

1. Age…….

2. Marital status: Married / Cohabitation / Single……...……

3. Number of children……...……

4. Educational level……....

5. Occupation…….

6. Religion……

7. Ethnic group……

8. Birth weight…….

9. Gestational age…….

10. Length of stay at NICU……...

**Date / Time…….**

**SECTION B: INTERVIEW GUIDE**

**Guiding questions**

**A. CONFIDENCE**

1. Can you please tell me how strong you have been as you care for your child at the NICU?

- Probes:

  How did you take it emotionally?

  Tell me more

2. How did you take it emotionally?

   Optimism (Do you have a positive mindset? If yes, why?)

   Hope (What is your wish as you care for your child)

**B. PURPOSEFULNESS**

3. Please share with me your sense of purpose as you care for your baby at the NICU

- Probe:

  Please share with me what made you think your child will recover or survive?

4. Please share with me how your sense of purpose influences your resilience?

- Probe:

  How do these influence your care?

  Eg. Love for baby

**Date / Time…….**

## C. SOCIAL SUPPORT

5. Please share with me about any support you have received since the admission of your baby to the NICU

- Probe:

  What support have you received?

  How did family members help you during the care of the baby?

- Probe:

  Are they supporting you? If yes share with me how they are supporting you?

  I. Spouse

  II. in-laws

  III. close family

- Probe:

  How are the health professionals supporting you as you are caring for your child?

  I. Education on condition of baby by nurses

  II. Empathy from the staff: do you realise the staff showing understanding of your situation? Share with me

  III. Communication: Please share with me how you get to know your baby's progress in condition, treatment

  IV. Any words of comfort from the staff

V. Please share with me how it feels when do not know the state of your child's condition

VI. Please share with me how the atmosphere at the NICU influences your care for the infant

- Probe:

The gadgets available

VII. Share with me about any education and reassurances received from the nurses

VIII. Any counselling sections?

IX. Conversation with other preterm mothers

X. Met with mothers with older children who were born preterm

6. Please share with me about any support you received from elsewhere apart from family the health staff

How has these supports helped in building up your strength?

- Probe:

How did all these contribute to building your strength while at the NICU?

I. Church

II. Support group

III. Friends

IV. Other preterm mothers at the NICU

**D. ADAPTATION**

7. Please share with me your feeling about your neonate from the beginning of the care so far

- Probe

Please tell me more about your feeling

8. Please share with me some of the challenges you are experiencing as you care for your baby

- Probing:

  In relation to lodging and sanitation facilities

  Please share with me how it feels to be separated from your baby

  Please me about the feeding of your baby

9. How are you coping?
10. Please share with me about your most difficult moment during your stay in the NICU.

- Probe:

  I. Why was it the most difficult moment?

11. What helped to adapt to the conditions at the NICU in the care of your baby

- Probe:

  I. Spirituality e.g. prayer; How does prayer help you; makes you feel at ease, helps to cope.

  II. Self-efficacy? Share with me your personal ability to help cope with the changes

  Can you please share with me the education you received at the NICU?

  How has this education helped you to cope?

  Please tell me more

**12.** Is there anything else you would like to add that I have not asked you about or we haven't spoken about?