University of Ghana http://ugspace.ug.edu.gh

University of Ghana

Department of Psychology

THE USE OF KANGAROO MOTHER CARE: COPING AND PSYCHOLOGICAL DISTRESS AMONG MOTHERS WITH PRETERM BABIES IN GHANA

BY

CRESCENS OSEI BONSU OFORI

(10521385)

THIS THESIS IS SUBMITTED TO THE UNIVERSITY OF GHANA, LEGON, IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF MASTER OF PHILOSOPHY IN CLINICAL PSYCHOLOGY

JANUARY, 2022

University of Ghana http://ugspace.ug.edu.gh

DECLARATION

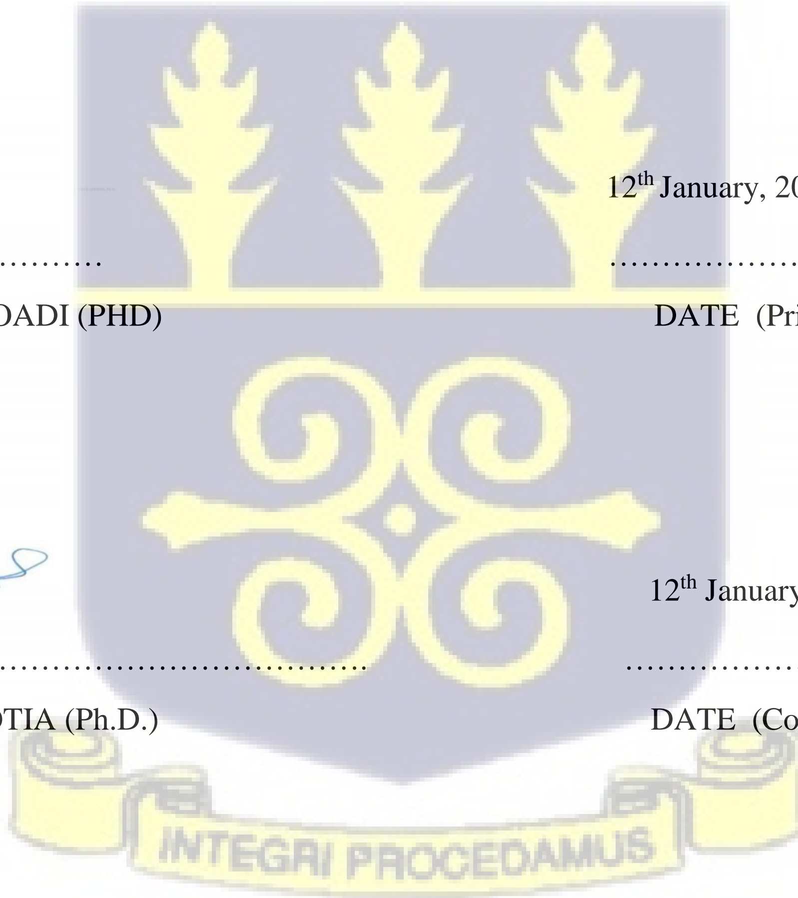
I CRESCENS OSEI BONUS OFORI, hereby declare that this thesis is the result of my own research work and no part of it has been submitted for any academic award.

11th January, 2022

………………………………….. ………………………..

CRESCENS OSEI BONUS OFORI DATE

(10521385)



12th January, 2022

………………………… ……………………….

MABEL OTI-BOADI (PHD) DATE (Principal Supervisor)

12th January, 2022

……………………………………………….. …………………….

CHARITY AKOTIA (Ph.D.) DATE (Co. Supervisor)

University of Ghana http://ugspace.ug.edu.gh

DEDICATION

This work is dedicated to Almighty God for the gift of life and strength through the writing of this thesis. To my family and friends.

University of Ghana http://ugspace.ug.edu.gh

ACKNOWLEDGEMENT

I do express my heartfelt gratitude to my supervisors, Dr. Mabel Oti-Boadi and Prof. Charity Akotia for their guidance, scrutiny, support and best wishes that helped me complete this thesis.

Grateful to the management of Eastern Regional Hospital especially the Kangaroo clinic for their support and cooperation.

Many thanks to friends and loved ones (i.e Sam-Nkrumah, Marcus, Juliet and Sakyibea) who assisted in diverse ways.

Finally, my sincere gratitude goes to my parents (Mr & Mrs Ofori) for their love, support and prayers throughout this program of study.

University of Ghana http://ugspace.ug.edu.gh

TABLE OF CONTENT

DECLARATION ii
DEDICATION iii
ACKNOWLEDGEMENT iv
LIST OF TABLES vii
LIST OF FIGURES vii
ABSTRACT viii
CHAPTER ONE 1
INTRODUCTION 1
Background of the study 1
Problem statement 10
Research Aim and Objectives 11
CHAPTER TWO 13
LITERATURE REVIEW 13
Theoretical Framework 13
The Stress Process Model (Pearlin, Mullan, Semple, & Skaff, 1990). 13
The Reformulated Theory of Learned Helplessness (Abramson, Seligman & Teasdale, 1978). 14
Transactional Model of Stress and Coping (Lazarus & Folkman, 1984). 16
Review of Related Studies 18
Challenges of Kangaroo mother care among mothers with preterm infants 18
Psychological distress (parental stress, anxiety, and depression) among mothers with preterm infants 21
Perceived stigma among preterm mothers 26
Perceived social support among preterm mothers 27
Ways of coping among preterm mothers 28
Research Hypotheses 34
Conceptual Framework 35
Research Rationale 36
CHAPTER THREE 38

INTEGRI PROCEDAMUS

University of Ghana http://ugspace.ug.edu.gh

METHODOLOGY 38
Introduction 38
Design 38
Study setting 38
Participants and Sampling 39
Inclusion criteria 40
Measures/Materials 40
Demographic Information 40
Parenting Stress: Parenting Stress Scale (PSS) (Berry & Jones, 1995). 42
Psychological distress: Brief Symptom Inventory (BSI) (Derogatis & Melisaratos, 1983). 42
Perceived Social Support: Multidimensional Scale of perceived social support (MSPSS) (Zimmert et al., 1988) 43
Coping: Brief Cope Inventory (BCI) (Carver, 1997). 43
Perceived Stigma: Perceived Stigma Scale – Revised (PSSR) (based on Mickelson et al., 1999) 44
Pilot study 45
Procedure 46
Ethical considerations 46
Data analysis 47
CHAPTER FOUR 49
RESULTS 49
Introduction 49
Summary of descriptive analyses 49
Hypotheses testing 51
CHAPTER FIVE 61
DISCUSSION 61
Introduction 61
Challenges with the practice of KMC on prenatal stress 61
Psychological distress (depression and anxiety) among preterm mothers 63
Mothers' ways of coping with depression 68
Mothers' ways of coping with anxiety 72
Limitations of the study 76
Recommendations for future study 77

University of Ghana http://ugspace.ug.edu.gh

Conclusion 78

References 79

APPENDICES 93

LIST OF TABLES

Table 1: Summary of demographic characteristics of participants in the study (N =120) 41

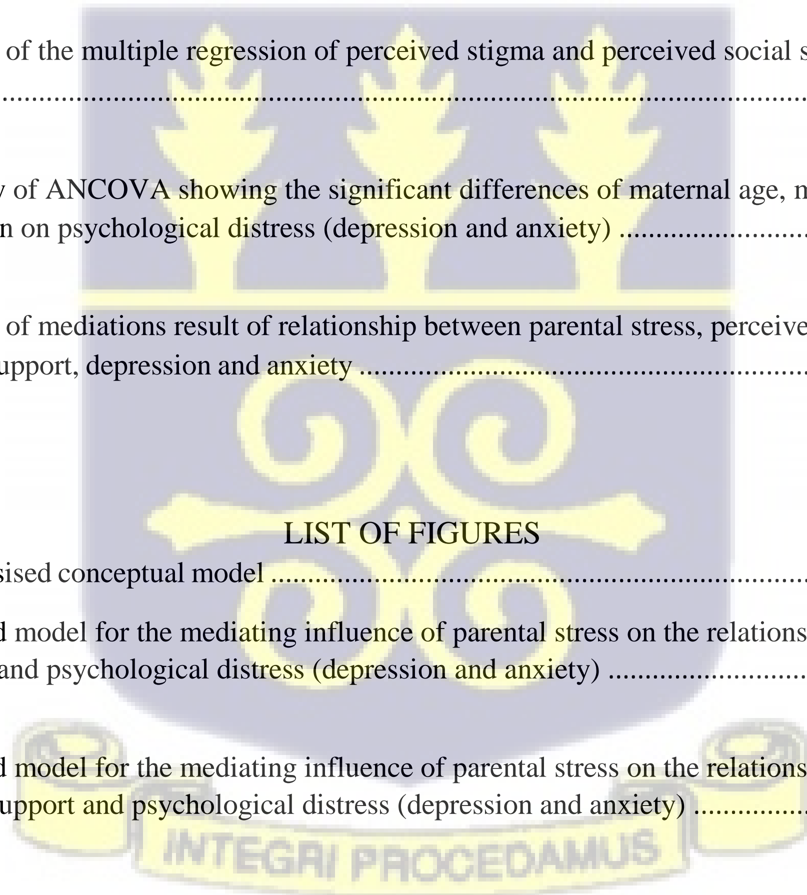
Table 2 Summary of descriptive statistics of study variables 50

Table 3 Summary of multiple regression of ways of coping on psychological distress (depression and anxiety) 51

Table 4 Summary of the multiple regression of perceived stigma and perceived social support on parental stress 53

Table 5 Summary of ANCOVA showing the significant differences of maternal age, marital status, and number of children on psychological distress (depression and anxiety) 55

Table 6 Summary of mediations result of relationship between parental stress, perceived stigma, perceived social support, depression and anxiety 57



LIST OF FIGURES

Figure 1 Hypothesised conceptual model 35

Figure 2 Observed model for the mediating influence of parental stress on the relationship between perceived stigma and psychological distress (depression and anxiety) 59

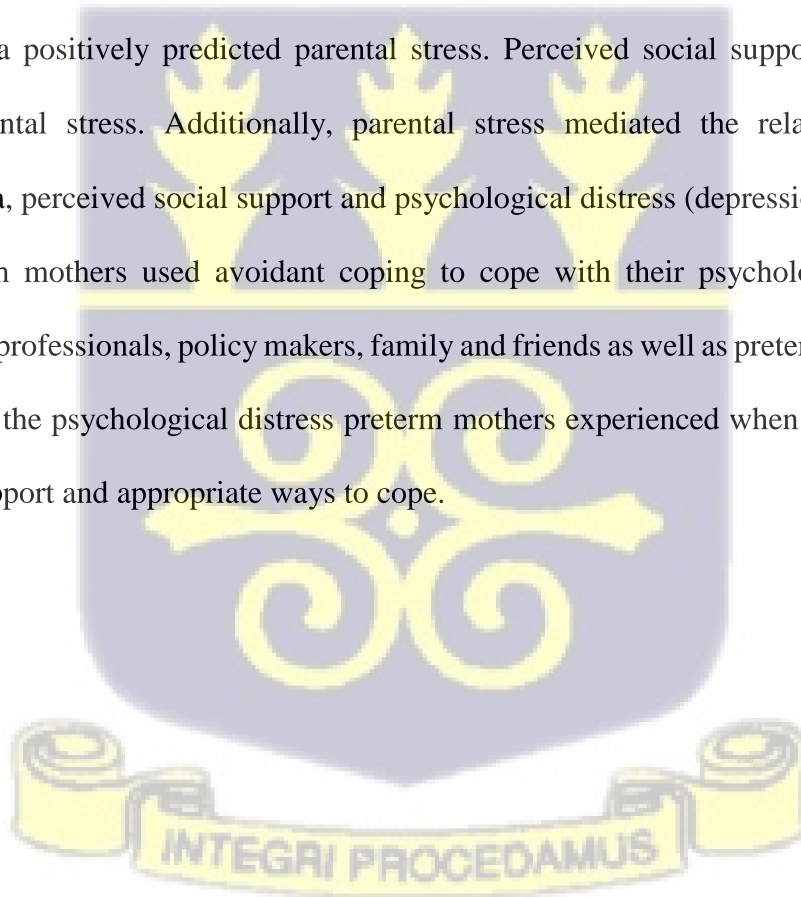
Figure 3 Observed model for the mediating influence of parental stress on the relationship between perceived social support and psychological distress (depression and anxiety) 60

University of Ghana http://ugspace.ug.edu.gh

ABSTRACT

This study investigated the challenges associated with the practice of Kangaroo Mother Care (KMC) at home and its impact on mothers' psychological distress (parental stress, depression and anxiety) and they a coping. The study employed a cross-sectional design with 120 preterm mothers from Koforidua as study participants. Participants were recruited by using purposive sampling and convenient sampling. Questionnaires (i.e., Parental Stress Scale, Perceived Stigma, Multidimensional Scale of Perceived Social Support, Brief Symptom Inventory and Brief Cope Inventory) were administered to participants. Multiple regression, One-way ANCOVA and regression (Process Marco) was used to analyze the data. Findings of the study showed that perceived stigma positively predicted parental stress. Perceived social support had a negative impact on parental stress. Additionally, parental stress mediated the relationship between perceived stigma, perceived social support and psychological distress (depression, and anxiety).

Finally, preterm mothers used avoidant coping to cope with their psychological distress. In essence, health professionals, policy makers, family and friends as well as preterm mothers should be educated on the psychological distress preterm mothers experienced when performing KMC and provide support and appropriate ways to cope.



University of Ghana http://ugspace.ug.edu.gh

CHAPTER ONE

INTRODUCTION

Background of the study

According to the World Health Organization (WHO), preterm birth is all births before 37 weeks of gestational age or fewer than 259 days since pregnancy (WHO, 2012). In 2010, about 15 million babies were born preterm globally (WHO, 2012), which signifies a preterm birth rate of 11.1% (Blencowe et al., 2012). One out of every ten world's babies are born preterm (Aseidu , et al., 2019). An average of 12% of preterm birth occurs in lower-income countries (WHO, 2018). The rate of preterm birth in Ghana is 14%, with 128,000 babies born preterm per year and 8,400 infants die as a result of preterm complications. In terms of the number of preterm births, Ghana ranks 25th in the world (Liu et al., 2014).

Preterm birth is a major factor of low birth weight (LBW) (UNICEF & WHO, 2018) and can be subdivided by gestational age (< 28 weeks extreme preterm, very preterm babies are born between 28 and 32 weeks, and moderate preterm babies are born between 32 weeks and 37 weeks). The exact determinants of preterm infants are unknown but there are several predisposing factors such as hypertensive complications, urinary tract infections, multiple births, maternal age, excessive alcohol intake, and smoking.

The development and growth of preterm infants are less than normal neonates, which makes preterm infants' high-risk newborns (Fraser & Cooper, 2003). Being classified as high-risk newborns increases the chances of mortality or morbidity (Suraju et al., 2013). Since preterm infants are classified as high-risk neonates, they faced several problems which include behavioral

University of Ghana http://ugspace.ug.edu.gh

(i.e impulsive, disorganized, and easily distractible), physical (respiratory illness, sensory deficits, and cerebral palsy), and psychomotor (such as developmental coordination disorder) (Suraju et al., 2013). As a result of the above problems, preterm infants are managed with optimal care at the Neonatal Intensive Care Unit (NICU) for their survival (Holditch-Davis et al., 2000). Optimal care at the NICU includes establishing and maintaining respiration, maintenance of body temperature, and prevention of infection (Suraju et al., 2013). After NICU, preterm infants are discharged home to continue with optimal care (Rudolph et al., 2002).

The birth of preterm infants continues to increase, which causes a significant impact on the economy, society, and family (Suraju et al., 2013). Parents, especially mothers are considered at higher risk for enormous challenges because they are the primary caregivers of their babies (Ballantyne et al., 2013). Such challenges include, psychological (i.e stress, depression, and anxiety), physical (i.e body pains), and economic costs (i.e financial burden) (Ango, 2016). Mothers encounter such challenges when their children have physiological and developmental issues (Auslander et al., 2003), and during the process of providing optimal care for their infants either at NICU (Ango, 2016) or after being discharged from the NICU (Suraju et al., 2013).

Kangaroo Mother Care (KMC) is a natural method for caring for preterm infants, which usually begins at the hospital (NICU). This continues after the stability of the infant, where mothers who have demonstrated confidence in handling their infants are discharged to continue the practice of KMC at home. KMC is an early, continuous, and prolonged skin-to-skin contact where a stable LBW preterm infant is placed and carried in skin-to-skin contact of the mother (WHO, 2018). This natural method for caring for preterm infants is an accepted World Health Organization standard of care to decrease mortality and morbidity rates among LBW infants and preterm infants (Baley,

University of Ghana http://ugspace.ug.edu.gh

2015; Charpak et al., 2005; Nunes et al., 2017). KMC was developed in Bogota, Columbia in the 1970s by Rey and Martinez to help tackle the challenges of inadequate and insufficient incubators to care for preterm infants, overcrowding, and the problem of separation of mother and the baby (WHO, 2003). In 2007, KMC was first introduced in Ghana (Nguah, et al., 2011). It gained much acceptance in the year 2015 and major regional and district hospitals in Ghana included it in their optimal care for preterm infants (Bergh et al., 2013).

KMC can be continuous or intermittent (Mohammadi et al., 2021). Practicing KMC continuously is when there is day and night skin-to-skin contact between the mother and the infants for at least 20 hours or more per day. Whereas, intermittent KMC is when there is skin-to-skin contact between the mother and the infant for a shorter period (at least 70 minutes every day) (Mohammadi et al., 2021). KMC involves components such as KMC position, exclusive breastfeeding, early discharge from NICU, and adequate support for mothers at home (Sarfo, 2018).

KMC position is where the naked baby is held upright between the mother's breasts, wearing only a cap, diaper, and socks. Preterm infants are encouraged to be in a kangaroo position for 24 hours a day until the preterm infant weighs at least 2500g (2.5kg) and wriggles to show his or her discomfort. With regards to feeding, mothers ensure exclusive breastfeeding for at least every two hours especially when preterm infants are discharged home. Social support is the provision of adequate support from family, friends, and significant others and a fellow up from health staff for mothers at home.

Benefits of KMC include bonding, confidence, stimulation, maintain body temperature, regular breathing pattern, and reduced risk of infection (Amankwaa et al., 2007; Bera et al., 2014; Jones & Santamaria, 2018; Lewis et al., 2019). However, barriers such as social support, family

University of Ghana http://ugspace.ug.edu.gh

acceptance, maternal age, marital status, and the number of children has impeded the mother's ability to implement KMC (Lewis et al., 2019). Studies in Sweden and Ghana highlighted the above array of challenges mothers faced when caring for their preterm infant both at the NICU and home (Ango, 2016; Blomqvist, et al., 2012; Lee & Kimble, 2009; Suraju et al., 2013). Thus, studies have shown high levels of stress that led to severe psychological distress among mothers after preterm birth (Witt et al., 2012). This calls for the present study to examine the challenges that mothers faced when practicing KMC at home, its impact on mothers' psychological distress and how mothers cope with such psychological distress.

Psychological distress is a psychological construct that has several dimensions and is characterized by negative functioning such as expression discomfort, harm, alteration of emotional state, and inability to effectively cope with negative situations (Nutsugah, 2019). Ridner defines psychological distress as the unique discomforting, emotional state experienced by an individual in response to a specific stressor or demand that results in harm, either temporary or permanent, to the person" (Ridner, 2004, p. 539). A change in an individual's stable emotions determines whether an individual has experienced psychological distress or not. Stress, depression, and anxiety are all manifestations of psychological distress that an individual show when there is a change in his or her stable emotions (Massey, 2002).

Parental care appears to be linked to the severity of psychological distress (Borghini et al., 2006). This is because parenting is affected by new stressors, which causes mothers to experience some unique discomforting or emotional state (Surkan et al., 2011). Mothers with preterm infants are at serious risk in terms of adverse parenting, which causes mothers to experience high levels of psychological distress (Hall et al., 2017). Anxiety and depression are the commonest

University of Ghana http://ugspace.ug.edu.gh

(NolenHoeksema & Keita, 2003) and leading psychological distress in women more than men especially during childbearing years (Mayosi et al., 2009).

Anxiety is the fear of the future, temporary fear, and uncertainty about a particular event or situation (Barlow, 2004). Causes of anxiety among mothers, especially preterm mothers have been suggested to include behavior and appearance of infants, parental role alteration, social support, financial problems, and the environment of the mother (Ango, 2016; Duarte et al., 2009). A study by Duarte et al. (2009) has shown that clinical symptoms of anxiety decrease when preterm mothers are discharged from the hospital (Duarte et al., 2009). This means preterm mothers are more anxious during hospitalization as compared to the period of discharge. However, other studies have pointed out that mothers who have been discharged for months continue to exhibit high levels of anxiety like those at the hospital (Holditch-Davis et al., 2009).

Mothers' levels of anxiety were not significantly different, considering their marital status (Hinz, Finck, & Gomez, 2014). This means the level of anxiety among mothers who are married is equal to the level of anxiety among mothers who are not married. With regards to maternal age, anxiety decreases with increasing age among preterm mothers who perform KC at the NICU (Sweeney et al., 2017). This is because those who have advanced in age have experienced other life events or situations that have caused them to know how to cope better with stress. Therefore, such mothers can handle the stress that comes with the performance of KCM at the NICU.

Depression according to the American Psychiatric Association, is a mental illness that negatively affects an individual cognition, behavior, and emotions. Symptoms of depression include the feeling of sadness, loss of interest, changes in appetite, worthlessness, feeling of hopelessness, guilt, feeling of helplessness, and suicidal thoughts. The rate of depression among preterm mothers

University of Ghana http://ugspace.ug.edu.gh

is 14% to 27% (Annon , 2008) and depressive symptoms are 63% high during the hospitalization of the preterm infant (Miles et al., 2007). Studies have indicated that increased parental stress, poor social support, single marital status, poor coping skills, perceived parental role alteration, perception of infant's development, and stay at the NICU are all risk factors that cause preterm mothers to be depressed (Beck, 2001; Rogers et al., 2013).

Mothers of preterm infants are at higher risk of depressive and anxiety symptoms than mothers of healthy term infants and fathers (Auslander et al., 2003; Ballantyne et al., 2013). Goodman and Brand (2009) indicated that mothers who are depressed or anxious engage in withdrawal and disengaged interaction behaviors with their infants (Goodman & Brand, 2009). However, in some studies, preterm mothers who are anxious and depressed developed a strong bond with their infant (Borghini et al., 2006). This shows that in some instances, psychological distress strengthens mothers to take proper care of their infants.

Parents of preterm infants are more vulnerable to stress especially after being discharged as parents felt overwhelmed, afraid, and unprepared to assume responsibilities (Haemmerli et al., 2000). Additionally, studies have pointed out that high levels of stress led to severe psychological distress such as depression and anxiety (Witt et al., 2012). This is because mothers face challenges when caring for their preterm infant or performing KMC both at the NICU and home (Ango, 2016; Blomqvist et al., 2012; Lee & Kimble, 2009; Suraju et al., 2013). Some challenges include social support, family acceptance, maternal age, marital status, and the number of children of the mother (Lewis et al., 2019). Parenting is often affected by new stressors (Surkan et al., 2011), hence, psychological distress can continue well beyond the time the infant is discharged home (Vigod et al., 2010). This makes it difficult for preterm mothers to create an environment that supports resiliency (Duarte et al., 2009), which negatively affects the development of the infant (Singer, et

University of Ghana http://ugspace.ug.edu.gh

al., 2007) and the relationships between the child and the parent (Eiser et al., 2005). Thus, understanding the relationship between the level of psychological distress and the challenges that mothers face when performing KMC at home would be relevant in determining the appropriate coping for mothers with preterm infants.

Every parent, especially mothers' dreams of having a normal and healthy infant but when parents lose such a dream, it results in psychological distress such as depression and anxiety. Mothers who appraise KMC as a stressful event but possess inadequate resources to address the stressors may experience high levels of stress and an adverse psychological effect as compared to mothers who possess adequate resources to address her stressors (Greer, 2011). Studies have also shown that individuals cope with psychological distress negatively (Burns et al., 2008). This means an individual with adequate resources can cope properly with stressors that cause psychological distress to decrease and vice-versa.

Overwhelming challenges associated with the practice of KMC during NICU or after discharge may cause parental stress among mothers and they need to possess adequate resources to handle such challenges effectively. Mothers' way of coping may have an impact on their psychological distress and research by Kendall and Terry (2008) has pointed out the ways of coping into three categories. They include emotional-focused coping, problem-focused coping, and avoidant coping (Kendall & Terry, 2008).

Problem-focused coping is mostly used when an individual perceives he or she can change stressful environments or situations (Moszczynski & Haney, 2002). This is because problem focused coping includes skills that help individuals change their stressful situations (GueritaultChalvin et al., 2010). Such skills include actively trying to make the situation better, thinking about the positive

University of Ghana http://ugspace.ug.edu.gh

side of a stressful situation, adjusting to stressful situations and learning to accept stressful situations (Jones et al., 2010).

A study by Tuncay et al. (2008) showed that problem-focused coping is related to less psychological distress while emotion-focused coping is positively related to depressed moods. Likewise, an empirical study by Chang et al. (2007) showed that the use of problem-focused coping helped nurses in Australian and New Zealand hospitals handle role stress better than those who used emotional-focused coping. Since nurses can control their workplace stress, they adopted the problem-focused coping approach to change their workplace stress and this benefited the nurses in addressing their stresses.

However, studies also showed that the use of problem-focused coping increased an individual's psychological distress even though the individual has control over the stressful situation (Calvete & Lopez de Arroyabe, 2012; Feldman et al., 2002). This occurs when the problem-focused coping approaches become ineffective in trying to control the stressful situation, which causes individuals to be more frustrated and confused and eventually become distressed (Chronister & Chan, 2006). Apparently, the stress surrounding the practice of KMC can either be controlled or not depending on the caregiver and since women mostly used problem-focused coping than men (Chronister & Chan, 2006), this study examines whether preterm mothers would make use of problem-focused coping as a way of coping.

Emotion-focused coping on the other hand is used when a stressful situation or condition is uncontrollable especially situations in the health-related field but the individual tries to manage the magnitude of the stress on his or her emotions (Eaton et al., 2011). It includes approaches such as the use of religion, emotional support, expression, self-blame, humor, and cognitive distraction.

University of Ghana http://ugspace.ug.edu.gh

For instance, if an individual finds a particularly stressful situation as part of everyday life, the individual manages the stressful situation by applying either cognitive distraction or cognitively accepting the stressful situation which helps reduce the stress level the individual experiences. This is because the individual has admitted that stressful conditions are part of his or her life and the level of depression and anxiety the individual experience reduces.

A study in Ghana by Suraju et al. (2013) highlighted that, mothers of preterm infants' cope with challenges by relying on some emotion-focused coping approaches such as support from family, significant others, and religion. Additionally, a study in Bawku Municipality and Korle-Bu teaching hospital showed that regardless of the overwhelming challenges, mothers adopted emotion-focused coping approaches such as understanding their baby's needs, spirituality (such as having faith in God), and collective coping (Ango, 2016; Akum, 2018).

Another empirical study by Wartella et al. (2009) showed that the use of emotion-focused coping by family members of neuroscience patients did not affect stress. Since the family members were in a denial state, the use of emotion-focused coping was negated in dealing with stress (Wartella et al., 2009).

Avoidant coping is a type of coping in which the meaning of a particularly stressful event or environment is changed, and the individual ignores his or her emotions to alleviate distress (Lu et al., 2016). It includes skills such as denial, substance use, behavioral disengagement, and self-distraction. Several studies have revealed that the use of avoidant coping is related to increase in caregivers' psychological distress and mental health (Mausbach et al., 2006; Penley et al., 2002). This is because most people who use avoidant coping believe that a particular stressful condition is uncontrollable and therefore it is beyond their abilities to use any behavioral or cognitive actions

University of Ghana http://ugspace.ug.edu.gh

to address such a condition (Mausbach et al., 2006). The psychological distress associated with the practice of KMC at home may cause preterm mothers to use avoidant coping as a form of coping with anxiety and depression because they might believe they cannot use cognitive and behavioral actions to cope.

All coping strategies can be effective (Tuncay et al., 2008) therefore, determining mothers' ways of coping and their influence on depression and anxiety would be useful for this study. This is because it will help clinical psychologists plan an effective coping way for preterm mothers who practice KMC at home.

Problem statement

An alternative way to care for preterm infants is the use of Kangaroo Mother Care (Uwaezuoke, 2017). KMC has shown to have multiple benefits to the preterm infant, parents, and the health systems (Bayo et al., 2019). The rate of practice has remained low due to the challenges associated with its practice at home than the robust evidence on the benefits of KMC (Vesel et al., 2015). Thus, the low rate of practice increases the risk of early growth retardation, developmental delays, and early death at childhood (Conde-Agudelo and Diaz-Rossello, 2016) which invariably affect the family. These challenges associated with the practice of KMC do not take a significant psychological toll on mothers when handled well but the reverse has always been true with most reported studies of mothers at the NICU.

However, most of the studies reviewed primarily focused on the experiences of mothers' providing general caregiving to preterm infants. Thus, it becomes a challenge to identify the specific challenges associated with the practice of KMC. Additionally, other studies have similarly looked

University of Ghana http://ugspace.ug.edu.gh

at the practice of KMC, but the focus has always been on the hospital (NICU) setting. Hence, there is a dearth of studies on how the challenges of practicing KMC at home take a significant psychological toll on mothers at home. It is therefore a rising concern to assess the psychological distress of preterm mothers who faced challenges when practicing KMC at home.

Furthermore, there is a paucity of the quantitative literature on how preterm mothers cope with psychological distress when faced with challenges for practicing KMC at home. This creates an opportunity to quantitatively investigate how these mothers will cope with psychological distress when faced with challenges while practicing KMC at home.

Research Aim and Objectives

The main aim of the study is to investigate the challenges associated with the practice of KMC at home, its impact on mothers' psychological distress (parental stress, depression, and anxiety) and mothers' ways of coping with the psychological distress.

Specifically, this study seeks to;

1. Investigate the extent to which mothers cope with psychological distress (depression and anxiety).
2. Assess the influence of perceived stigma and perceived support on parental stress
3. Investigate the extent to which demographic variables (i.e., marital status, maternal age and other siblings) influences psychological distress (depression and anxiety).
4. Examine the impact of parental stress on preterm mothers' psychological distress (Depression and anxiety).

INTEGRI PROCEDAMUS

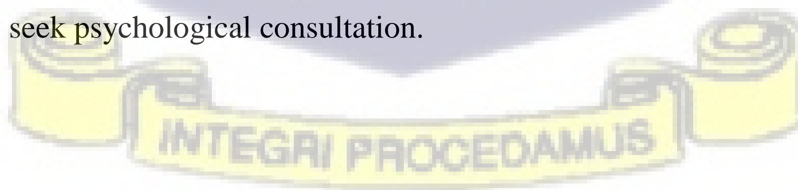
University of Ghana http://ugspace.ug.edu.gh

Relevance of the study

The study is of relevance to academia, mothers of preterm infants, and the health sector. The study will contribute to the existing understanding of the challenges associated with the practice of KMC, the contribution to preterm mothers' psychological distress, and ways these mothers cope with the psychological distress when at home. This would aid in developing appropriate intervention models to improve mothers' psychological well-being while taking care of their preterm infants at home.

Additionally, results from this study would be of help to health professionals working with preterm infants and their mothers in the clinical setting. This is where health professionals would get to know the challenges faced when practicing KMC at home, its impacts on mothers' psychological distress, and how effectively mothers can cope with their psychological distress. Thus, health professionals would specifically focus on how well they can assist preterm mothers to cope with their psychological distress. This can be achieved when clinic reviews do not focus only on the preterm infant but include their mothers as well.

Lastly, findings from this study will give insight to preterm mothers about how well they can cope with their psychological distress and recognize any psychological distress in their life. This is where preterm mothers get to understand the challenges that affect their psychological wellbeing and be willing to seek psychological consultation.



University of Ghana http://ugspace.ug.edu.gh

CHAPTER TWO

LITERATURE REVIEW

The present chapter presents theories that have been used to explain psychological distress and ways of coping. Additionally, this chapter reviews empirical research in the area. The review of literature focused more on variables such as psychological distress (depression, anxiety, and parental stress), perceived stigma, perceived social support, and ways of coping.

Theoretical Framework

The Stress Process Model (Pearlin, Mullan, Semple, & Skaff, 1990).

The stress process model was introduced as an attempt to conceptualize how informal family caregivers experienced stress as a process. From the theory, caregivers provide specific types or amounts of care within the context of other roles (i.e parenting, employment and marital). Within this context, Pearlin and colleagues came up with four factors that contribute to caregiving stress, which include caregiver's background and context, stressors, mediators or moderators, and outcomes. According to the theory, the caregiver's background and contexts such as marital status, age, and religion influence the caregiver's level of stress. Stressors were grouped into primary stressors and secondary stressors. Primary stressors such as providing support and supervising the care receiver influence caregivers' level of stress. Economic or social burdens were also considered secondary stressors that contribute to caregiver's stress. Coping strategies, personal responses, and social support were part of the mediators or moderators that influence the effect of stress among caregivers (Pearlin et al., 1990).

University of Ghana http://ugspace.ug.edu.gh

Outcome, which is the last contributing factor of caregiver stress, is the effects of caregiver's abilities to maintain social roles or themselves. Therefore, failure to maintain themselves or social roles leads to decisions to end providing care, physical health problems, depression, cognitive disturbance, and anxiety. From the theory, preterm mothers who are not able to maintain themselves or social roles will experience high levels of depression and anxiety when faced with factors or challenges that contribute to their stress while practicing KMC at home. The present study focused on the direct relationship between preterm mothers' background and context, their stressors, and the mediators of stress on preterm mothers' outcomes such as depression and anxiety.

The Reformulated Theory of Learned Helplessness (Abramson, Seligman & Teasdale, 1978).

Seligman (1975) originally developed the learned helplessness theory, which explains how humans or animals are unwilling and unable to escape stimulus events or situations that lead to discomfort, suffering, or pain when subsequently exposed to the stimulus events or situations. Meaning, when individuals understand and perceive that they cannot control events or situations that lead to discomfort and pain, the individual begins to act and feel helpless. This act of helplessness occurs after the individual experiences such a stimulus event or situation.

Abramson et al. (1978) identified some flaws in Seligman's original learned helplessness theory by coming up with the reformulated theory of learned helplessness to address these flaws. Cognitive thinking was included in the reformulated theory of learned helplessness, to help determine whether individuals would be willing or unwilling to escape stimulus events that lead to individuals' discomfort or pain. Thus, Abramson and colleagues used the theory to elaborate on why some individuals are not anxious or depressed when faced with an unpleasant event.

University of Ghana http://ugspace.ug.edu.gh

According to the reformulated theory, individuals faced with a draining situation which they do not have control over may end up with cognitive deficit, emotional deficit, and motivational deficit (Abramson et al., 1978). The situation whereby an individual perceives a particular situation as uncontrollable is termed the cognitive deficit, whereas emotional deficit is the feeling associated with helplessness when an individual experiences a negative event as uncontrollable and such feeling includes depression and anxiety. An individual failure to avoid or escape a negative situation results in a motivational deficit.

Universal helplessness and personal helplessness were introduced by Abramson and colleagues to elucidate the relationship between depression and learned helplessness. A sense of helplessness whereby an individual believes that nothing can be done about the circumstances he or she is referred to as universal helplessness. This is where the person believes that no one is in the capacity to alleviate his or her discomfort or pain. Therefore, people use external attributions to their failure to solve problems and to their problems, under universal helplessness.

However, under personal helplessness, people use internal attributions for their problems and failure to solve their problems. This is because, with personal helplessness, the individual perceives that he or she is unable to provide solutions to negative situations he or she is experiencing but rather believes that the solution to the negative situation lies in the hands of others. Since they believe others can solve a negative situation, they become more prone to low self-esteem which leads to depression. Additionally, higher forms of emotional deficit are experienced by people who believe others are capable than themselves.

Preterm mothers may encounter difficult or negative situations they do not have control over in their daily lives when practicing KMC at home. Such difficult and uncontrollable situations

University of Ghana http://ugspace.ug.edu.gh

include infants' appearance, infant behavior, practicing KMC, community acceptance, and support. Preterm mothers may use the universal helplessness by making external attribution to the difficult situation. They make external attributions by believing that no one can control the behavior of their preterm infant. Personal helplessness may be used by preterm mothers by making use of internal attribution to the above difficult situations. For instance, preterm mothers may say they are unable to control others to accept their practice of KMC. Therefore, the difficult situation of the community not accepting preterm mothers because they are practicing KMC lies in the willingness of the community to control the difficult situation by making an effort to accept these mothers. This may lead to anxiety anytime mothers think of practicing KMC and depression may set in due to the feeling of helplessness.

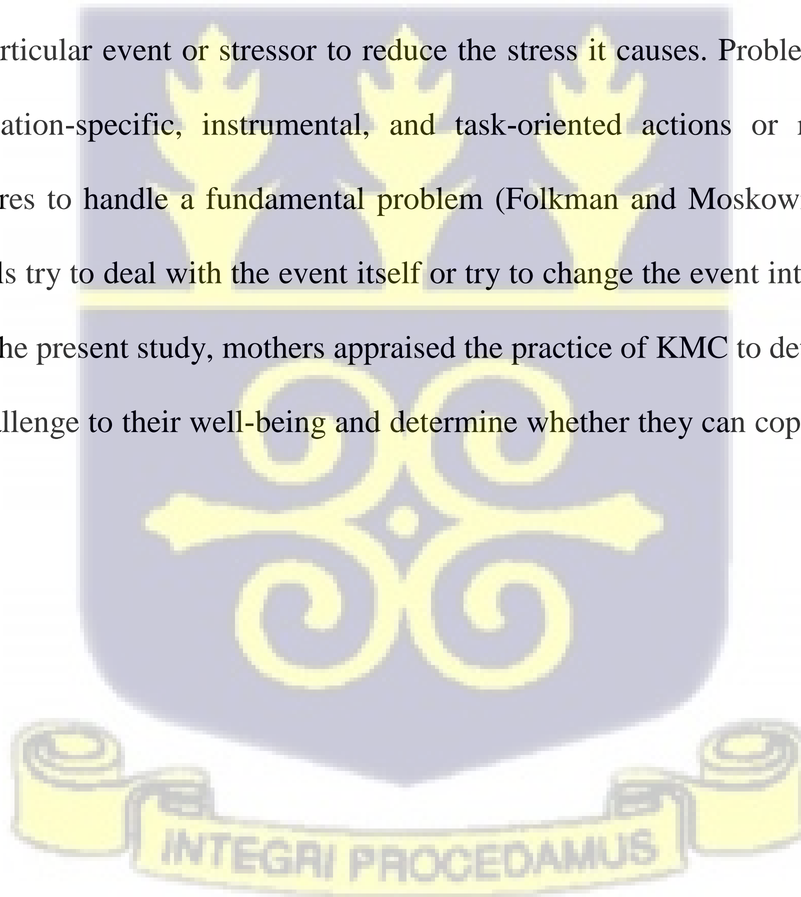
Transactional Model of Stress and Coping (Lazarus & Folkman, 1984).

The Transactional Model of Stress and Coping is a framework for assessing the processes of coping with stressful events. It proposes that stress is experienced as an evaluation (appraisal) of situations individuals find themselves in. When an individual faces a potential or perceived stressful event, he or she engages in a cognitive process that includes primary and secondary appraisal. Primary appraisal means evaluating a situation to decide whether it affects one's wellbeing positively, irrelevantly, or negatively (Wood et al., 2007). The situation or event could be harmful, threat and challenge especially if the situation or event is evaluated as stressful (Lazarus & Folkman, 1984). When damage (psychological) has already occurred, it is called harm. Anticipation of harm as a result of an event is termed as a threat while challenges refer to demands which make an individual feel confident about overcoming or mastering. An individual elicits negative emotions such as fear, anxiety, and anger when they evaluate an event as harmful or a

University of Ghana http://ugspace.ug.edu.gh

loss. However, individuals will experience positive emotions (i.e eagerness, excitement, and hopefulness) when they evaluate an event as challenging (Wood et al., 2007). The secondary appraisal is where an individual cognitively evaluates the available options and resources to decide if the individual can cope with the event or stressor (Wood et al., 2007). Adequate resources to cope with the event or stressor decreases an individual levels of stress. On the other hand, inadequate resources to cope with the stressor leads to higher stress levels.

Lazarus and Folkman identified two major coping strategies which include emotion-focused coping and problem-focused coping. Emotion-focused coping and avoidant coping, involves reducing and managing emotional distress. This is where the individual changes or reappraises the meaning of a particular event or stressor to reduce the stress it causes. Problem-focused coping consists of situation-specific, instrumental, and task-oriented actions or resources that an individual acquires to handle a fundamental problem (Folkman and Moskowitz, 2004). This is where individuals try to deal with the event itself or try to change the event into something more pleasant. With the present study, mothers appraised the practice of KMC to determine whether it is a threat or challenge to their well-being and determine whether they can cope with the stressor or not.



University of Ghana http://ugspace.ug.edu.gh

Review of Related Studies

Challenges of Kangaroo mother care among mothers with preterm infants

Mothers' general awareness of KMC serve as either barrier or enabler to the practice of KMC (Parmar et al., 2009). Study by Solomons and Rosant (2012) reported that mothers who had full knowledge in KMC were adherent to the practice of KMC in South Africa. However, studies (Abul-Fadi et al., 2012; Bazzano et al., 2012; Blomqvist et al., 2013; Bramson et al., 2010; Lemmen, Fristedt and Lundqvist 2013; Kumar et al., 2008; Vesel et l., 2013) showed non-adherent to KMC because preterm mothers had limited or no information about KMC. Quasem et al. (2003) identified fatigue as a major challenge preterm mother's encounter when practicing KMC. Additionally, preterm mothers continually expressed challenges such as discomfort on the chest, difficult sleeping with the infant on the chest, difficult with breastfeeding and discomfort associated with the infant temperature. Preterm mother's medical issues such as pain from episiotomy repair (Brimdyr et al., 2012), pain from caesarean section (Kymre & Bondas, 2013), maternal illness (Lee, Martin-Anderson & Dudley, 2012; Quasem et al., 2003) and among others was emphasized as a challenge for preterm mothers when practicing KMC. Thus, this study seeks to understand the challenges of KMC among mother with preterm infants in Ghana.

Studies have shown various challenges mothers with preterm infants' encounter when caring for their preterm infants especially with the use of KMC. A study by Suraju (2013) explored mothers care at home for their preterm infants within the Accra Metropolis and the study found that most mothers use KMC as a special way to care for their infants. Participants faced challenges such as sleep deprivation, inability to maintain personal hygiene and being cut off from social gatherings

University of Ghana http://ugspace.ug.edu.gh

because of the tedious and constant care of their infants. Siblings of the preterm infants were not given much attention, and this caused displeasure to mothers.

Another study by Gabriels et al. (2015) reviewed the experiences and needs of parents with infants within the NICU. Literature was searched through the following databases, PubMed, Cochrane Library, CINAHL, and PsychINFO. The study showed that parents' own physical needs (such as needs to eat, drink, sleep and shower) were seen as irritating and difficult when practicing KMC. Parents had other obligations at work or home but the practice of KMC both at the hospital and home impeded parents' ability to honor their obligations. In addition, parents complained of inappropriate and uncomfortable furniture and rooms for KMC at the NICU, which made it difficult to perform KMC for a longer period because of backache. Inadequate information and communication concerning caregiving activities is a challenge for parents in monitoring their child's condition when practicing KMC.

Mu et al. (2019) reviewed qualitative studies on the experiences of parents who have used kangaroo care for preterm infants in neonatal intensive care. By searching through English and Chinese databases for relevant studies and the use of the Joanna Briggs Institute, qualitative assessment and review instruments were used to extract the findings. The study pointed out that parents who practiced KMC faced challenges such as parental stress and role strain. These challenges become pressure points that make parents (especially mothers) feel as though they cannot cope with parental roles when practicing kangaroo care, which causes parents to experience a sense of emptiness and uncertainty about their parental role. This present study assessed the impact of the practice of KMC on mothers' level of psychological distress and their coping

University of Ghana http://ugspace.ug.edu.gh

strategies. That is to determine whether the challenges associated with the practice of KMC at home affect mothers' level of parental stress, depression and anxiety, and ways of coping.

Purbasary et al. (2017) conducted a study to investigate the effect of education about kangaroo mother care on young mothers' confidence and ability to implement KMC. The study employed a randomized controlled trial and equivalent groups of 13 mothers for each pre-test (control group)-post-test (intervention group). Mothers who were $\leq$ 25 years participated in this study. Questionnaires were used to measure mothers' confidence and mothers' ability to implement KMC was measured by the KMC observation sheet. The study pointed out the young mothers' confidence and ability to implement KMC increased after education about KMC. This means that before KMC education, young mothers had low confidence and were not willing to implement KMC because they lack knowledge and experience to handle family responsibilities together with the practice of KMC. Present study examines whether maternal age is a challenge to practice of KMC at home and its impact on mothers' psychological distress.

Kurniawati et al. (2019) did a study to investigate the effect of peer support on KMC implementation, infant's weight, and maternal self-confidence among four hospitals (Jakarta, Bekasi, Tangerang and Bogor). Twenty-four participants were grouped into an intervention group and a control group. The intervention group had their peers educating them on KMC while the control group did not have their peers educating them on KMC. Peers engaged in activities such as sharing their experience on KMC and demonstration of KMC in practice. A maternal self-confidence questionnaire was used to measure maternal self-confidence and observation for infant weight gain. Results have shown that infant weight gain, KMC implementation, and maternal self-

University of Ghana http://ugspace.ug.edu.gh

confidence have improved effectively as a result of peer support. This current study focused on how social support impacted mothers' psychological distress when practicing KMC at home.

Psychological distress (parental stress, anxiety, and depression) among mothers with preterm infants

Ango (2016) conducted a cross-sectional survey to examine the psychological distress and coping styles among mothers with preterm infants at Korle-Bu-Teaching hospital. The study sampled 150 preterm and term mothers (50 term mothers and 100 preterm mothers) at Korle-Bu-Teaching hospital. Results revealed less depression and anxiety among mothers with term infants at the NICU than preterm mothers. The NICU environment predicted depression and anxiety. Additionally, mothers' psychological distress was influenced by parental role, support from family, spiritual and collective coping styles. The current study examines how a specific caring giving approach or intervention (i.e KMC) influences mothers' level of depression and anxiety since the hospital environment might naturally have an impact on the mother's level of depression and anxiety. It seems appropriate for this study to examine mothers whose preterm infants have been discharged from the NICU. Moreover, the socio-economic background of mothers with preterm infants might cause mothers to differ in the way they perceive psychological distress. Mothers in Accra may experience different challenges when practicing KMC and this might cause them to perceive depression and anxiety differently from mothers in the Eastern Region. Therefore, the present study focused on preterm mothers in the Eastern Region and their level of depression and anxiety when practicing KMC at home.

INTEGRI PROCEDAMUS

Another empirical study by Rao et al. (2019) assessed anxiety and depression among postnatal mothers of preterm babies and evaluated whether Kangaroo Mother Care reduces mothers'

University of Ghana http://ugspace.ug.edu.gh

anxiety. Participants of 50 were grouped into two, the pre-kangaroo mother care and the post kangaroo mother care. This descriptive study showed that the total mean of the hospital anxiety and depression scale score was significantly less in the post kangaroo care group while mothers in the pre-kangaroo experience significant anxiety and depression. This means, kangaroo mother care can reduce mothers' stress level, which would affect the mother's level of depression and anxiety. Since mothers in the post kangaroo mother care used KMC for just one week, they might not have experienced the full challenges associated with the practice of KMC. Therefore, this research examines mothers who have used KMC for more than a week and how the stressful challenges influence their level of depression and anxiety.

Rogers et al. (2013) conducted a study to investigate the most useful factors which make mothers at risk for postpartum depression or anxiety when discharged from the NICU. Prospective cohort design was used to recruit 73 Caucasian and African-American preterm mothers for three years. At the time of discharge, comprehensive questionnaires were completed by participants to assess postpartum depression, anxiety, and demographic and psychosocial factors. The findings of the study showed clinically significant levels of depression among 20% of preterm mothers and moderate to severe anxiety among 43% of preterm mothers. Additionally, the study indicated that factors such as prolonged ventilation, parental role alteration, and being married contributed to the increase in depressive symptoms. Demographics and psychosocial factors did not contribute to the mother's anxiety levels. This means that few risk factors lead to anxiety among preterm mothers at the time of discharge. The current study examines the identified risk factors and their relationship with parental stress when practicing KMC at home among Ghanaian preterm mothers.

INTEGRI PROCEDAMUS

University of Ghana http://ugspace.ug.edu.gh

Scime et al. (2019) did a study to investigate the impact of skin-to-skin care on postpartum depression among preterm mothers or mothers with low-birth-weight infants. The study was conducted through a meta-analysis and systematic review at the neonatal intensive care units (NICU). Results of the mate-analysis indicated that continuous practice of skin-to-skin care thrice daily from 15 minutes to an hour was associated with a 1.04% reduction in depression. This is because, at the NICU, infants are separated from their mothers which causes mothers to be psychologically vulnerable therefore, the practice of skin-to-skin care helps alleviate mothers' psychological vulnerability. This study focused on the impact of the practice of KMC on mothers' psychological distress at home.

A study conducted by Soghier et al. (2020) investigated the risk factors and prevalence associated with parental depressive symptoms at neonatal intensive care unit (NICU) discharge and determined the relationships among social support, stress, and depressive symptoms. Standardized questionnaires (such as Center for Epidemiological Studies Depression Scale, Parental Stressor Scale: Neonatal Intensive Care Unit, Perceived Stress Scale, and Multidimensional Scale of Perceived Social Support) were shared among participants in Washington, DC who engaged in giving parental support trial two weeks before NICU discharged. Findings of the study indicated that at NICU discharge, there were high depressive symptoms and increased perceived stress among parents. Younger parents reported higher depressive symptoms and the study showed a positive association between depressive symptoms and parental stress. This is because infants' appearance and parental role alteration became constant stressors for parents to handle. In addition, social support was negatively associated with depressive symptoms. The current study examines mothers' psychological distress after a week of being discharged from the NICU.

INTEGRI PROCEDAMUS

University of Ghana http://ugspace.ug.edu.gh

A cohort study conducted by Herizchi et al. (2017) evaluated the effect of kangaroo mother care on the incidence of postpartum depression in mothers of preterm infants. With a sample of 60 mothers of preterm infants who were hospitalized in the NICU at Tabriz Al-Zahra hospital. Mothers were divided into two groups, mothers with three or more times or days of KMC and those with less KMC. Findings showed that there were no obvious differences at the beginning of KMC, which is the 10th day, but there was a significant difference in the 20th and 30th days. Depression in mothers with KMC decreased during follow-up times. At the NICU, mothers are separated from their infants and this mostly increases mothers' level of depression therefore, the intervention of KMC would reduce mothers' level of depression because it is an opportunity to get closer to their babies. The mother's level of depression will not necessarily be based on the stressful challenges of practicing KMC but rather the challenges at the NICU. Hence, this current study assessed mothers who have been discharged from the NICU and have full access to their preterm infants on any given day while practicing KMC more than three times.

Cekin and Turan (2017) conducted a study to determine the stress level of parents whose premature babies are hospitalized in the neonatal intensive care unit and to determine the factors affecting their stress. One hundred and one parent were sampled for this study. The researcher used face-to face interviews and filling of questionnaires to assess parents' level of stress and the factors that affect the stress levels in parents. The findings of the study show the highest rate of stress on the infants' appearance and behavior. In addition, parents who had children other than their babies in the NICU had high levels of stress. The mean score on the parental role alteration subscale shows that mothers had higher levels of stress than fathers. It could be the case that being admitted at the hospital alone can contribute to mothers' rate of stress because mothers cannot bring other siblings to the hospital to take care of them. This would be a challenge for mothers especially when they

University of Ghana http://ugspace.ug.edu.gh

do not have anyone around to support them. Hence, this current study determines whether other siblings of the discharged preterm infant influence mothers' level of stress when practicing KMC at home. Since mothers are the primary caregivers of preterm infants, the current study examines whether being married or not influences mothers' level of stress when practicing KMC at home.

Gray et al. (2013) conducted a longitudinal study to explore factors associated with parenting stress among preterm mothers. Participants of 105 preterm mothers and 105 term mothers were enrolled in the study between 2007 to 2009. Standardized questionnaires, such as Parenting Stress Index, the Short Temperament Scale for toddlers, and the Edinburgh Postal Depression Scale were completed by the participants at the age of one of their preterm infants. After comparing preterm and term mothers, the findings showed greater parenting stress among preterm mothers and less parenting stress among term mothers. Infant temperament and depressive symptoms were found as contributing factors for higher levels of parenting stress. The present study examines whether the practice of KMC at home is a risk factor for higher levels of parental stress in preterm mothers and its impact on the mother's psychological well-being.

Howe et al. (2014) examined the type and degree of parenting stress among families with very low birth weight infants for the first two years of life. It's an exploratory study with participants of 505 mothers (297 preterm mothers and 208 full-term mothers) from Tainan-Taiwan. Participants were assessed on the Neonatal Medical Index, Parenting Stress Index, and Behavior-based Feeding Questionnaire. Findings from the study showed that preterm mothers' levels of stress increases even though it was not statistically significant. Clinical intervention was warranted because preterm mothers demonstrated 13.1% of stress levels. Additionally, preterm mothers demonstrated different parenting stress and health difficulties such as more depression, role restriction, less

University of Ghana http://ugspace.ug.edu.gh

support from spouses, and social isolation. The present study focused on how the challenges of performing KMC affect parental stress among mothers.

Perceived stigma among preterm mothers

Murjuki (2017) did a study to determine health workers' perceptions on the factors that would affect KMC implementation in one rural country in Kenya. Participants of service providers and health facility managers engage in focus group discussions and in-depth interviews. Findings indicated that community perception of KMC and stigma served as barriers to the implementation of KMC by the mothers. Since the sociocultural background of Kenya is different from Ghana, the current study uses quantitative methods (questionnaires) to examine whether mothers with discharged preterm infants perceive stigma as one of the challenges when practicing KMC at home in the Ghanaian context.

Kampekete et al. (2018) investigated factors that influence the acceptance of KMC in the care of premature babies at the university teaching hospital, Lusaka Zambia. The study used a cross sectional analytical design with a mixed-method approach. Sixty mothers participated in the study. Results showed that 96.7% of the mothers did not agree that it was wrong to place a naked baby skin-to-skin between the breasts while 3.3% were not sure. Additionally, 45% observed the traditional beliefs of caring for a preterm infant while 55% did not. That is the 45% felt it was strange to practice KMC therefore, the mothers were stigmatized against the practice themselves. Since the sociocultural background differs from country to country, this present study assesses the acceptance of KMC from the mothers' environment (partner, family, friends, and community) and not just the mother. The present study focused on how acceptance of KMC influences mothers' psychological distress.

University of Ghana http://ugspace.ug.edu.gh

Mickelson (2015) conducted a study to examine the effects of perceived stigma on perceived support availability, negative interactions, and depression among parents of special needs children such as mental retardation, autism, and developmental delays. A short-term longitudinal method was used with participants from 109 parents of special needs children. Two interviews were conducted over four months among the parents. The study found that perceived stigma was consistently related to less perceived support availability from the respondent's parents, negative interactions with grandparents and spouse, and increased depressive symptomatology. Structural equation modeling suggested that perceived support availability of grandparents partially mediated the longitudinal relation between perceived stigma and depression. Since the population is different from the current study, it can be possible that mothers of preterm infants would have enough support from family and others. Which can affect mothers' perceived stigma. The present study would use mothers with preterm infants discharged from the NICU to know how parental stress would mediate the relationship between perceived stigma and psychological distress (depression and anxiety).

Perceived social support among preterm mothers

Opeara and Okonie (2017) did a study to explore mothers' knowledge and experiences with KMC at home after discharge from the University of Port Harcourt Teaching Hospital (UPTH). A simple structured interview and questionnaire were used to collect the data among 402 participants in Nigeria. The results of the study revealed that one of the commonest reasons for the termination of KMC was lack of support for domestic chores. Participants described KMC as both a restorative and energy-draining experience. Therefore, a supportive environment facilitates restorative experience while obstacles in the environment make the provision of KMC energy-draining for

University of Ghana http://ugspace.ug.edu.gh

parents. Thus, this current study examines mothers' level of perceived support from their environment and how it affects their psychological distress. Since support for domestic chores was the commonest reason for the termination of KMC in Nigeria, this study looked at the contributing factors for parental stress among preterm mothers at home.

In a related study, Gold et al. (2013) conducted a study to examine risk factors and the prevalence for depression among mothers with high-risk ill neonates in Ghana. Data were collected through a semi-structured interview among 153 participants at Komfo Anokye Teaching Hospital (KATH). The outcome of the study showed that several symptoms of depression were present among more than two-thirds of the mothers who have an infant(s) at the hospital. Subsequently, lack of perceived social support was indicated among the risk factors of postpartum depression among mothers with sick infants in Ghana. Hence, the study looked to quantitatively investigate the role of perceived social support on psychological distress among mothers with preterm infants who have been discharged from the NICU.

Ways of coping among preterm mothers

A study by Madu and Roos (2006) investigated maternal levels of symptoms of depression and ways of coping between preterm and full-term mothers in a hospital in Pretoria (South Africa). Convenient sampling was used to select 150 participants (50 preterm mothers and 50 term mothers) at Pretoria academic hospital. The study used the Edinburgh Postnatal Depression Scale (EPDS) and Ways of Coping Questionnaire to collect data from participants. The results of the study demonstrated that preterm mothers' highest levels of depression were positively related to them seeking for social support. This means that preterm mothers in this study cope with their challenges by depending solely on seeking social support. Hence, their inability to get this social

University of Ghana http://ugspace.ug.edu.gh

support or when these needs are not met sufficiently increases mothers' levels of depression. Since the study focused on how coping strategies contribute to depression, this recent study assesses how mothers cope with their psychological distress as a result of the challenges they face when performing KMC at home.

Rowe and Jones (2010) conducted a study to compare mothers' and fathers' patterns of stress, coping, and parenting efficacy for having low-risk preterm infants. The study applied to a longitudinal study. Participants of 25 couples from three special care nurseries in South East Queensland (Australia) completed a survey about their perception of their stress, coping, social support, and parenting efficacy just before their infant's discharge from hospital and three months later. Results of the study showed that both fathers' and mothers' appraisals of negative stress decreased three months after being discharged. Additionally, there were changes in mothers' and fathers' coping strategies and social support. This is where after transitioning from hospital to home, family routines and life gets established which causes extended support networks (such as support from kinship and informal kinship) to diminish. Thus, parents cope by consulting other parents and medical staff. It is difficult to generalize the above findings because of its small sample size and the different sociocultural background that exists between Australia and Ghana. Therefore, the present study focuses on how mothers' cope after being discharged.

Linden et al. (2015) examined factors that predict parenting stress in a longitudinal cohort of children born very prematurely at age seven years. Participants were 100 parents with preterm infants and a control group of 50 parents with term-born infants between 2001 and 2004 with follow-up at seven years. Parenting Stress Index, Ways of Coping Questionnaire, Child Behavior Checklist, Beck Depression Inventory, and the State-Trait Anxiety Inventory questionnaires were

University of Ghana http://ugspace.ug.edu.gh

used to assess participants. From the findings, it was found that parents' use of avoidance coping predicted higher parenting stress. Once a particular way of coping can predict parenting stress, then it will be more suitable for this present study to investigate the kind of coping mothers used when faced with higher psychological distress as a result of the challenges associated with the practice of KMC at home.

Another study by Awah and Bimerew (2016) explored and described the coping strategies and support needs of mothers with preterm infants admitted to a neonatal care unit in one hospital in Cape Town. The study adopted descriptive and exploratory design to elicit information from participants using semi-structured interview techniques. Purposive sampling was used for sample selection. The study showed that mothers cope by praying, attachment to the baby, acceptance of the situation, and support from others. Since the study focused on how mothers' ways of coping at the NICU, it will be appropriate for this current study to quantitatively focus on how mothers cope at home after being discharged from the hospital.

Al-Maghaireh et al. (2020) conducted a study to investigate how emotional support training programs impact acute stress disorder levels among mothers of preterm infants admitted at the neonatal intensive care unit at a public teaching hospital in Amman at Jordan. The study used a pretest-posttest experimental randomized controlled trial design with 24 participants in each group (control and intervention). Participants in the intervention group were introduced to the emotional support training program. The emotional support training program is where participants in the intervention group had the opportunity to express their feelings and share their experiences with other preterm mothers at the NICU. Also, participants in the intervention group were given psychological training on how to handle their acute stress disorder. It was revealed that there were

University of Ghana http://ugspace.ug.edu.gh

statistically significant differences between the control group and the intervention group. This means that emotional support helps reduce the amount of acute stress that mothers experience while at the NICU. Hence, the present study investigates how preterm mothers cope with psychological distress while in the house and how effectively it influences mothers' psychological distress.

Schreuder et al. (2012) explored styles of coping relating to work environment and health status among nurses in both Dutch and Norwegian hospitals. A comparative study design was used and questionnaires were used to assess nurses' work environment, health, and coping styles. Findings from the study indicated that Norwegian nurses made use of active problem coping which correlates with good general health. However, the use of emotion-focused coping by both the Dutch and Norwegian nurses was associated with poor mental health, low job control, and poor general health. This shows that cultural differences did not influence the outcome of the use of emotionally focused coping therefore, the current study seeks to establish how preterm mothers cope and its outcome on depression and anxiety within the Ghanaian context.

A pilot study conducted by Jones et al. (2010) investigated factors that led to stress among medical students when caring for cancer patients and identified how the medical students cope with these stresses. Self-administered questionnaires such as brief cope inventory was given to 80 medical students from the University of Birmingham, UK. The findings of the study showed that males experienced lower levels of stress than the females and factors such as breaking bad news, patients' condition, and biopsychosocial effects of cancer contributed to the stress. Additionally, it was reported that most students used problem-focused coping and those who experienced higher levels of stress used both problem-focused coping and emotion-focused coping. The study indicated a

University of Ghana http://ugspace.ug.edu.gh

positive relationship between the two coping styles (emotion-focused coping and problem-focused coping) and stress. This means that both coping styles were not effective in handling stress among the medical students. Cultural differences and the type of stress the medical student encounters may be the reason why the coping strategies were not effective therefore, the present study examines effective coping styles that preterm mothers used when depressed and anxious.

Another empirical study by Gueritault-Chalvin et al. (2014) examined how nurses cope with occupational burnout and work-related stress when providing care for people with AIDS. Four hundred and forty-five (445) nurses completed self-administered questionnaires such as the ways of coping scale, rotter's internal-external locus of control scale, and Maslach burnout inventory. The outcome of the study showed that emotion-focused coping positively correlated with burnout. This means that frequent use of emotion-focused coping did not decrease nurses' burnout during caretaking. However, the findings also showed a negative correlation between problem-focused coping and burnout. Nurses who used problem-focused coping experienced lower levels of burnout therefore, the use of problem-focused coping becomes a protective factor for nurses.

Contrary to the above study Cooper et al. (2008) conducted a study to examine how caregivers of people with Alzheimer's disease cope with caregivers' burden, anxiety, and depression. The study employs a longitudinal study design with all participants sampled from the UK. The findings of the study showed that more caregivers used problem-focused coping with fewer participants using emotion-focused coping. Further findings showed that the use of emotion-focused coping decreased the levels of anxiety whilst more use of the problem-focused coping led to an increase in anxiety a year later. This is because caregivers perceive the problems of caring for people with Alzheimer's disease as intractable thus, the use of problem-focused coping becomes ineffective

University of Ghana http://ugspace.ug.edu.gh

and frustrating for caregivers. Since the problems associated with the practice of KMC at home are not intractable, this present study examines the kind of coping ways preterm mothers adopt when depressed and anxious.

Summary of Relate Studies

Literature have showed that preterm mothers faced challenges such as sleep deprivation, inability to maintain personal hygiene, being cut off from social gatherings, neglect of other siblings of the preterm infants, other obligations at work or home, inappropriate and uncomfortable furniture, family acceptance, maternal age, lack of knowledge about the practice of KMC and lack of social support when practicing KMC (Gabriels et al., 2015; Gold et al., 2013; Lewis et al., 2019; Mu et al., 2019; Opeara & Okonie, 2017; Purbasary et al., 2017; Suraju, 2013).

Studies indicated that factors such as prolonged ventilation, parental role alteration, being married, lack of support from family and lack of coping strategies contributed to the increase in depressive, stress and anxiety symptoms at the NICU environment (Ango, 2016; Cekin & Turan, 2017; Gray et al., 2013; Rogers et al., 2013; Soghier et al., 2020). Additionally, the practice of kangaroo or skin-to-skin care predicted both anxiety and depression (Rao et al., 2019; Scime et al., 2019; Herizchi et al., 2017). Perceived stigma was found to be associated with the practice of KMC by increasing depressive and anxiety symptomatology (Kampekete et al., 2018; Mickelson, 2015; Murjuki, 2017).

Parents cope with their psychological distress by seeking for social support, consulting other parents and medical staffs, seeking emotional support, avoidance, praying, attachment to the baby, acceptance of the situation and problem-focused coping (Awah & Bimerew; 2016; Al-

University of Ghana http://ugspace.ug.edu.gh

Maghaireh et al., 2020; Cooper et al., 2008; Linden et al., 2015; Madu & Roos, 2006; Rowe & Jones,2010)

Research Hypotheses

1. a. There will be a significant negative association between problem-focused coping and psychological distress (i.e., depression and anxiety)

   1b. There will be a significant negative association among emotion-focused coping and psychological distress (i.e., depression and anxiety).

   1c. There will be a significant positive association among avoidant coping and psychological distress (i.e., depression and anxiety).

2. There will be a significant positive relationship between perceived stigma and parental stress.
3. There will be a significant negative relationship between perceived social support and parental stress.
4. There will be differences in psychological distress (i.e depression and anxiety) concerning having other siblings, marital status, and maternal age.
5. Parental stress will mediate the relationship between perceived stigma, perceived social support and psychological distress (i.e depression, and anxiety)

University of Ghana http://ugspace.ug.edu.gh

Conceptual Framework

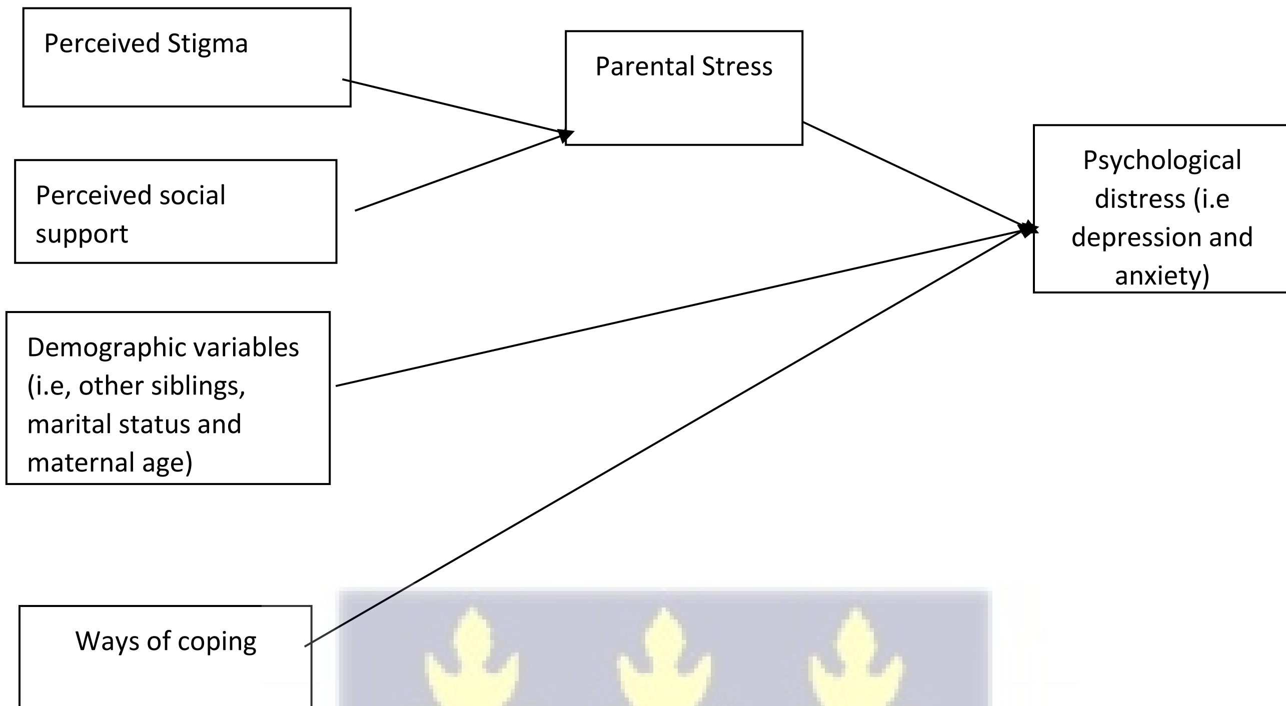


Figure 1 Hypothesised conceptual model

In this model, we assumed that perceived stigma and perceived social support would have a direct influence on parental stress. In addition, parental stress is assumed to mediate the relationship between perceived stigma, perceived social support and psychological distress (depression and anxiety). Lastly, demographic variables (i.e., other siblings, marital status and maternal age) and ways of coping are assumed to have a direct influence on mothers' level of psychological distress (depression and anxiety). Hence, the present study assessed the role of the independent variables (perceived stigma, perceived social support, others siblings, marital status, maternal age and ways of coping) on the dependent variable psychological distress (depression and anxiety). Additionally, to assessed the potential mediating effect of parental stress on the relationship between perceived stigma, perceived social support and psychological distress (depression and anxiety)

University of Ghana http://ugspace.ug.edu.gh

Definition of terms

Kangaroo Mother Care: Prolonged skin-to-skin contact where a stable LBW preterm infant is placed and carried in skin-to-skin contact of the mother.

Psychological distress: An individual expression of parental stress, depression and anxiety in response to a specific stressor.

Perceived stigma: The fear of being discriminated against by family, friends, significant others and society.

Perceived social support: Is when an individual perceive sources available to provide material, psychological and overall support during times of need.

Problem-focused coping: Is when an individual perceives he or she can change a stressful situation

Avoidant coping: Is when an individual ignores his or her emotions to alleviate distress by changing the meaning of a particular stressful event.

Emotion-focused coping: Is when an individual tries to manage the magnitude of stress on his or her emotions.

Research Rationale

There are studies of mothers with preterm babies in Ghana, yet, there is sparse literature in Ghana about KMC after discharge from the NICU. The majority of studies on preterm mothers focus on the experiences, detriments, psychological distress, and coping at the NICU (Adu-Bonsaffoh, et al., 2019; Ango, 2016; Aseidu, et al., 2019). Fewer studies, for instance (Akum, 2018; Suraju, 2013) focus on the care of preterm infants at the home or after discharge. But there is limited

University of Ghana http://ugspace.ug.edu.gh

knowledge about challenges related to the practice of KMC at home and its impact on mothers' psychological distress and how mothers cope after being discharged from NICU. Hence, to fill the gap, this study seeks to investigate the challenges associated with the practice of KMC at home, its impact on mothers' psychological distress (parental stress, depression, and anxiety), and how mothers cope with the psychological distress.

University of Ghana http://ugspace.ug.edu.gh

CHAPTER THREE

METHODOLOGY

Introduction

The chapter presents comprehensive information on the study design, settings, participants and sampling, measures of the study, procedures, ethical considerations and analysis of the data.

Design

The study employed a cross-sectional research design, because it draws conclusions or inferences about a population of interest at one point in time and examines a large number of variables (Wang & Cheng, 2020). Thus, this helped determined varying views of the participants regarding the issues under investigation concerning the use of KMC among mothers with preterm infants as well as accommodating different characteristics such as age, number of children and marital status. The instrumentation for the research was the distribution of questionnaires to obtain information.

Study setting

This current study was conducted in the Eastern Region of Ghana specifically at the Eastern Regional Hospital in the New Juaben South Municipality in Koforidua. According to the Ghana Health Service report (Ghana Health Service, 2016), 25, 285 teenage girls were impregnated over the past two years and since teenage pregnancy is a high-risk factor of preterm birth it is more appropriate to conduct the study at the Eastern Region (especially at the Eastern Regional Hospital). Moreover, a study by Sarfo (2018) showed that because of the increase in numbers of preterm delivery, the Eastern Regional hospital has a well-structured Kangaroo clinic for preterm

University of Ghana http://ugspace.ug.edu.gh

infants and their mothers aside from the NICU. That is, the clinic provides both in-patient and outpatient KMC (Sarfo, 2018). With an in-patient Kangaroo clinic, caregivers are introduced to KMC and allowed to practice intermittent skin-to-skin contact with their infants, before being discharged from the NICU. Out-patient kangaroo clinic is where the clinic follows-up care after being discharged. This is where caregivers have to come for reviews after being discharged.

Participants and Sampling

Sample participants were recruited from the Eastern Regional Hospital through the use of purposive sampling and convenient sampling techniques. Purposive sampling was used because the population (mothers with preterm infant) consists of specific individuals who bare the relevant information considering the research. Convenient sampling was used because these individuals must be available, accessible to the researcher and be willing to give consent to participate in the study. In addition, the study was open to all persons irrespective of their religious and educational background. Since teenage pregnancy is one of the major risk factors for preterm delivery, it was appropriate to include mothers from 15 years old and above. The convenient sampling technique allowed the population an opportunity to participate without any discrimination.

For this research, one hundred and twenty (120) participants were sampled from the population to participate in the study. Minimum sample size determination ($N > 50 + 8m$ where m=number of variables) offered by Tabachnick and Fidell (2013) for regression-based analysis was used to determine the sample size selection. Therefore, the study with 8 variables will need a minimum sample of 114 participants. Hence, a sample size of 120 was adequate for this study. Informed consent was sought from participants themselves, assent from guardians where the participants

University of Ghana http://ugspace.ug.edu.gh

were below 18 years and consent from the participants themselves after the assent. Withdrawal from this study was acceptable at any point during this study.

Inclusion criteria

Inclusion criteria for the study, (a) mothers with preterm infants who have been discharged home for more than a week and are 15 years and beyond, (b) mothers with preterm infants who could effectively communicate in Twi and English participated in this study.

Exclusion criteria

Exclusion criteria include; (a) mothers with preterm infants who might be too ill to communicate in English and Twi; (b) mothers whose infants have been discharged from the NICU less than one week. This is because at that point mothers have not experienced much stress in the home.

Measures/Materials

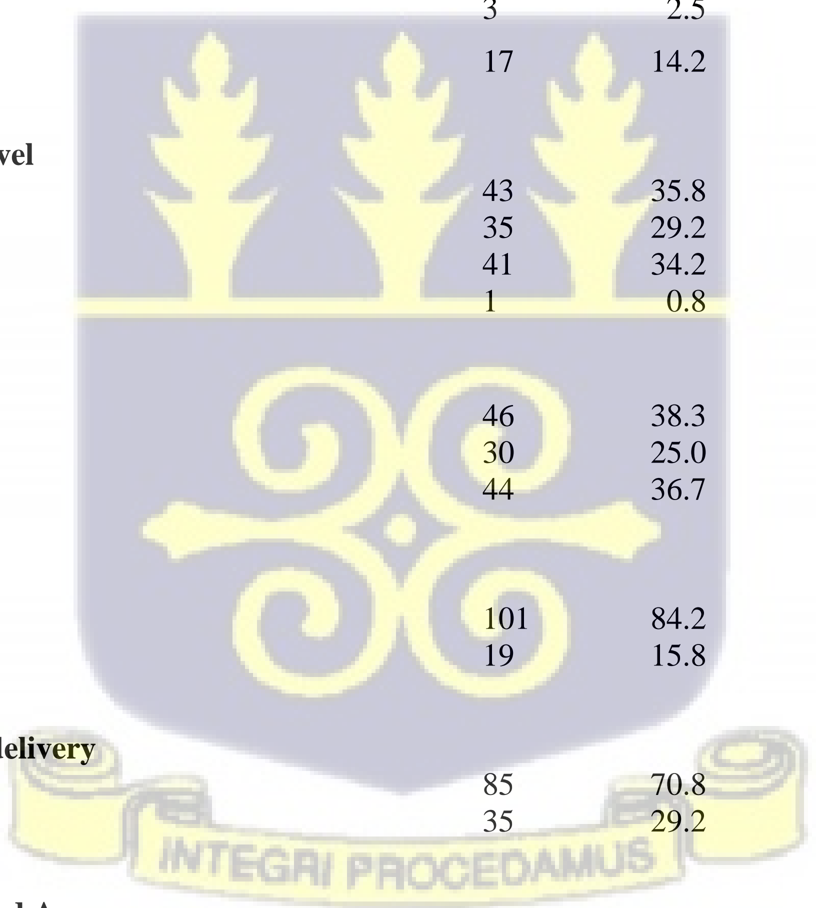
Demographic Information

Participants completed a brief demographic questionnaire in which they were asked to indicate their age, working status, religion, number of children, marital status, and educational level. Table 1 summarizes the characteristics of the study participants.

University of Ghana http://ugspace.ug.edu.gh

Table 1: Summary of Demographic Characteristics of Participants in the Study (N =120)

Variables	Frequency	Percentage	Mean	SD
Number of children			1.37	2.42
Weeks after discharged			0 .65	0.98
Maternal Age range Teenagers				
(16-19 years)	12	10.0		
Young Adult (20-30 years)	55	45.8		
Adult (31-40 years)	41	34.2		
Old Adult (41years & above years)	12	10.0		
Marital status				
Single	40	33.3		
Married	60	50.0		
Divorced	3	2.5		
Cohabiting	17	14.2		
Educational level				
Basic	43	35.8		
Secondary	35	29.2		
Tertiary	41	34.2		
Others	1	0.8		
Occupation				
Employed	46	38.3		
Unemployed	30	25.0		
Others	44	36.7		
Religion				
Christian	101	84.2		
Muslim	19	15.8		
Type of child delivery				
Caesarian	85	70.8		
Self-delivery	35	29.2		
Childs corrected Age				
0-3 months	53	44.2		
4-6 months	42	35.0		
7-9 months	23	19.2		
10-12 months	2	1.7		



University of Ghana http://ugspace.ug.edu.gh

Parenting Stress: Parenting Stress Scale (PSS) (Berry & Jones, 1995).

It is an 18-item self-report scale, which measures stress due to parenting a child (Berry & Jones, 1995). This scale takes into account positive (emotional benefits, personal development) and negative (demands on resources and restrictions) aspects of parenting. It is on a 5-point scale (1- strongly disagree, 2- disagree, 3- undecided, 4- agree & 5- strongly agree) for participants to indicate the degree to which they agree or disagree with each item. Examples of the items include; "Caring for my child sometimes takes more time and energy than I have to give, it is difficult to balance different responsibilities because of my child and I feel overwhelmed by the responsibility of being a parent". For scoring, items 1, 2, 5, 6,7,8, 17 and 18 should be reversed before summing up all the items. Thus, possible scores on the scale can range between 18-90. Lower scores signify a low level of stress while high scores signify a high level of stress. The scale has an internal reliability of (.83) and test-retest reliability of (.81) (Berry & Jones, 1995).

Psychological distress: Brief Symptom Inventory (BSI) (Derogatis & Melisaratos, 1983).

It aims is to demonstrate the clinical psychological symptoms of medical, psychiatric and healthy subject. It a self-report inventory with 53-items. Measures three global dimensions of psychological distress and nine profiles of primary symptom areas. But this study made use of only anxiety and depression subscales. Answers are on a 5-point likert scale (0 = not at all, to 4 = extremely). All items under all the subscales are added and divided by 53 (the total number of items on the scale) in order to obtained the Global severity index (the total score on the scale).

Depression has 6 items with sample questions such as "Feeling lonely, feeling sad and Feeling hopeless about the future''. Anxiety is measured on 6 items with sample questions such as

University of Ghana http://ugspace.ug.edu.gh

"Suddenly scared for no reason, Feeling fearful and Spells of terror or panic". The BSI has a high Cronbach's α for all the subscales, which is within 0.71 to 0.85 (Derogatis, & Melisaratos, 1983).

In addition, a study among Ghanaian mothers with preterm infants reported a reliability for BSI Depression subscale as 0.74 and BSI Anxiety subscale of 0.81 (Ango, 2016).

Perceived Social Support: Multidimensional Scale of perceived social support (MSPSS) (Zimmert et al., 1988)

Multidimensional Scale of Perceived Social Support (MSPSS) evaluates people perceptions of social support received from 3 sources. It consists of three subscales which includes Family (4 items), sample question —My family really tries to help me; Friends (4 items), sample question —I can talk about my problems with my friends; and Significant Other (4 items), sample question —I have a special person who is a real source of comfort to me. The scale consists of 12 items, with 4 items for each subscale, rated on a 7- point Likert scale ranging from (1) strongly disagree to (7) very strongly agree. Ango (2016) reported a total consistency of Cronbach alpha 0.88 among mothers with preterm infants. For scoring, calculate the mean score of each subscale and divide it by 4. Therefore, any score low score (i.e 1-2.9) is considered as low support, moderate score (i.e 3-5) is considered as moderate support or support and higher scores (i.e 5.1-7) are considered as high support.

Coping: Brief Cope Inventory (BCI) (Carver, 1997)

The Brief Cope Inventory is a self-report measure for coping and a short version of the COPE inventory (Carver et al., 1989). This Inventory assesses different coping strategies people would use when they encounter a particular stressful condition. It's made up of 14 subscales that are categorized into adaptive coping and maladaptive coping (Meyer, 2001). Adaptive coping includes

University of Ghana http://ugspace.ug.edu.gh

seeking social support, emotional support, planning, humor, active coping, reframing, use of religion and acceptance. Maladaptive coping also includes denial, self-blame, substance use, venting, behavior disengagement and self-distraction. These 14 subscales consist of 2 items each which sum up to 28 items on the Inventory with a sampled question of 'I've been trying to find comfort in my religion or spiritual beliefs' (religion) and 'I've been trying to get advice or help from other people about what to do' (instrumental support). The 14 subscales are categorized into three overarching coping ways. It includes the problem-focused coping, emotion-focused coping, and avoidant coping. Responses are rated on a 4-point Likert scale ranging from (1) I haven't been doing this at all to (4) I've been doing this a lot. The Inventory was developed from theoretical models such as behavioral self-regulation and Lazarus' transactional model of stress (Muller & Spitz, 2003). Additionally, it is used to evaluate trait coping and state coping. The usual way an individual copes with everyday life stressors is term as trait coping while the specific way an individual uses to cope with specific stressful situations is referred to as state coping. Internal consistency for the 14 subscales ranges from α= 0.57 to 0.90 (Carver, 1997). To score the items, each overarching coping ways are summed up and divided by the number of items under each overarching coping ways. Higher scores for each overarching coping ways indicate participates use of such coping way while lower scores indicate less use of such coping way.

Perceived Stigma: Perceived Stigma Scale – Revised (PSSR) (based on Mickelson et al., 1999)

The Perceived Stigma Scale is a self-report measure, adapted from other measures of perceived stigma (Crandall, 1991; Levinson & Starling, 1981). Mickelson's Perceived Stigma Scale contains eight items, assessed on a 5-point Likert scale (1=Definitely False; 3=Neither; 5=Definitely True). The eight items have been found to have an internal consistency coefficient of .76 and test-retest

University of Ghana http://ugspace.ug.edu.gh

reliability of .78 (Mickelson, 2001). This current study will adapt from Mickelson et al. (1999), which assessed perceived stigma among parents of children with special needs. According to Mickelson (2001), the scale has been used with a variety of different populations by changing the wording to match the stigma with which that specific population deals. The current study will reword the items so that the stigma reaction being measured will be in response to practicing of KMC after discharge. The scale will be administered three times in the current study, to assess parenting-related perceived stigma in three different contexts: (a) among family members, (b) friends (c) within the community of the mother. Therefore, the above three-context makes the total items 24 whereby the higher total scores indicated a higher level of parenting-related perceived stigma.

Pilot study

Prior to the start of the study, reliability for the five scales used in the study were tested. The main focus of the pilot study was to determine how the responses of the population under study would affect the reliability of the scales. A Study by Bonsu (2014) reported the acceptability and appropriateness of Brief Cope measure as .82 among formal caregivers in Ghana. Additionally, study conducted by Nuworza (2013) reported an acceptability and appropriateness of the Brief Symptom Inventory as a Cronbach alpha value of .89 with depression of .70 and anxiety of .78 among diabetic patient. Dzadey (2015) did a study among Ho Presbytery and reported an acceptability and appropriateness of parental stress as .83. Lastly, study by Ango (2016) reported an acceptability and appropriateness of Multidimensional Scale of perceived social support as a Cronbach alpha value of .90 among preterm mothers in the neonatal intensive care unit of Korle-Bu Teaching Hospital.

University of Ghana http://ugspace.ug.edu.gh

The pilot study for this study took place at the Nsawam hospital after permission have been sought. Sample size selection for the pilot study was determined by 10% of the total sample of the study (Connelly, 2008). Therefore, twelve preterm mothers at the Nsawam hospital were recruited to participate in the pilot study. Analysis showed that the Cronbach's alpha for Parenting Stress Scale (.72), Perceived Stigma Scale (.75) and Brief Symptoms Inventory for depression (.72) and anxiety (.78) was acceptable. Multidimensional scale for perceived social support (.92) and Brief Cope Inventory (.86) reported a preferable reliability.

Procedure

The Eastern Regional hospital research team and the Head of the Kangaroo clinic in the Eastern Regional Hospital granted permission for collection of data after receiving the Psychology Department introductory letter. After granting permission, the researcher identified and engaged preterm mothers who met the inclusion criteria ate the Kangaroo clinic. Participants were then asked individually to complete the standardized structured questionnaires. Participants who willingly participated in the study gave written informed consent and mothers also gave assent to participants who were below 18 years old. Consent was given by either thumb printing or signing of a signature. Some participants were assisted to complete the questionnaires because they were not literate enough with the language of the questionnaires and the English language. The researcher used 4 weeks to complete the data collection and participants were not compensated for their participation.

INTEGRI PROCEDAMUS

Ethical considerations

Permission was sought from the Ethical Committee of Humanities and the institution where the data was collected. Informed consent, which is an ethical consideration in research, require*s* that

University of Ghana http://ugspace.ug.edu.gh

participants are fully informed about the procedures and risks involved in research and must give their consent to participate. Informed consent was employed in the study by explaining and giving participants detailed information about the purpose of the study. Participants were made aware that there was a psychological risk as a result of recall of psychological distress involved before they could sign to confirm their voluntary participation. The clinical psychologist at the hospital was engaged to assist participants who may be at risk before the researcher began the data collection. The researcher guaranteed the participant's confidentiality with a verbal statement put in strict privacy or secrecy. They were assured that information will not be made available to anyone who is not directly involved in the study because data collected was locked under a key. The principle of anonymity, which essentially means that the participant's identity will not be revealed throughout the study even to the researcher themselves, was employed. This was done because names were not required or needed to be stated on the questionnaires, thus guaranteeing privacy.

Additionally, the researcher did not compromise on the safety protocols of COVID-19 (i.e., social distancing and wearing of nose marks) during data collection, in order to protect the researcher as well as the participants. This was done by wearing the nose mask and observing the approved social distance between the researcher and the participant anytime the researcher gets to the field to collect data.

Data analysis

The statistical package for social sciences (SPSS version 23) was used to analyze the descriptive statistics and the data collected during the study.

University of Ghana http://ugspace.ug.edu.gh

Hypothesis 1a, 1b, 1c, 2 and 3 was analyzed using multiple regression because it determines how much each independent variable (problem-focused coping, emotion-focused coping, avoidant coping, perceived stigma, perceived social support) explains the unique variance in the dependent variable psychological distress (parental stress, anxiety and depression).

Hypothesis 4 was analyzed using One-way ANCOVA because it tested the mean difference between selected factor variables containing more than 2 categories (maternal age, marital status and having other siblings) and dependent variable psychological distress (depression and anxiety).

Hypothesis 5 was measured on regression (Process Marco) because it will test the relationship between two predictors (perceived stigma and perceived social support) and psychological distress (depression and anxiety) through a mediator variable (parental stress).

University of Ghana http://ugspace.ug.edu.gh

CHAPTER FOUR

RESULTS

Introduction

The study was aimed to investigate the challenges (perceived stigma, perceived social support, marital status, maternal age and having other children) associated with the practice of KMC at home, its impact on mothers' psychological distress (parental stress, depression and anxiety) and mothers' ways of coping with the psychological distress. The data was analyzed using the Statistical Package for Social Sciences v23. This chapter outlines the descriptive statistics of the study variables and inferential statistics of the study by using appropriate figures and tables.

Summary of descriptive analyses

Table 2 reported the mean score and standard deviation of parental stress, perceived social support, perceived stigma, depression, anxiety, active coping, informational support, positive reframing, planning, emotional support, venting, humor, acceptance, religion, self-blame, self-distraction, denial, substance use, and behavioral disengagement.

Participants in the study had a negative skewness and a relatively flat kurtosis in relation to parental stress. With perceived social support, participants had a negative skewness and a positive kurtosis value. Participants on perceived stigma had a negative skewness value and a relatively flat kurtosis value. Depression levels reported a positive skewness and relatively flat kurtosis. Anxiety levels of participants also had a negative skewness and a relatively flat kurtosis.

Active coping had a negative skewness value and relatively flat kurtosis score. Informational support reported a negative skewness score and relatively flat kurtosis. Positive reframing also

University of Ghana http://ugspace.ug.edu.gh

reported a negative skewness score and a relatively flat Kurtosis. Planning reported a negative skewness and a flat kurtosis score. Emotional support had a negative skewness and a positive kurtosis. Venting and humor reported had a positive skewness score and flat kurtosis score. Acceptance and religion had a negative skewness and a positive kurtosis. Self-blame and denial had a positive skewness and flat kurtosis. Self-distraction, substance use and behavioral disengagement had a negative skewness, and positive skewness for substance use and disengagement. With a flat kurtosis for self-distraction and behavioral disengagement and a positive Kurtosis score for substance use.

Table 2: Summary of Descriptive Statistics of Study Variables

Variables	Mean	SD	Skewness	Kurtosis
Parental Stress	47.84	9.47	-.63	.04
Perceived Social Support	58.97	17.18	-1.03	1.31
Perceived Stigma	22.23	6.73	-.69	-.53
Depression	12.92	5.01	.20	-1.01
Anxiety	16.77	6.03	-.31	-.94
Subscales of Brief coping Active coping	5.66	1.89	-.84	-.25
Informational Support	6.19	1.82	-.90	-.16
Positive reframing	5.10	1.69	-.47	-.46
Planning	5.04	1.73	-.33	-.94
Emotional Support	6.53	1.77	-1.15	.45
Venting	4.83	1.95	.024	-1.10
Humor	2.50	1.04	2.46	6.92
Acceptance	5.33	1.37	-.24	.02
Religion	6.79	1.75	-1.62	1.80
Self-blame	4.63	2.52	.24	-1.66
Self-distraction	5.69	2.06	-.74	-.75
Denial	3.71	1.62	.67	-.36
Substance use	2.17	.74	5.74	37.44
Behavioral disengagement	3.62	1.63	.74	-.23

University of Ghana http://ugspace.ug.edu.gh

Hypotheses testing

Hypothesis 1a. *There will be a significant negative association between problem-focused coping and psychological distress (i.e., depression and anxiety)*

1b. There will be a significant negative association among emotion-focused coping and psychological distress (i.e., depression and anxiety).

1c. There will be a significant positive association among avoidant coping and psychological distress (i.e., depression and anxiety).

Multiple regression was used to determine how much each independent variable (problem-focused coping, emotion-focused coping, and avoidant coping) explains the unique variance in the dependent variable psychological distress (depression and anxiety).

Table 3 ***Summary of Multiple Regression of Ways of Coping on Psychological Distress (Depression and Anxiety)***

Depression							
Predictor	*B*	*SE B*	*Β*	*T*	*P*	95% confidence interval	
						Lower bound	upper bound
Problem-focused coping	.07	.13	.07	.53	.60	-.19	.32
Emotion-focused coping	.07	.13	.07	.51	.61	-.19	.32
Avoidant coping	.38	.13	.31	2.84	.005	.11	.64
Anxiety							
Problem-focused coping	.08	.15	.07	.54	.59	-.21	.37
Emotion-focused coping	.28	.15	.25	1.85	.07	-.02	.57
Avoidant coping	.34	.15	.23	2.21	.03	.03	.64

P<0.05

From Table 3, it was showed that there was a significant positive association between avoidant coping and mothers' level of psychological distress depression at the significance level of .05, [$\beta = .31, t = 2.84, p < .05$]; anxiety at the significance level of .05, [$\beta = .23, t = 2.21, p < .05$]. This

University of Ghana http://ugspace.ug.edu.gh

means that the more preterm mother uses avoidant coping the higher their levels of depression and anxiety. Also, the less preterm mother uses avoidant coping the lower their levels of depression and anxiety. Therefore, hypothesis 1c was supported because there was a positive association among avoidant coping and psychological distress (depression and anxiety).

Additionally, from Table 3, it was showed that there was no significant association between problem-focused coping, emotion-focused coping and depression [$\beta = .07, t = .53, p > .05$]; [$\beta = .07, t = .51, p > .05$] and anxiety [$\beta = .07, t = .54, p > .05$] [$\beta = .25, t = 1.85, p > .05$]. This means that preterm mother use of both problem-focused coping and emotion-focused coping did not have an impact on depression and anxiety. Therefore, hypothesis 1i and 1ii was not supported by the above findings.

Hypothesis 2: *There will be significant positive association among perceived stigma and parental stress.* Multiple regression was used to determine how much each independent variable in hypothesis 2 & 3 (perceived stigma and perceived social support) explains the unique variance in the dependent variable (parental stress).

Hypothesis 3: *There will be significant negative association among perceived social support and parental stress.* Multiple regression was used to determine how much each independent variable in hypothesis 2 & 3 (perceived stigma and perceived social support) explains the unique variance in the dependent variable (parental stress).

University of Ghana http://ugspace.ug.edu.gh

Table 4 ***Summary of the Multiple Regression of Perceived Stigma and Perceived Social Support on Parental Stress***

Predictor	*B*	*SE B*	*Β*	*T*	*P*	F	95% confidence interval	
							Lower bound	upper bound
Perceived Stigma	.40	.12	.56	4.74	.000	10.11	.32	.79
Perceived social support	-.21	.05	-.12	-2.59	.011		-.21	-.03
Family support	.05	.19	.07	.36	.723		-.31	.45
Friends support	-.19	.09	-.20	-2.16	.033		-.39	-.02
Significant others support	-.15	.22	-.24	-1.10	.276		-.66	.19

$p < 0.01$, $p < 0.05$

From Table 4, f (1, 115) = 10.11, *P* = .000. thus, the regression model provides a better fit for the data because the significant level is less than 0.05. Table 4 also showed that there was a significant positive association between perceived stigma and parental stress at the significance level of .01, [$\beta = .56, t = 4.74, p < .01$]. This means that higher levels of stigma perceived by preterm mothers leads to an increase in parental stress. Also, lower levels of stigma perceived by preterm mothers leads to decrease in parental stress. Therefore, hypothesis 2 was supported that there would be a significant positive relationship between perceived stigma and parental stress among preterm mothers who practice KMC at home.

From Table 4, it was showed that there was a significant negative association between perceived social support and parental stress at the significance level of .05, [$\beta = -.21, t = -2.59, p < .05$]. This means that higher levels of social support perceived by preterm mothers leads to a decrease

University of Ghana http://ugspace.ug.edu.gh

in parental stress and vice versa. Therefore, hypothesis 3 was supported that there would be a significant negative relationship**.**

Specifically, Table 4 showed that there was a significant negative association between support from friends and parental stress at the significance level of .05, [$\beta = -.20, t = -2.16, p < .05$]. This means that support from friends decreases parental stress among preterm mothers while lack of support from friends increases parental stress. However, support from family and significant others did not show a significant association with parental stress at the significance level of .05, [$\beta = .07, t = .36, p > .05$]; [$\beta = -.24, t = -1.10, p > .05$]. Hence, support from family and significant others did not predict parental stress among preterm mothers.

Hypothesis 4: *There will be differences in psychological distress (i.e depression and anxiety) concerning having other siblings, marital status, and maternal age.*

One-way ANCOVA was used to determine the significant differences because it determines the difference between two or more independent groups (maternal age, marital status and having other siblings) and one dependent variable psychological distress (depression and anxiety).

University of Ghana http://ugspace.ug.edu.gh

Table 5 ***Summary of ANCOVA Showing the Significant Differences of Maternal Age, Marital Status, and Number of Children on Psychological Distress (Depression and Anxiety)***

Predictor	Sum of Squares	Df	Mean Square	*F*	*p*
Depression					
Maternal age	156.17	3	52.06	2.13	.10
Marital status	83.75	3	27.92	1.14	.34
Other siblings	1.35	1	1.35	.06	.82
Anxiety					
Maternal age	314.25	3	104.75	2.99	.34
Marital status	134.97	3	44.99	1.28	.28
Other siblings	.65	1	.65	.02	.89

Depression =R squared = .08, Adjusted R squared; Anxiety =R squared = .09, Adjusted R squared = .04, p > .05

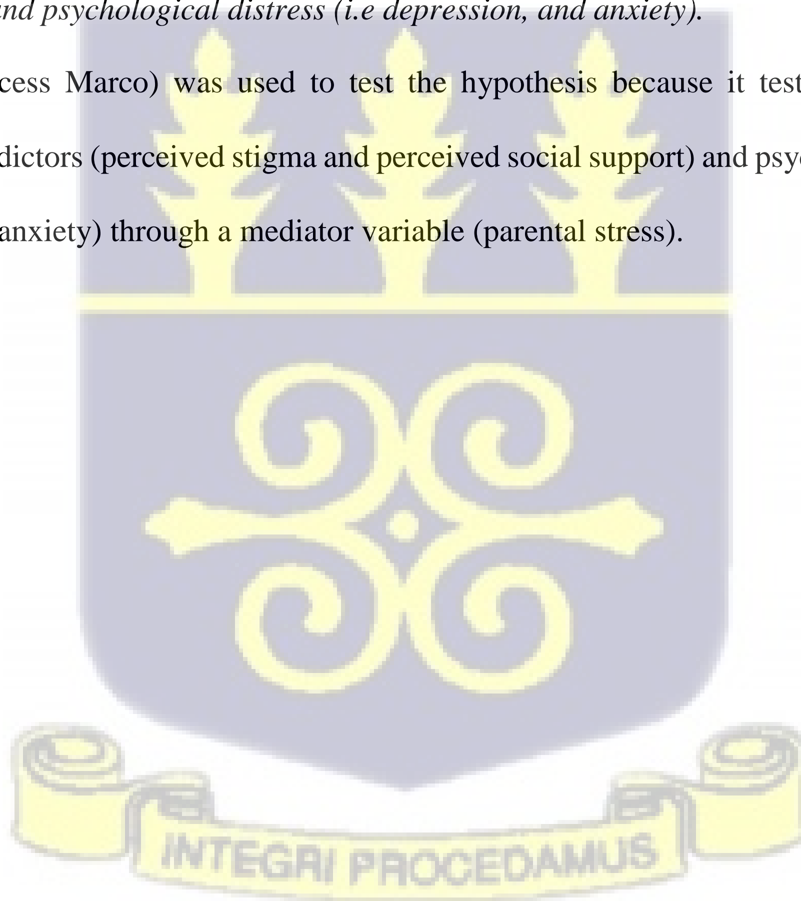
Form Table 5, it was observed that maternal age could not showed significant difference on depression F (3, 95) = 2.13, p > .05 and anxiety F (3, 95) = 2.99, p > .05 among preterm mothers. This means that there were no significant differences between maternal age and psychological distress (depression and anxiety). Also, it was observed that marital status could not showed

University of Ghana http://ugspace.ug.edu.gh

significant difference on depression F (3, 95) = 1.14, p > .05 and anxiety F (3, 95) = 1.28, p > .05 among preterm mothers. This means, no significant differences exited between marital status and psychological distress (depression and anxiety). Lastly, it was observed that other siblings could not showed significant difference on depression F (3, 95) = .06, p > .05 and anxiety F (3, 95) = .02, p > .05 among preterm mothers. This indicates that no significant differences exited between other siblings and psychological distress (depression and anxiety). Therefore, the findings in Table 5 did not support hypothesis 4 of the study.

Hypothesis 5: *Parental stress will mediate the relationship between perceived stigma, perceived social support, and psychological distress (i.e depression, and anxiety).*

Regression (Process Marco) was used to test the hypothesis because it tests the relationship between two predictors (perceived stigma and perceived social support) and psychological distress (depression and anxiety) through a mediator variable (parental stress).



University of Ghana http://ugspace.ug.edu.gh

Table 6 ***Summary of Mediations Result of Relationship Between Parental Stress, Perceived Stigma, Perceived Social Support, Depression and Anxiety***

	Depression			Anxiety		
	B (SE *B*)	*p*	*BLL BUL*	*B* (SE *B*)	*p*	*BLL BUL*
Total effect						
Perceived stigma	.41, (.06)	.000		.52 (.07)	.000	
Direct effect						
Perceived Stigma	.30 (.06)	.000		.39 (.07)	.000	
Parental Stress	.17 (.04)	.002		.20 (.05)	.001	
Indirect effect 95% CI						
P. Stigma → P. Stress	.11 (.04)		.04, .20	.13 (.05)		.04, .26
Total effect						
Support	-.11 (.03)	.000		-.08 (.03)	.02	
Direct effect Support	-.07 (.02)	.003		-.02 (.03)	.43	
Parental Stress	-.23 (.04)	.000		-.32 (.05)	.000	
Indirect effect 95% CI						
Support → Stress		-.04 (.01)	-.06, -.01	-.05 (.02)		-.20, -.02

B unstandardized coefficient, CI confidence interval, *SE* standard error. Bootstrapped samples = 5000. BLL Bootstrapped Lower Limit, BUL Bootstrapped Upper Limit

Total effect of perceived stigma on psychological distress. Results of the multiple mediation analyses revealed that the total effect (i.e. the effect while not accounting for the mediator) of perceived stigma on depression (B = .41, p < .001) and anxiety (B = .52, p < .001) was significant see Table 6).

Direct effect of perceived stigma on psychological distress. The direct effect (i.e. the effect while accounting for the mediator) of the multiple mediation indicated that perceived stigma influence depression (B = .30, p < .001) and anxiety (B = .39, p < .001; see Table 6).

University of Ghana http://ugspace.ug.edu.gh

Indirect effect of perceived stigma on psychological distress. When the variables were examined individually, it was found that perceived stigma indirectly influenced depression and anxiety through its effect on parental stress. This result is presented in Figure 2, showing perceived stigma as the predictor variable, parental stress as the mediator variable, and depression and anxiety as the outcome variables with unstandardized coefficients. On each regression pathway, high perceived stigma led to higher parental stress which increase mothers' level of depression ($t(120) = 3.87$, $b1 = .17$, $p < .05$) and anxiety ($t(120) = 3.97$, $b1 = .20$, $p < .01$).

Additionally, results in Table 6 show that the bootstrap estimation procedure (with a defined bootstrap sample of 5000) supports these significant indirect effects. Specifically, perceived stigma had a statistically significant indirect effect through parental stress on depression ($a1\ b1 = .11$; 95% CI: .04, .20), Anxiety ($a1\ b1 = .13$; 95% CI: .04, .26). In summary, parental stress mediated the relationship between perceived stigma and depression and anxiety among preterm mothers who practice KMC at home.

Total effect of perceived social support on psychological distress. Results of the multiple mediation analyses revealed that the total effect (i.e. the effect while not accounting for the mediator) of perceived social support on depression ($B = -.11$, $p < .001$) and anxiety ($B = -.08$, $p < .05$) was significant see Table 6).

Direct effect of perceived social support on psychological distress. The direct effect (i.e. the effect while accounting for the mediator) of the multiple mediation indicated that perceived social support influence depression ($B = -.07$, $p < .05$) but not statically significant with anxiety ($B = .02$, $p > .01$; see Table 6).

Indirect effect of perceived social support on psychological distress. When the variables were examined individually, it was found that perceived social support indirectly influenced depression

University of Ghana http://ugspace.ug.edu.gh

and anxiety through its effect on parental stress. This result is presented in Figure 3, showing perceived social support as the predictor variable, parental stress as the mediator variable, and depression and anxiety as the outcome variables with unstandardized coefficients. On each regression pathway, when preterm mothers had perceived social support, it led to lower parental stress which decrease mothers' level of depression ($t(120) = 5.30$, $b1 = -.23$, $p < .001$) and anxiety ($t(120) = 5.96$, $b1 = -.32$, $p < .001$).

Additionally, results in Table 6 show that the bootstrap estimation procedure (with a defined bootstrap sample of 5000) supports these significant indirect effects. Specifically, perceived social support had a statistically significant indirect effect through parental stress on depression (a1 b1 = -.04; 95% CI: -.06, -.01), Anxiety (a1 b1 = -.05; 95% CI: -.20, -.02). In summary, parental stress mediated the relationship between perceived social support and depression and anxiety among preterm mothers who practice KMC at home.

Observed Model

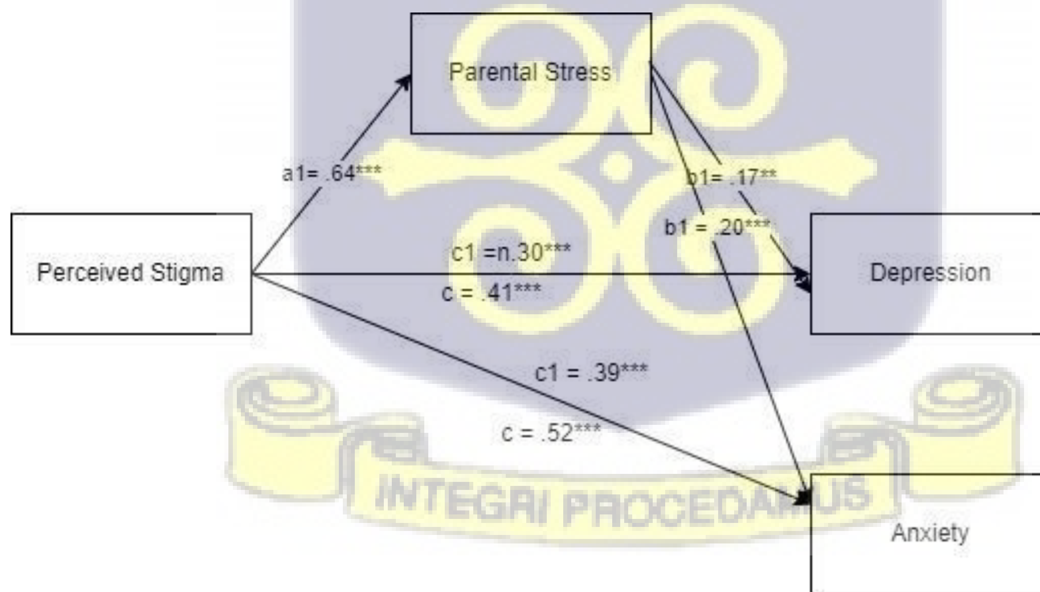


Figure 2 Observed model for the mediating influence of parental stress on the relationship

University of Ghana http://ugspace.ug.edu.gh

between perceived stigma and psychological distress (depression and anxiety)

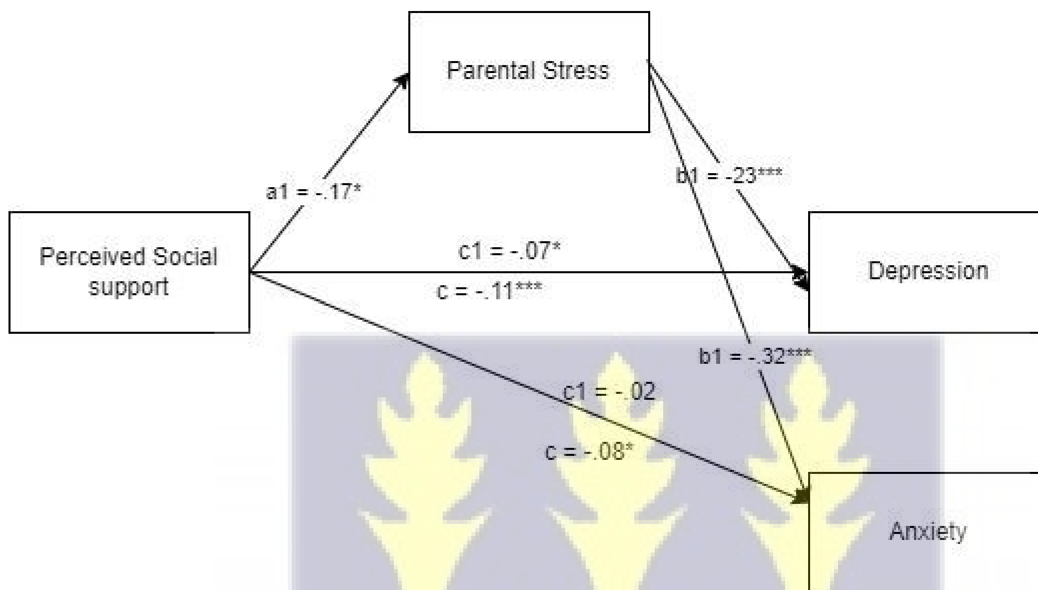


Figure 3 Observed model for the mediating influence of parental stress on the relationship between perceived social support and psychological distress (depression and anxiety)

University of Ghana http://ugspace.ug.edu.gh

CHAPTER FIVE

DISCUSSION

Introduction

The study aimed to investigate the challenges (perceived stigma, perceived social support, marital status, maternal age, and having other children) associated with the practice of KMC at home, its impact on mothers' psychological distress (prenatal stress, depression, and anxiety) and mothers' ways of coping with the psychological distress. Specifically, the study investigated the effect of perceived stigma, perceived social support, marital status, maternal age, and having other children on parental stress. The mediating effect of parental stress on the relationship between perceived stigma, perceived social support, depression, and anxiety was examined. Additionally, the effect of depression and anxiety on mothers' ways of coping was investigated. This chapter discusses the findings of the study. The implication, limitation, recommendation, and conclusion of the study are also outlined in this chapter.

Challenges with the practice of KMC on prenatal stress

The influence of perceived stigma on parental stress was investigated. It was confirmed that perceived stigma had a positive relationship with parental stress. This means that, when mothers perceived high levels of stigma while practicing KMC, their levels of parental stress increase. This outcome is consistent with findings by Kampekete et al. (2018); Muriuki (2017) who indicated that community members and mother's perception of KMC and stigma served as barriers to the implementation of KMC by mothers. The findings have affirmed the stress process model by Pearlin et al. (1990) which postulates that caregivers' context contributes to their level of stress.

University of Ghana http://ugspace.ug.edu.gh

According to the theory, caregiver's context such as secondary stressors and outcome contributes to caregivers' level of stress. Secondary stressors are stressors that the caregiver had no direct control over and it's mostly caused by external people or institutions such as economic and social burden. The outcome is where caregivers cannot maintain social roles or themselves. This shows that mothers do not determine how their community should treat or accept the practice of KMC. Thus, if the community decides to stigmatize against the practice of KMC, it becomes a social burden to the mother. Therefore, it affects the mother's ability to maintain social roles within the community which causes cognitive disturbance and later increases parental stress among preterm mothers.

Moreover, Mickelson (2015) discovered that perceived stigma was consistently related to less perceived support availability from respondents' parents and negative interaction with grandparents and spouses. This may explain the reason perceived stigma is positively related to parental stress. When family members, close friends, and significant others stigmatized against the practice of KMC, preterm mothers may struggle with social support which causes mothers to be overwhelmed with the responsibilities of caring for preterm infants after being discharged home and this would eventually increase parental stress.

It was further hypothesized that perceived social support would have a negative relationship with parental stress. This hypothesis was confirmed. This shows that when preterm mothers had support, their parental stress reduces and vice versa. Further investigation revealed a significant negative relation among mothers who perceived support from friends and significant others and parental stress whereas perceived support from family was not statistically significant with parental stress. The finding is consistent with studies by Opeara and Okonie (2017) who showed that lack of support leads to the termination of KMC because mothers faced high levels of parental

University of Ghana http://ugspace.ug.edu.gh

stress. The findings also support the stress process model which states that social support serve as either mediator or moderator to caregiver's stress. This means that when preterm mothers face challenges such as sleep deprivation, being cut off from social gathering, parental role alteration, and among others (Gabriels et al., 2015; Mu et al., 2019; Suraju, 2013), support from family, friends and significant others helps to explain, strengthen or reduce mothers stress levels. Thus, if a preterm mother finds it difficult to combine the practice of KMC and domestic chores, the invention of social support from a spouse or friend help reduce mothers stress levels because the social support offload mothers' responsibilities.

Additionally, Kurniawati et al. (2019) found that preterm mothers who received peer support on KMC implementation had an increased self-confidence. This shows that when preterm mothers received support from either family, friends, or significant others, it helps increase mothers' level of confidence that would increase the esteem of preterm mothers. Therefore, an increase in one's self-esteem would decrease mothers' levels of depression and anxiety. However, if preterm mothers do not receive any social support from family, friends, and significant others while performing KMC, mothers become overwhelmed with their responsibilities (Haemmerli et al., 2000) because practicing KMC alone is energy-draining (Opeara & Okonie, 2017) and combining it with other roles becomes too much for mothers which would increase their parental stress levels.

Psychological distress (depression and anxiety) among preterm mothers

The study aimed to investigate the influence of perceived stigma, maternal age, marital status, having other siblings, and perceived social support on psychological distress (depression and anxiety). Again, the study aimed to examine the mediating effect of parental stress on the relationship between perceived stigma, perceived social support and psychological distress

University of Ghana http://ugspace.ug.edu.gh

(depression and anxiety). Therefore, it was hypothesized that parental stress will mediate the relationship between perceived stigma, perceived social support and psychological distress (depression, and anxiety).

The findings showed that perceived stigma was positively significant with both depression and anxiety. This means, when preterm mothers perceived a high level of stigma, it increases their level of depression and anxiety. Also, when preterm mothers perceived a low level of stigma their level of depression and anxiety decreases. This finding is consistent with a study by Mickelson (2015) that demonstrated that perceived stigma is related to an increase in depression among parents of special needs children such as mental retardation, autism, and developmental delays. Additionally, studies by Kampekete et al. (2018) and Murjuki (2017) support the finding that people including community members and mothers themselves stigmatized against the practice of KMC. This is because some mothers and community members believe the practice of KMC is strange to the Ghanaian traditional beliefs of caring for babies or infants. These mothers and community members may engage in behaviors (i.e looking down on preterm mothers) that will cause preterm mothers to feel inferior for practicing KMC instead of the traditional way of caring for infants or babies. This would cause preterm mothers to feel depressed anytime people looked down on them likewise, preterm mothers may feel anxious anytime they think of practicing KMC.

Again, the above finding is consistent with the reformulated theory of learned helplessness which posits that when an individual believes others can solve a negative situation, they become more prone to low self-esteem which leads to an increase in depression. This means preterm mothers believe others are in the capacity to stop the stigmatization. Therefore, continuous stigmatization by people reduces preterm mothers' level of self-esteem which leads to depression and anxiety especially when preterm mothers think of practicing KMC.

INTEGRI PROCEDAMUS

University of Ghana http://ugspace.ug.edu.gh

Perceived social support showed a negatively significant association with psychological distress (depression and anxiety). This is where, when preterm mothers received enough support from family, friends, or significant others, their level of depression and anxiety decreases. Likewise, when preterm mothers lack social support from family, friends, or significant others, their level of depression and anxiety increases. The outcome is in line with studies by Ango (2016); Gold et al. (2013) and Soghier et al. (2020) which showed that lack of social support leads to an increase in depressive and anxiety symptoms among caregivers. An increase in depression and anxiety could be because of a lack of social support that causes difficulty or obstacles in preterm mothers' environment, which makes the provision of KMC energy-draining for preterm mothers (Opeara & Okonie, 2017). This difficult situation cannot be solved by the mothers themselves but rather by people (i.e family, friends, and significant others) closer to preterm mothers. Therefore, when such people are not willing to support, preterm mothers may feel worried for people not willing to support or help them which would cause mothers to feel depressed and anxious.

The study further revealed that parental stress mediated the relationship between perceived stigma, perceived social support and psychological distress (depression, and anxiety). Parental stress had a significant positive relationship with perceived stigma and further partially mediated the relationship between perceived stigma and depression. Likewise, parental stress partially mediated the relationship between perceived stigma and anxiety. The finding provides some support to studies by Ango (2016); Rogers et al. (2013); Soghier et al. (2020), and Witt et al. (2012) that showed that an increase in parental stress leads to an increase in depression and anxiety. The possible reason could be because preterm mothers may make an external and internal attribution to their difficult situation, which would cause the mother to experience emotional deficits such as depression and anxiety.

University of Ghana http://ugspace.ug.edu.gh

This is in line with studies by Haemmerli et al. (2000); Surkan et al. (2011), and Vigod et al. (2010) which pointed out that parenting is always affected by new stressors, which causes psychological distress such as depression and anxiety to continue well beyond the time the infant is discharged home because preterm mothers become more prone or vulnerable to stress after being discharged home. However, other studies Duarteet al. (2009); Herizchi et al. (2017); Rao et al. (2019) and Scime et al. (2019) have demonstrated contrary findings that, after discharged preterm mothers' level of anxiety and depression decreases because preterm mothers do not become vulnerable to stress.

Prenatal stress had a significant negative relationship with perceived social support and partially mediated the relationship between perceived social support and depression. Similarly, prenatal stress partially mediated the relationship between perceived social support and anxiety. A study by Ango (2016) supports the outcome that the absence of support from family, friends, and significant others leads to an increase in depression and anxiety. Therefore, when preterm mothers do not receive any help from others, it increases their level of parental stress which would later increase mothers' level of depression and anxiety. This is because the preterm mother would be worried about doing everything on their own without any support or help from either family, friends, or significant others. Also, anxiety sets in anytime preterm mothers develop the thought of doing everything by themselves. This clearly explains why preterm mothers who have been discharged for months continue to exhibit high levels of anxiety, like those at the hospital (Holditch-Davis, et al., 2009).

An increase in depression and anxiety may make it difficult for preterm mothers to create a resiliency environment (Duarte et al., 2009), which would negatively affect preterm mothers' relationship with their infants (Eiser et al., 2005; Goodman & Brand 2009) as well as the

University of Ghana http://ugspace.ug.edu.gh

development of their infant (Singer, et al., 2007). However, a study has also shown that preterm mothers who became more anxious and depressed, developed a strong bond with their infant (Borghini et al., 2006).

Contrary to the expectation that demographics variables (maternal age, marital status, and having other siblings) would have a significant difference with psychological distress (depression and anxiety), the study demonstrated that the above variables did not have any significant differences with both depression and anxiety. This means that, maternal age, marital status, and having other siblings reported a non-significant difference with depression and anxiety. The above findings are consistent with a study by Hinz et al. (2014); Rogers et al. (2013) that pointed out that mothers' level of anxiety was not significant with their marital status. This means mothers' marital status did not show any significant differences with mothers' level of anxiety.

The finding was also inconsistent with Cekin and Turan, (2007) who reported that other siblings by preterm mothers does influence mothers' levels of psychological distress (depression and anxiety) among preterm mothers at the NICU. The reason could be because mothers with serval children apart from their preterm infant may have gained better experience on how to practice KMC at home despite enormous challenges they encounter. A study by Kurniawati et al. (2019) confirmed the fact that experience helped preterm mothers gain confidence and effectively implement KMC. Therefore, the experience and confidence gained may be the reason why other siblings did not show any significant difference with psychological distress among preterm mothers because mothers would be able to handle any challenges they may encounter when practicing KMC at home.

University of Ghana http://ugspace.ug.edu.gh

Again, maternal age of preterm mothers did not show any significant difference on psychological distress (depression and anxiety) among preterm mothers. The current result is inconsistent with Soghier et al. (2020) who reported that younger parents had higher psychological distress because the infant's appearance and parental role alteration became constant stressors for parents to handle. The inconsistency maybe because of the education preterm mothers had received about the practice of KMC and how to handle family responsibilities together with the practice of KMC. According to Purbasary et al. (2017), young mothers' confidence and ability to implement KMC increased after education about KMC. This means that no matter the age, preterm mothers would not be naive about the practice of KMC at home, the challenges associated with it, and how to handle such challenges. Therefore, maternal age may not show any significant difference with psychological distress (depression and anxiety) because every preterm mother knows what to expect and how to handle such expectations. However, Sweeney et al. (2017) identified that maternal age reported a significant negative difference with anxiety. Preterm mothers advanced in age, experience low levels of anxiety while much younger mothers experienced higher levels of anxiety.

Mothers' ways of coping with depression

Preterm mothers' use of avoidant coping in this study indicated a significant positive relationship with depression. This means that the use of avoidant coping such as self-distraction leads to an increased in mothers' level of depression. Similarly, Linden et al. (2015); Mausbach et al. (2006) and Penley et al. (2002), highlighted that caregivers use of avoidant coping leads to an increase in caregivers' psychological distress and mental health. This finding is consistent with the transactional model of stress and coping which posits that when an individual perceived a stressful

University of Ghana http://ugspace.ug.edu.gh

situation as harming his or her well-being, the individual expresses negative emotions such as depression which affects how one evaluates resources to adequately cope with the stressful situation. Therefore, the use of inadequate recourses (such as self-distraction, denial, and behavioral disengagement) to cope with depression would lead to higher levels of depression.

Additionally, according to Mausbach et al. (2006), preterm mothers made use of avoidant coping (i.e self-distraction, denial, and behavioral disengagement) because preterm mothers believe they do not have control over the damage or stressful situation and it's also beyond their abilities thus, engaging in avoidant coping could not alleviate mothers' depression but it would rather increase mothers' level of depression. Hence, the use of avoidant coping becomes ineffective and frustrating to preterm mothers, which increases mothers' levels of depression.

Specifically, this study revealed that preterm mothers made greater use of behavioral disengagement when depressed. Most preterm mothers with depression mostly give up on the attempt to address their psychological distress. Mothers' inability to cope to the end maybe as a result of their ineffective ways of dealing with depression which causes mothers to be frustrated and later give up their effort to cope with depression.

Apart from behavioral disengagement, self-distraction was the second way of coping used by preterm mothers. Since preterm mothers do not have adequate resources to cope with their depression, involving themselves in other activities (example; watching of television) would help shift their attention from their distress. Even though preterm mothers mostly made use of both coping ways, the finding of the study showed that the use of both behavioral disengagement and self-distraction did increase mothers' levels of depression.

University of Ghana http://ugspace.ug.edu.gh

Interestingly, substance use under the avoidant coping reported a significant negative relationship with depression. This means that the use of a substance such as alcohol decreases preterm mothers' depression. Using substances such as alcohol could compromise preterm mothers' level of consciousness (WHO, 2021), which would later cause preterm mothers to forget about their stressors. Thus, forgetting about the stressors would reduce preterm mothers' level of depression for the short term.

Problem-focused coping and emotion-focused coping could have a negative impact on depression (Al-Maghaireh et al., 2020; Awah & Bimerew, 2016; Cooper et al., 2007) but this was not the situation for preterm mothers in this study. This is where the use of problem-focused coping and emotion-focused coping positively predicted depression but was statistically insignificant. Meaning, the use of problem-focused coping and emotion-focused coping could not reduce the mother's levels of depression.

Under the problem-focused coping, it was reported that preterm mothers mostly used active coping, planning, and information support when depressed. With regards to active coping, preterm mothers tried to engage in activities that can handle or tackle the depressive situation because the depressive situation has become harmful to them. Since preterm mothers do not engage in rightful activities, their level of depression still increases even though they try to engage in activities that would tackle the depressive situation. This result is contrary to a study by Jolanda et al. (2010) that showed that the use of active coping led to good mental and general health among nurses in Dutch and Norwegian hospitals.

INTEGRI PROCEDAMUS

Coping by planning is where the preterm mothers attempt to come up with a solution to their depressive state. The preterm mothers had no idea as to how to cope with their depressive situation

University of Ghana http://ugspace.ug.edu.gh

therefore, they struggle by thinking hard to come up with a strategy to handle their depressive state. This struggle could be a result of a lack of training (Al-Maghaireh et al., 2020), especially by a psychologist on how to handle psychological distress.

Again, under the problem-focused coping, this study demonstrated a negative correlation between the use of informational support and depression among preterm mothers. This is where information received from health professionals, families, and other preterm mothers helped reduced preterm mothers' level of depression. The finding is consistent with Rowe and Jones (2010) that showed that after being discharged from the NICU, both fathers and mothers cope with stress by consulting other parents and medical staff, which helped reduce their stress. Information from medical staff and other preterm mothers enlightens preterm mothers on how to cope and the dangers of being depressed. Thus, the enlightenment gives preterm mothers hope and confidence to effectively cope with their depressive situation.

Although emotion-focused coping was not statistically significant with depression, the study pointed out that the use of self-blame and religion under the emotion-focused coping was positively significant with depression while emotional support was negatively significant with depression. With self-blame, preterm mothers criticized themselves to cope with their depressive situation. They accused themselves as they are the cause of their preterm infant's birth which has led to the practice of KMC and eventually caused them to be depressed. To compensate for their wrongdoing, preterm mothers may blame themselves so that they would be relieved of any psychological distress such as depression. Unfortunately, this study showed that self-blame could not relieve preterm mothers of their psychological distress such as depression. This may be because depressive symptoms are 63% among preterm mothers (Miles et al., 007) and self-blame or guilt is a symptom of depression that increases an individual's level of depression.

University of Ghana http://ugspace.ug.edu.gh

Surprisingly, the use of religion was not able to reduce preterm mothers' level of depression. This finding is not consistent with studies (Akum, 2018; Ango, 2016; Awah & Bimerew, 2006) that showed that the use of religion (i.e praying) was an effective way of coping for mothers with preterm infants both at the NICU or being discharged home. The use of religion alone may not be effective enough to alleviate mothers' depression because of a spiritual struggle with one's maker (Oti-Boadi & Asante, 2017). Therefore, when an individual expresses doubt regarding help for her maker, the use of religion may not take away or manage the stressors, which would eventually increase depression (Oti-Boadi & Asante, 2017).

The use of emotional support reportedly helped reduced preterm mothers' levels of depression. Preterm mothers cope with their depression by getting comfort from others such as family, friends, and significant others. Additionally, people closer to preterm mothers helped them to appreciate or understand their situation by engaging in activities such as allowing preterm mothers to either express or share their feelings and experiences (Al-Maghaireh et al., 2020) which would relieve mothers from their stressors. This outcome is consistent with studies by Awah and Bimerew (2016); Suraju et al. (2013) which highlighted that, mothers of preterm infants' cope with challenges by relying on support from family, significant others, and friends. However, a study by Jolanda et al. (2010) showed that the use of emotional-focused coping such as emotional support did have a poor impact on the mental health of Dutch and Norwegian nurses. This clearly shows that the use of emotional support could sometimes be an inadequate resource for coping.

Mothers' ways of coping with anxiety

One of the hypotheses of the current study was to know how preterm mothers cope with anxiety when practicing KMC at home. The findings of the current study showed that avoidant coping had

University of Ghana http://ugspace.ug.edu.gh

a significant positive relationship with anxiety while the use of problem-focused coping and emotion-focused coping was not statistically significant with anxiety.

With regards to avoidant coping, the study showed that preterm mothers specifically make use of self-distraction, behavioral disengagement, and substance use when coping with anxiety. Self-distraction had a positive correlation with anxiety. Meaning, the use of self-distraction such as turning to work, watching television, and reading were not able to reduce mothers' level of anxiety. This was explicitly in line with the transactional model of stress and coping which posits that inadequate resources to cope with stressors would lead to higher stress levels. Research by Linden et al. (2015) supported the finding that the use of avoidance coping which includes self-distraction leads to higher parenting stress. The reason could be because the use of self-distraction becomes ineffective to cope with anxiety which later frustrates mothers leading to an increase in anxiety.

Behavioral disengagement also demonstrated a positive relationship with anxiety. Apparently, giving up on the attempt to cope would not reduce anxiety but rather increase preterm mothers' level of anxiety. Preterm mothers may give up on their attempt to cope with anxiety because they lack the appropriate or adequate resources to deal with anxiety. Therefore, using several inadequate ways to cope with anxiety may cause preterm mothers to feel more frustrated, confused, and exhausted in dealing with anxiety, which would eventually lead to giving up on coping. Several studies (Mausbach et al., 2006; Penley et al., 2002) have revealed the use of avoidant coping to be related to an increase in caregivers' psychological distress and mental health.

Substance use demonstrated a statistically significant negative correlation with anxiety. This is where preterm mothers' level of consciousness may be compromised using alcohol (WHO, 2021),

University of Ghana http://ugspace.ug.edu.gh

which would later cause preterm mothers to forget about their stressors. Thus, forgetting about the stressors would reduce preterm mothers' levels of anxiety.

Under the problem-focused coping, the study demonstrated that active coping and planning were positively related to anxiety while informational support showed a negative relationship with anxiety. The use of active coping and planning was not able to reduce mothers' levels of anxiety. This is because preterm mothers are not certain of how to cope with their anxiety thus, the use of active coping and planning tells that, preterm mothers are now trying to put something together to see if it can help them cope with their anxiety. The finding is consistent with a study by Cooper et al. (2007) that highlighted that the use of problem-focused coping such as planning and active coping led to an increase in anxiety among caregivers of Alzheimer's disease.

Contrary to the above facet of problem-focused coping, informational support demonstrated a negative relationship with anxiety. This means when preterm mothers coped by using informational support their level of anxiety decreases. Informational support was able to reduce anxiety because it was an adequate resource, and the transactional model of stress and coping explains an adequate resource as one that can help reduce one's distress. Additionally, the use of informational support such as advice and help from people helps preterm mothers to understand, appreciate and accept their situation (Awah and Bimerew, 2016), which can help reduce their level of anxiety. This finding is in line with a study by Gueritault-Chalvin, et al. (2014) that posits that the use of problem-focused coping such as informational support helped nurses who provided care for people with AIDS to experienced lower levels of burnout.

With regards to the facet under the emotion-focused coping, only religion and self-blame were significantly positively correlated with anxiety. That is, the use of both self-blame and religion did

University of Ghana http://ugspace.ug.edu.gh

not reduce mothers' level of anxiety, which makes the use of both religion and self-blame an inadequate resource for preterm mothers. This is consistent with studies by Gueritault-Chalvin et al. (2014); Jolanda et al. (2010); Jones et al. (2010); Wartella et al. (2009) that showed that the use of emotion-focused coping such as self-blame and religion did not reduce caregivers' psychological distress. However, a study by Cooper et al. (2007) showed that the use of emotion focused coping helped reduced caregivers' level of anxiety.

In a nutshell, findings from the present study have shown that perceived stigma and perceived social support are predictors of parental stress, anxiety, and depression. Additionally, parental stress mediated the relationship between perceived stigma, perceived social support and psychological distress (anxiety, and depression). Furthermore, the study has shown that preterm mothers cope with depression and anxiety by making much use of avoidant coping (behavioral disengagement, self-distraction, and substance use).

The stress process model by Pearlin et al. (1990) explains that caregivers context of care giving contributes to their level of stress. Thus, providing support and social burdens (such as perceived stigma) are part of the factors that contributes to parental stress, anxiety and depression within the caregiver's context. From the reformulated theory of learned helplessness (Abramson et al., 1978), preterm mothers perceived that they cannot control the situations (i.e providing support and perceived stigma) therefore, its causes them to experienced negative emotions such as anxiety and depression towards the negative situations. This eventually affects preterm mothers' efforts to avoid or escape the negative situation (i.e perceived stigma) after evaluating the available options and resources to cope with the negative situations as explained by the transactional model of stress and coping (Lazarus & Folkman, 1984).

University of Ghana http://ugspace.ug.edu.gh

Contrary to the study expectation, it was identified that demographics variables (maternal age, marital status, and having other siblings) did not show any significant difference with psychological distress (depression and anxiety). Similarly, problem-focused coping and emotion-focused coping did not predict depression and anxiety even though some facets under these two coping ways predicted depression and anxiety either positively or negatively. Hence, the practice of KMC can be deemed to have psychological distress on preterm mothers and preterm mothers may seem to have difficulties in coping with these psychological distresses.

Limitations of the study

The nature of the study might lead to socially desirable responses from participants. Since the study is a self-report of preterm mothers' experiences with the practice of KMC at home, preterm mothers may give responses that may be suitable for the researcher because it is not an interview to probe mothers' responses.

Another limitation was that the researcher translated the questionnaires into the local language before most participants were able to select their preferred response. This affects the guarantee that these participants fully understood each item on the questionnaire and their responses to such items.

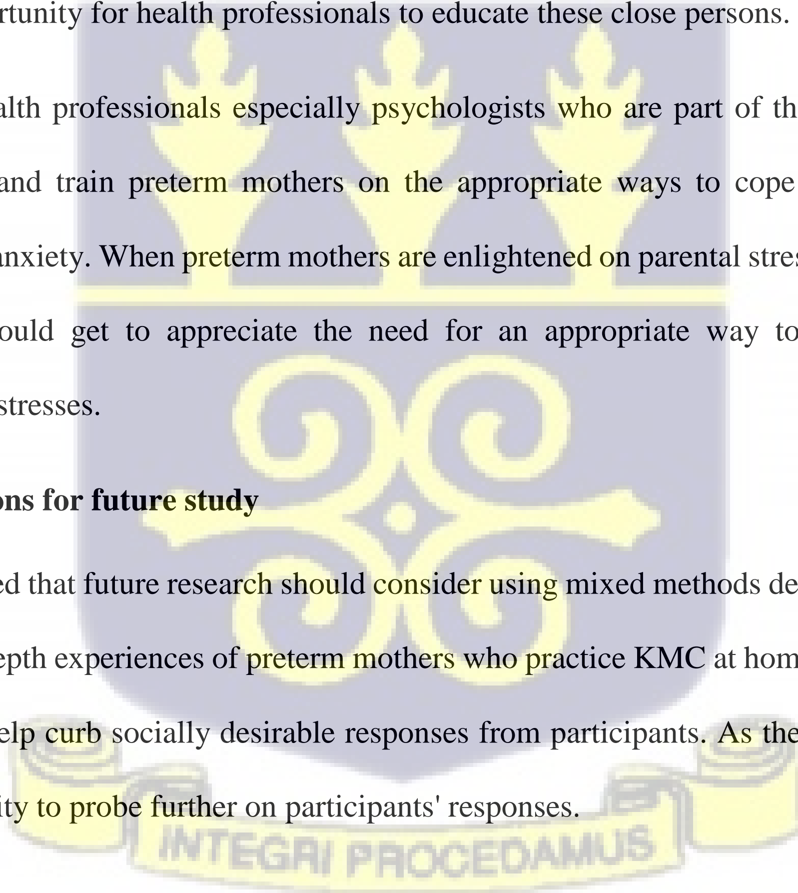
Lastly, detailed and depth experiences of the practice of KMC were not captured. Therefore, future study inquiring into the experiences of mothers using qualitative study would reflect the actual views of the participant sampled from the Eastern Regional Hospital.

University of Ghana http://ugspace.ug.edu.gh

Implications of the findings

This calls for policies to organized educational programs and forums to educate community members on why preterm mothers practice KMC at home and the need to accept these mothers by providing their full support to the preterm mothers. Family, friends, and significant others of preterm mothers should be well educated on the practice of KMC for them to assist in the practice of KMC and provide monetary support and empathy to the mothers.

To achieve this, health professionals for the Kangaroo clinic should put policies in place that would encourage mothers to bring their family, friends, and significant others to the clinic. Which would serve as an opportunity for health professionals to educate these close persons.



Furthermore, health professionals especially psychologists who are part of the Kangaroo clinic should educate and train preterm mothers on the appropriate ways to cope with their stress, depression, and anxiety. When preterm mothers are enlightened on parental stress, depression, and anxiety, they would get to appreciate the need for an appropriate way to cope with these psychological distresses.

Recommendations for future study

It is recommended that future research should consider using mixed methods design to capture the details and the depth experiences of preterm mothers who practice KMC at home. Also, the mixed method would help curb socially desirable responses from participants. As the researcher would get the opportunity to probe further on participants' responses.

University of Ghana http://ugspace.ug.edu.gh

Conclusion

From the findings of this study, it can be concluded that parental stress, depression, and anxiety were experienced by preterm mothers who practice KMC at home. Evidently, experiencing stigma and social support were risk factors for parental stress, depression, and anxiety among preterm mothers. Additionally, avoidant coping showed to be preterm mothers' ways of coping with psychological distress. It was also revealed that maternal age, marital status, and having other siblings did not show any significant differences with psychological distress (depression, and anxiety) among preterm mothers from the Eastern Regional Hospital. Lastly, preterm mothers in this study were not able to effectively use problem-focused coping and emotion-focused to cope with their psychological distress. Therefore, preterm mothers need a practical and imperative way to cope with their psychological distress.

University of Ghana http://ugspace.ug.edu.gh

References

Abramson, L. Y., Seligman, M. E., & Teasdale, J. D. (1978). Learned helplessness in humans: critique and reformulation. *Journal of Abnormal Psychology*, *87*(1), 49-74.

Akum, F. A. (2018). Assessment of mothers' challenges, support and coping strategies towards caring for preterm babies post-discharge from Presbyterian hospital in Bawku Municipality, Ghana. *ARC Journal of Pediatrics* , *4*(1),14-24. http://dx.doi.org/10.20431/2455-5711.0401003 .

Al-Maghaireh , D. F., Khalaf , I. A., Abdullah , K. L., Chan , C. M., Basyoun, N. R., & Kawafha, M. M. (2020). The effect of an emotional support training program on acute stress disorder among mothers of preterm infants hospitalized in neonatal intensive care units. *Journal of Neonatal Nursing*, *26*, 273-277. https://doi.org/10.1016/j.jnn.2020.06.003.

Amankwaa, L. C., Pickler, R. H., & Boonmee, J. (2007). Maternal responsiveness in mothers of preterm infants. *Newborn and Infant Nursing Reviews*, *7*(1)25-30, oi:10.1053/j.nainr.2006.12.001.

Ango , A. R. (2016). Psychological distress and coping styles: A study among mothers with preterm infants in the NICU of Korle-Bu Teaching Hospital . *Ugspace.ug.edu.gh* .

Annon . (2008). Prevalence of self-reported postpartum depressive symptoms. *MMWR Morb Mortal Wkly Rep* , *57*(14): 361-366.

Aseidu , E. K., Bandoh , D. A., Ameme , D. K., Nortey , P., Akweongo, P., Sackey, S. O., & Kenu, E. (2019). Obstetric determinants of preterm delivery in a regional hospital Accra Ghana .

University of Ghana http://ugspace.ug.edu.gh

BMC Pregnancy and Childbirth , *19*(248).

Auslander , G., Netzer , D., & Arad , I. (2003). Parental anxiety following discharge from hospital of their very low bith weight infants . *Family Relation* , *52*, 12-21.

Awah, D. S., & Bimerew, M. S. (2016). Understanding the experiences of mothers with preterm babies admitted in a public hospital. *Journal of Maternal-Fetal and Neonatal Medicine*, *26*(5):459-462.

Baley , J. (2015). Skin-to-skin care for term and preterm infants in the neonatal ICU. *Pediatrics* , *136*(3), 596-599.

Ballantyne , M., Benzies , K. M., & Trute , B. (2013). Depressive symptoms among immigrant and Canadian born mothers of preterm infants at neonatal intensive care discharge: A crosssectional study. *BMC Pregnancy an Childbirth* , DOI: 10.1186/1471-2393-13S1-S11.

Barlow , D. H. (2004). Anxiety and its disorders: The nature and treatment of anxiety and panic. New York: Guilford press.

Bayo, P., Alobo, G., Feyissa , G. T., & Belaid , L. (2019). Mothers' perceptions of the practice of kangaroo mother care for preterm neonates in sub-Saharan Africa: A qualitative systematic review protocol. *JBI Database of Systematic Reviews and Implementation Reports*, 15581559, DOI: 10.11124/JBISRIR-2017-004027.

Beck , C. T. (2001). Predictors of postpartum depression: An update . *Nurs Res*, *50*(5), 275-285 .

Bera, A., Ghosh, J., Singh, A. K., Hazra2, A., & Som, T. (2014). Effect of Kangaroo Mother Care on vital physiological parameters of the low birth . *Indian Journal of Community Medicine*, *39*(4), DOI:10.4103/0970-0218.143030.

University of Ghana http://ugspace.ug.edu.gh

Bergh , A. M., Manu, R. A., Davy, K., Van Rooyen , E., Asare , G. Q., Awoonor-Williams , J. K., & Nang-Beifubah , A. (2013). Progress with the implement of kangaroo mother care in four regions in Ghana. *Ghana Medical Journal* , *47*(2), 57-63.

Berry , J. D., & Jones , W. H. (1995). The parental stress scale: Initial psychometric evidence . *Journal of Social and Personal Relationships*, *12*, 463-472.

Blencowe, H., Cousens , S., Oestergaard, M., Chou, D., & Moller, A. B. (2012). National, regional and worldwide estimates of preterm birth rates in the year 2010 with time trends for selected countries since 1990: A systematic analysis . *For Cherg/WHO*.

Blomqvist , Y. T., Frolund , L., Rubertsson , C., & Nyqvist , K. H. (2012). Provision of kangaroo mother care: supportive factors and barriers perceived by parents . *Scandinavian Journal of Caring Sciences* , doi: 10.1111/j.1471-6712.2012.01040.x.

Borghini , A., Pierrehumbert, B., Miljkovitch , R., Muller-Nix, C., Forcada-Guex, M., & Ansermet, F. (2006). Mother's attachment representations of their premature infant at 6 and 18 months after birth. *Infant Mental Health Journal* , *27*, 494-508. doi: 10.1002/imhj.20103.

Burns , M. J., Feaster, D. J., Mitrani , V. B., OW, C., & Szapocznik , J. (2008). Stress processes in HIV-positive African American mothers: moderating effects of drug abuse history . *Anxiety Stress Coping*, *21*(1), 95-116.

Calvete , E., & Lopez de Arroyabe , E. (2012). Depression and grief in Spanish family caregivers of people with traumatic brain injury: The roles of social support and coping . *Brain Injury*, *26*(6): 834–843, DOI: 10.3109/02699052.2012.655363.

Carver, C. S. (1997). You want to measure coping but your protocol's too long: Consider the Brief Cope. *International Journal of Behavioural Medicine* , *4*(1), 92-100.

University of Ghana http://ugspace.ug.edu.gh

Cekin, B., & Turan, T. (2017). The stress levels of parents of premature infants and related factors in nenoatal intensive care units. *The Turkish Journal of Pediatrics*, 117-125; DOI: 10.24953/turkjped.2018.02.001.

Chang, E. M., Bidewell, J. W., Huntington , A. D., Daly, J., Johnson , A., Wilson , H., Lambert, C. E. (2007). A survey of role stress, coping and health in Australian and New Zealand hospital nurses. *International Journal of Nursing Studies* , 1354–1362, doi:10.1016/j.ijnurstu.2006.06.003.

Charpak , N., Gabriel , R. J., Zupan , J., Cattaneo , A., Figueroa , Z., Tessier , R., & Mokhachane , M. (2005). Kangaroo mother care: 25years after. *Acta Paediatrica* , *94*(5), 514-522.

Chronister, J., & Chan, F. (2006). A Stress Process Model of Caregiving for Individuals With Traumatic Brain Injury. *American Psychological Association*, *51*(3),190–201, DOI: 10.1037/0090-5550.51.3.190.

Conde-Agudelo, A., & Diaz-Rossello , J. (2016). Kangaroo mother care to reduce morbidity and mortality in low birthweight infants. *Cochrane Database Syst Rev*.

Cooper, C., Katona, C., Orrell , M., & Livingston , G. (2008). Coping strategies, anxiety and depression in caregivers of people with Alzheimer's disease. *International Journal of Geriatric Psychiatry* , *23*: 929–936, DOI: 10.1002/gps.2007.

Derogatis, L. R., & Melisaratos, N. (1983). The Brief Symptom Inventory: An introductory report. *Psychological Medicine*, *13*(3), 595–605; https://doi.org/10.1017/S0033291700048017.

Duarte , G., Martinez , F. E., & Linhares , M. B. (2009). Anxiety, dysphoria, and depression symptoms in mothers of preterm infants. *Psychological Reports* , *104*, 667-679.

University of Ghana http://ugspace.ug.edu.gh

Eaton, P. M., Davis, B. L., Hammond, P. V., Condon, E. H., & McGee, Z. T. (2011). Coping strategies of family members of hospitalized psychiatric patients. *Nursing Research and Practice*, doi:10.1155/2011/392705.

Eiser , C., Eiser , J. R., Mayhew , A. G., & Gibson , A. T. (2005). Parenting the premature infant: balancing vulnerability and quality of life. *Journal of Child Psychology and Psychiatry* , *46*, 1169-1177.

Feldman, R., Eidelman, A. L., Sirota, L., & Weller, A. (2002). Comparison of skin-to-skin (Kangaroo) and traditional care: Parenting outcomes and preterm infant development. *American Academy of Pediatrics*.

Fraser, D., & Cooper, M. (2003). Myles' text books for midwifes (14th Eds). *Churchill Livingstone Edinburgh* .

Gabriels , K., Brouwer , A. J., Maat, J., & Hoogen , A. (2015). Kangaroo care: Experiences and needs of parents in neonatal intensive care: A systematic review 'parents' experience of knagaroo care. *Pediatrics and Neonatal Nursing*, *1*(1): doi http://dx.doi.org/10.16966/2470-0983.102.

Gold, K. J., Spangenberg, K., Wobil, P., & Schwenk, T. L. (2013). Depression and risk factors for depression among mothers of sick infants in Kumasi, Ghana. *International Journal of Gynecology and Obstetrics*, http://dx.doi.org/10.1016/j.ijgo.2012.09.016.

Goodman , S. H., & Brand , S. R. (2009). Infants of depressed mothers: Vulnerabilities, risk factors, and protective factors for the later development of psychopathology. In *In In J. C. H. Zeanah (Ed.). Handbook of infant mental health* (pp. 153-170). New York: Guilford Press.

University of Ghana http://ugspace.ug.edu.gh

Gray, P. H., Edwards, D. M., O'Callaghan, M. J., Cuskelly, M., & Gibbons, K. (2013). Parenting stress in mothers of very preterm infants — Influence of development, temperament and maternal depression. *Early Human Development* , 625–629, http://dx.doi.org/10.1016/j.earlhumdev.2013.04.005.

Greer , T. R. (2011). Coping strategies as moderators of the relation between individual racerelated stress and mental health symptoms for African American women. *Psychology of Women Quarterly*, *35*(2) 215-226; DOI: 10.1177/0361684311399388 .

Gueritault-Chalvin, V., Kalichman, S. C., Demi, A., & Peterson, J. L. (2014). Work-related stress and occupational burnout in AIDS caregivers: Test of a coping model with nurses providing AIDS care. *Psychological and Socio-medical Aspects of AIDS/HIV*, *12*:2, 149161, DOI:10.1080/09540120050001823.

Haemmerli, N. S., Lemola , S., Holditch-Davis , D., & Cignacco , E. (2000). Comparative evaluation of parental stress experiences up to 2 to 3 years after preterm and term birth. *Outcomes of Neonatal Care*, 1-13. https://doi.org/10.24451/arbor.11452.

Hall, R. A., Hoffenkamp, H. N., Braeken , J., Tooten , A., Vingerhoets, A. J., & Bakel, H. J. (2017). Maternal psychological distress after preterm birth: Disruptive or adaptive? . *Infant Behavior and development* , *49*, 272-280.https://doi.org/10.1016/i.infbeh.2017.09.012.

Herizchi, S., Hosseini, M. B., & Ghoreishizadeh , M. (2017). The Impact of kangaroo-mother care on postpartum depression in mothers of premature infants. *International Journal of Women's Health and Reproduction Sciences*, 312–317; doi 10.15296/ijwhr.2017.53.

Hinz, A., Finck , C., & Gomez , Y. (2014). Anxiety and depression in the general population in Columbia: reference values of the hospital anxiety and depression scale (HADS). *Soc.*

University of Ghana http://ugspace.ug.edu.gh

Psychiatry Epidemiol, *49*, 41-49.

Holditch-Davis , D., Bartlett, T. R., & Belyea , M. (2000). Developmental problems and interaction between mothers and prematurely born children. *Journal of Pediatric Nursing*, *15*(3), 157-167.

Holditch-Davis, D., Miles, M. S., Weaver, M. A., Black , B. P., Beeber , L. S., & Thoyre , S. (2009). Patterns of distress in African-American mothers of preterm infants . *Journal of Developmental & Behanioral Pediatrics* , *30*., (3) 193-205.

Howe, T. H., Sheu , C. F., Wang , T. N., & Hsu , Y. W. (2014). Parenting stress in families with very low birth weight preterm infants in early infancy. *Research in Developmental Disabilities*, *35*, 1748-1756. http://dx.doi.org/10.1016/j.ridd.2014.02.015.

Jones , F. M., Fellows, J. L., & Home, D. J. (2010). Coping with cancer: a brief report on stress and coping strategies in medical students dealing with cancer patients. *John Wiley & Sons, Ltd*, DOI: 10.1002/pon.1751.

Jones, H., & Santamaria, N. (2017). *Nordic College of Caring Science*, doi: 10.1111/scs.12543.

Kampetete , G. S., Ngoma , C., & Maureen , M. (2018). Acceptance of kangaroo mother care by mothers of premature babies. *African Journal of Midwifery and Women's Health*, *12*(4) 178-188; DOI: 10.12968/ajmw.2018.12.4.178.

Kendall, E., & Terry, D. J. (2008). Understanding adjustment following traumatic brain injury: Is the Goodness-of-Fit coping hypothesis useful? *Social Science & Medicine* , 1217–1224, doi:10.1016/j.socscimed.2008.05.033.

Kurniawati, Rustina , Y., & Budiati, T. (2019). Peer support increases maternal confidence, kangaroo mother care implementation and weight gain in LBW infants. *Comprehensive*

University of Ghana http://ugspace.ug.edu.gh

Child and Adolescent Nursing , *42*(1), 252-260. http://doi.org/10.1080/24694193.2019.1594457.

Lee, Y. S., & Kimble, P. L. (2009). *Journal of Obstetric, Gynecology, and Neonatal Nursing*, 38,676-685.

Lewis , T. P., Andrews , K. G., Shenberger , E., Betancourt , T. S., Fink , G., Pereira , S., & McConnell, M. (2019). Caregiving can be costly: A qualitative study of barriers and facilitators to conducting kangroo mother care in a US tertiary hospital neonatal intensive care unit. *BMC Pregnancy and Childbirth*, 19-227,https://doi.org/10.1186/s12884-0192363.

Linden, M. A., Cepeda, I. L., Synnes, A., & Grunau, R. E. (2015). Stress in parents of children born very preterm is predicted by child externalising behaviour and parent coping at age 7 years. *Arch Dis Child* , 1–5, doi:10.1136/archdischild-2014-307390.

Liu, L., Oza, S., Hogan, D., Perin, J., Rudan , I., Lawn, J. E., & Black, R. E. (2014). Global, regional, and national causes of child mortality in 2000-13, with projections to inform post-2015 priorities: an updated systematic analysis. *CrossMark*, http://dx.doi.org/10.1016/S01406736(14)61698-6.

Lu, N., Liu, J., Wang , F., & Lou, V. W. (2016). Caring for disabled older adults with musculoskeletal conditions: A transactional model of caregiver burden, coping strategies, and depressive symptoms. *Archives of Gerontology and Geriatrics*, http://dx.doi.org/doi:10.1016/j.archger.2016.11.001.

Madu , S. N., & Roos , J. J. (2006). Depression among mothers with preterm infants and their stress-coping strategies. *Social Behavior and Personality: An International Journal*, *34*(7), 877–890; https://doi.org/10.2224/sbp.2006.34.7.877.

University of Ghana http://ugspace.ug.edu.gh

Massey, D. S. (2002). A Brief History of Human Society: The Origin and Role of Emotion in Social Life. *American Sociological Review*, *67*(1),1-29; http://www.jstor.org/stable/3088931.

Mausbach, T. B., Aschbacher, K., Patterson, T. L., Ancoli-Israel, S., von Kanel, R., Mills, P. J., Grant, I. (2006). Avoidant coping partially mediates the relationship between patient problem behaviors and depressive symptoms in spousal alzheimer caregivers. *American Association for Geriatric Psychiatry*, DOI :10.1097/01.JGP.0000192492.88920.08.

Mayosi, B. M., Flisher , A. J., Umesh , G. L., Sitas , F., Tollman , S. M., & Bradshaw, D. (2009). The burden of non-communicable diseases in South Africa. *The Lancet*, 934-947.

Miles, M. S., Holditch-Davis, D., Schwartz , T. A., & Scher, M. (2007). Depressive symptoms in mothers of prematurely born infants. *Journal Dev Behav Pediatr*, *28*(1): 36-44.

Mohammadi, M., Bergh , A. M., & Heidarzadeh, M. (2021). Implementation and effectiveness of continuous kangaroo mother care: a participatory action research protocol. *Int Breastfeed Journal* , https://doi.org/10.1186/s13006-021-00367-3.

Moszczynski, A. B., & Haney, C. J. (2002). Stress and Coping of Canadian Rural Nurses Caring for Trauma Patients Who Are Transferred Out. *Journal of Emergency Nursing*, doi:10.1067/men.2002.129727.

Mu, P. F., Lee, M. Y., Chen, Y. C., Yang, H. C., & Yang , S. H. (2019). Experiences of parents providing kangaroo care to a premature infant: A qualitative, systematic review. *Nursing & Health Sciences* , 1-13; DOI: 10.1111/nhs.12631.

University of Ghana http://ugspace.ug.edu.gh

Muriuki, A. (2017). Health worker perceptions on barriers to provision of kangaroo mother care in Bungoma County, Kenya. Edinburgh, Scotland. *Pediatric Nursing & Healthcare*.

Nguah, S. B., Wobil, P. N., Obeng, R., Yakubu, A., Kerber, K. J., Lawn , J. E., & Plange-Rhule , G. (2011). Perception and practice of kangaroo mother care after discharge from hospital in Kumasi, Ghana: A longitudinal study . *BioMed Central Pregnancy and Childbirth* , *11*(1), 99. DOI: 10.1186/1471-2393-11-99.

Nolen-Hoeksema, S., & Keita, G. P. (2003). Women and depression: Introduction . *Psychology of Women Quarterly* , 89-90.

Nunes, C. R., Campos, L. G., Lucena, A. M., Pereira, J. M., Costa, P. R., Lima, F. A., & Azevedo , V. M. (2017). Relationship between the use of kangaroo position on preterm babies and mother-child interaction upon discharge. *Revista Paulista de Pediatria* , *35*(2), 136-143.

Nutsugah, T. (2019). Experiences, psychological distress and coping among teachers of students with learning difficulties. *Ugspace*, http://ugspace.ug.edu.gh.

Opara, P. I., & Okorie, E. (2017). Kangaroo mother care: Mothers experiences post discharge from hospital. *J Preg Neonatal Med*, *1*(1), 1-5; http://www.alliedacademies.org/pregnancy-andneonatal-medicine.

Oti-Boadi, M., & Asante , K. O. (2017). Psychological health and religious coping of Ghanaian women with infertility. *BioPsychoSocial Medicine*, 11:20, DOI 10.1186/s13030-0170105-9.

Pearlin, L. L., Mullan , J. T., Semaples , S. J., & Skaff, M. M. (1990). Caregiving and the stress process: An overview of concepts and their measures. *Gerontologist*, vol *30*, pp 583- 594.

University of Ghana http://ugspace.ug.edu.gh

Penley, J. A., Tomaka, J., & Wiebe, J. S. (2002). The association of coping to physical and psychological health outcomes: A meta-analytic review. *Journal of Behavioral Medicine*, *25*(6), doi:0160-7715/02/1200-0551/0.

Purbasary , E. K., Rustina , Y., & Budiarti, T. (2017). Increasing confidence and ability in implementing kangaroo mother care method among young mothers. *Comprehensive Child and Adolescent Nursing*, *40*(sup1), 1-7. https://doi.org/10.1080/24694193.2017.1386964.

Raj, E., Shiri, S., & Jangam, K. (2016). Subjective burden, psychological distress, and perceived social support among caregivers of persons with schizophrenia. *Indian Journal of Social Psychiatry*, *32*(42); DOI: 10.4103/0971-9962.176767.

Rao , P., Raajashri, R., Bothou, A., Bhat, V., & Palanivel, C. (2019). Does kangaroo mother care reduce anxiety in postnatal mothers of preterm babies? – A descriptive study from a tertiary care centre in South India. *J Nepal Health Res Counc*, *17*(42): 42-5; DOI https://doi.org/10.33314/jnhrc.1228.

Ridner, S. H. (2004). Psychological distress: concept analysis. *Journal of Advanced Nursing* , *45*(5), 536–545.

Rogers , C. E., Kidokoro, H., Wallendorf, M., & Inder , T. (2013). Identifying mothers of very preterm infants at-risk for postpartum depression and anxiety before discharge . *Journal of Perinatology*, *33*, 171-176.

Rowe, J., & Jones, L. (2010). Discharge and beyond. A longitudinal study comparing stress and coping in parents of preterm infants. *Journal of Neonatal Nursing*, 258-266, doi:10.1016/j.jnn.2010.07.018.

University of Ghana http://ugspace.ug.edu.gh

Rudolph, A. M., Kamei, R. K., & Overby , K. J. (2002). Rudolph's fundamentals of paediatrics (3rd edition). *McGraw-Hill companies* .

Sarfo, J. O. (2018). Ghana's Kangaroo Mother Care: A historical review on Eastern Regional Hospital KMC excellence centre. *Africa: History and Culture*, *3*(1): 12-17. DOI: 10.13187/ahc.2018.1.12.

Schreuder, J. A., Roelen, C. A., Groothoff, J. W., van der Klink, J. J., Magerøy, N., Pallesen, S., Moen, B. E. (2012). Coping styles relate to health and work environment of Norwegian and Dutch hospital nurses: A comparative study. *Nursing Outlook*, *60*(1), 37-43, doi:10.1016/j.outlook.2011.05.005.

Scime, N. V., Gavarkovs, A. G., & Chaput , K. H. (2019). The effect of skin-to-skin care on postpartum depression among mothers of preterm or low birthweight infants: A systematic review and meta-analysis. *Journal of Affective Disorders*, *253*, 376-384. https://doi.org/10.1016/j.jad.2019.04.101.

Singer, L. T., Fulton, S., Kirchner, H. L., Eisengart, S., Lewis, B., Short , E., & Baley , J. E. (2007). Parenting very low birth weight children at school age: maternal stress and coping. *The Journal of Pediatrics* , *151*, 463-469.

Soghier, L. M., Kritikos, K. I., Carty , C. L., Glass, P., Tuchman, L. K., Streisand, R., & Fratantoni, K. R. (2020). Parental depression symptoms at neonatal intensive care unit discharge and associated risk factors. *The Journal of Pediatrics*, https://doi.org/10.1016/j.jpeds.2020.07.040.

University of Ghana http://ugspace.ug.edu.gh

Suraju, A. H., Aniteye , P., & Adabayeri , V. M. (2013). The experiences of mothers caring for preterm babies at home: A study in the Accra Metropolis. *Ugspace*, http://ugspace.ug.edu.gh.

Surkan, P. J., Kennedy , C. E., Hurley , K. M., & Black , M. M. (2011). Maternal depression .

Sweeney, S., Rothstein , R., Visintainer , P., & Singh , R. (2017). Impact of kangaroo care on parental anxiety level and parenting skills for preterm infants in the neonatal intensive care unit. *Journal of Neonatal Nursing* , *23*, 151-158.

Tabachnick, B. G., & Fidell, L. S. (2013). Multiple regression . United States of America: Pearson Education, Inc.

Tuncay, T., Musabak, I., Gok, D. E., & Kutlu, M. (2008). The relationship between anxiety, coping strategies and characteristics of patients with diabetes. *Health and Quality of Life Outcomes*, 6:79, doi:10.1186/1477-7525-6-79.

UNICEF , & WHO. (2018, August 7). Retrieved from Low birthweight: Country, regional and global estimates: http://www.unicef.org/publications/index_24840.html

Uwaezuoke, S. (2017). Kangaroo mother care in resource limited settings: Implementation, health benefits, and cost-effectiveness. *Res Rep Neonatology* , *7*;8-11.

Vesel , L., Bergh , A., Kerber, K., Valsangkar, B., Mazia, G., & Moxon , S. (2015). Kangaroo mother care: A multi-country analysis of health system bottlenecks and potential solutions. *BMC Pregnancy Childbirth*.

Vigod , S. N., Villegas, L., Dennis , C. L., & Ross, L. E. (2010). Prevalence and risk factors for postpartum depression among women with preterm and low-birth-weight infants: a

University of Ghana http://ugspace.ug.edu.gh

systematic review. *BJOG: An international Journal of Obstetrics & Gynaecology*, *117*, 540-50. doi: 10.1111/j.1471-0528.2009.02493.

Wang , X., & Cheng, Z. (2020). Cross-sectional studies: strengths, weakness, and recommendations. *Chest* , doi: 10.1016/j.chest.2020.03.012.

Wartella, J. E., Auerbach , S. M., & Ward , K. R. (2009). Emotional distress, coping and adjustment in family members of neuroscience intensive care unit patients. *Journal of Psychosomatic Research* , 503–509, doi:10.1016/j.jpsychores.2008.12.005.

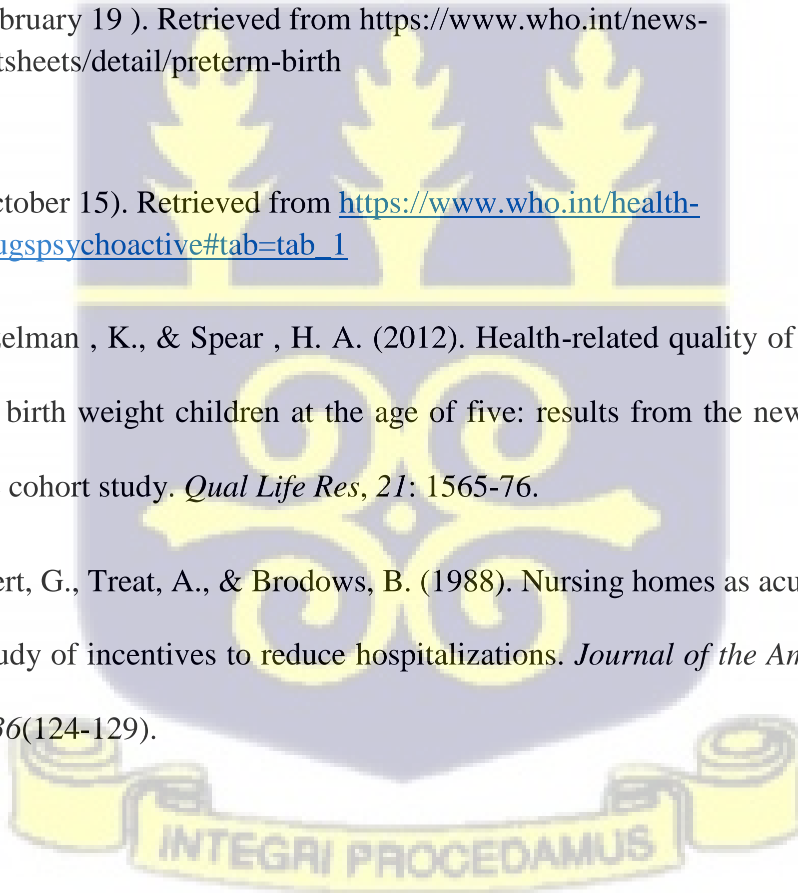
WHO. (2012). Born too soon . *WHO Library Cataloguing in Publication*.

WHO. (2018, February 19). Retrieved from https://www.who.int/news-room/factsheets/detail/preterm-birth

WHO. (2021, October 15). Retrieved from https://www.who.int/health-topics/drugspsychoactive#tab=tab_1

Witt, W. P., Litzelman , K., & Spear , H. A. (2012). Health-related quality of life of mothers of very low birth weight children at the age of five: results from the newborn lung project statewide cohort study. *Qual Life Res*, *21*: 1565-76.

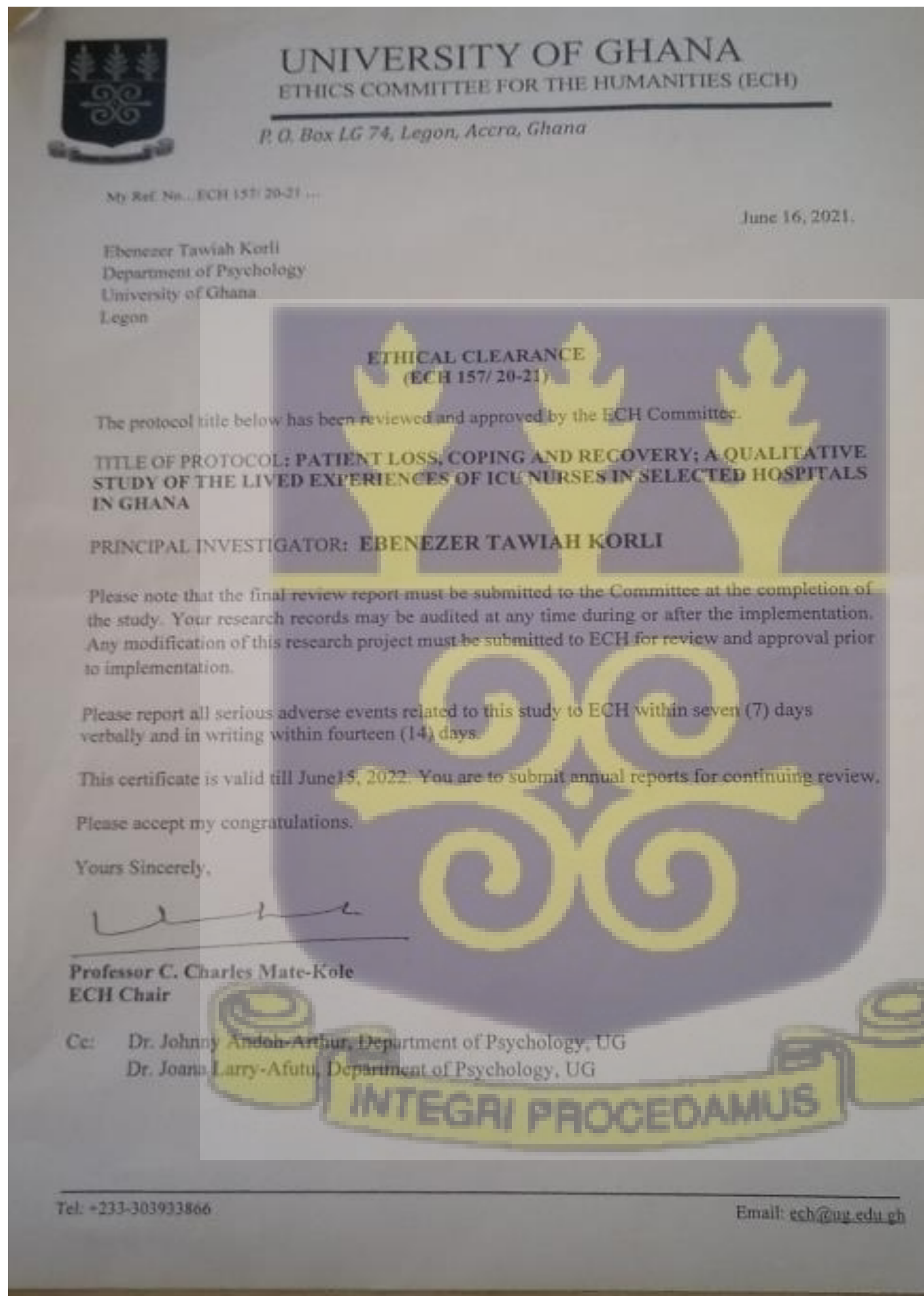
Zimmer, J., Eggert, G., Treat, A., & Brodows, B. (1988). Nursing homes as acute care providers: a pilot study of incentives to reduce hospitalizations. *Journal of the American Geriatrics Society*, *36*(124-129).



University of Ghana http://ugspace.ug.edu.gh

APPENDICES

Appendix 1: Ethics Approval Letter



UNIVERSITY OF GHANA
ETHICS COMMITTEE FOR THE HUMANITIES (ECH)
P. O. Box LG 74, Legon, Accra, Ghana

My Ref. No...ECH 157/ 20-21 ...

June 16, 2021.

Ebenezer Tawiah Korli
Department of Psychology
University of Ghana
Legon

ETHICAL CLEARANCE
(ECH 157/ 20-21)

The protocol title below has been reviewed and approved by the ECH Committee.

TITLE OF PROTOCOL: **PATIENT LOSS, COPING AND RECOVERY; A QUALITATIVE STUDY OF THE LIVED EXPERIENCES OF ICU NURSES IN SELECTED HOSPITALS IN GHANA**

PRINCIPAL INVESTIGATOR: **EBENEZER TAWIAH KORLI**

Please note that the final review report must be submitted to the Committee 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 ECH for review and approval prior to implementation.

Please report all serious adverse events related to this study to ECH within seven (7) days verbally and in writing within fourteen (14) days.

This certificate is valid till June15, 2022. You are to submit annual reports for continuing review.

Please accept my congratulations.

Yours Sincerely,

Professor C. Charles Mate-Kole
ECH Chair

Cc: Dr. Johnny Andoh-Arthur, Department of Psychology, UG
Dr. Joana Larry-Afutu, Department of Psychology, UG

INTEGRI PROCEDAMUS

Tel: +233-303933866 Email: ech@ug.edu.gh

University of Ghana http://ugspace.ug.edu.gh

Appendix II
Questionnaire for data collection

Dear Participant,

This study is designed to assist the researcher to make an objective assessment on 'The use of Kangaroo Mother Care: Psychological distress and coping strategies among mothers with preterm babies in Ghana'. The study is strictly for academic purposes. You are required to provide responses to five structured questionnaires which includes Parenting Stress Scale, Brief Symptom Inventory (BSI), Multidimensional Scale of perceived social support, Brief Cope and Perceived Stigma: Perceived Stigma Scale – Revised. There are no anticipated physical risks involved in this study and each participant will take between 45 minutes and an hour to complete the questionnaires. Any information that will be provided will remain confidential and will be disclosed only with your permission. Your participation in this study is voluntary and if you decide to participant, you are free to withdraw from this study at any point in time. If you have understood the above instructions and willing to participate in this study, kindly provide your signature in the space below as a form of your consent to participate in this study.

__________________________________ __________________

Participant's Signature Date

University of Ghana http://ugspace.ug.edu.gh

Demographic information

1. **Mother's Age** ☐
2. **Marital status: a. Single** ☐ **b. Married** ☐ **c. Divorced** ☐ **d. widowed** ☐

   e. cohabiting ☐
3. **Religion: a. Christian** ☐ **b. Muslim** ☐ **c. Others …………………..**
4. **Educational level: a. Primary** ☐ **b. secondary** ☐ **c. Tertiary** ☐
   d. Others ☐
5. **Occupation: a. employed** ☐ **b. unemployed** ☐
6. **Type of child delivery: a. caesarian** ☐ **b. self-delivery** ☐
7. **Is this your first child: a. Yes** ☐ **b. No** ☐
8. **Child's age** ☐

Parental Stress Scale

The following statements describe feelings and perceptions about the experience of performing KMC as a preterm mother at home. Think of each of the items in terms of how your relationship with your child or children typically is when performing KMC at home. Please indicate the degree

University of Ghana http://ugspace.ug.edu.gh

to which you agree or disagree with the following items by placing the appropriate number in the space provided.

1 = Strongly disagree 2 = Disagree 3 = Undecided 4 = Agree 5 = Strongly agree

1	I am happy in my role as a mother	
2	There is little or nothing I wouldn't do for my preterm child(ren) if it was necessary.	
3	Caring for my preterm child(ren) sometimes takes more time and energy than I have to give.	
4	I sometimes worry whether I am doing enough for my preterm child(ren).	
5	I feel close to my preterm child(ren).	
6	I enjoy spending time with my preterm child(ren).	
7	My preterm child(ren) is an important source of affection for me.	
8	Having preterm child(ren) gives me a more certain and optimistic view for the future.	
9	The major source of stress in my life is my preterm child(ren).	
10	Having preterm child(ren) leaves little time and flexibility in my life.	
11	Having preterm child(ren) has been a financial burden.	
12	It is difficult to balance different responsibilities because of my preterm child(ren).	
13	The behaviour of my preterm child(ren) is often embarrassing or stressful to me.	
14	If I had to do over again, I might decide not to have child(ren).	
15	I feel overwhelmed by the responsibility of being a mother.	
16	Having preterm child(ren) has meant having too few choices and too little control over my life.	

University of Ghana http://ugspace.ug.edu.gh

17	I am satisfied as a mother	
18	I find my preterm child(ren) enjoyable	

Multidimensional Scale of Perceived Social Support

Instructions: We are interested in how you feel about the following statements. Read each statement carefully. Indicate how you feel about each statement.
Circle the "1" if you **Very Strongly Disagree**
Circle the "2" if you **Strongly Disagree**
Circle the "3" if you **Mildly Disagree**
Circle the "4" if you are **Neutral**
Circle the "5" if you **Mildly Agree**
Circle the "6" if you **Strongly Agree**
Circle the "7" if you **Very Strongly Agree**

		1	2	3	4	5	6	7
1.	There is a special person who is around when I am in need							
2.	There is a special person with whom I can share my joys and sorrows.							
3.	My family really tries to help me.							
4.	I get the emotional help and support I need from my family.							
5.	I have a special person who is a real source of comfort to me.							
6.	My friends really try to help me.							
7.	I can count on my friends when things go wrong.							
8.	I can talk about my problems with my family.							
9.	I have friends with whom I can share my joys and sorrows.							
10.	There is a special person in my life who cares about my feelings.							
11.	My family is willing to help me make decisions.							
12.	I can talk about my problems with my friends.							

Perceived stigma

University of Ghana http://ugspace.ug.edu.gh

You are to indicate on a 5-point scale how true or false the following statements relate to you when performing KMC. Indicate by ticking the box √ which best fit you.

1 = ***definitely false***
2 = false
3 = ***neither true nor false***
4 = true
5 = ***definitely true***

		1	2	3	4	5
1.	I feel that I am odd or abnormal because I am performing KMC for my child's special needs					
2.	There have been times when I have felt ashamed for performing KMC					
3.	I ***never*** feel self-conscious about performing KMC for my child's special needs.					
4.	People treat me differently when they find out that I am performing KMC.					
5.	I ***never*** feel embarrassed about performing KMC.					
6.	People look down on me because **I am** performing KMC for a child with special needs.					
7.	I have found that people say negative or unkind things about me behind					
8.	I have been excluded from social gatherings because **I** perform KMC for a child with special needs.					

BRIEF SYMPTOM INVENTORY- 18

Please indicate on a 5-point scale how much you have been stressed by performing KMC at home. Tick √ the box that best relates to you.

	0 Not at all	1 A little bit	2 Moderately	3 Quite a bit	4 Extremely
1. Faintness or dizziness					
2. Feeling no interest in things					
3. Nervousness or shakiness inside					
4. Pains in the heart or chest					

University of Ghana http://ugspace.ug.edu.gh

5. Feeling loneliness					
6. Feeling tensed or keyed up					
7. Nausea or upset stomach					
8. Feeling down					
9. Suddenly scared for no reason					
10. Trouble getting your breath					
11. Feeling of worthlessness					
12. Spells of terror or panic					
13. Numbness or tingling in parts of your body					
14. Feeling hopeless about the future					
15. Feeling so restless you could not sit still					
16. Feeling weak in parts of the body					
17. Thoughts of ending your life					
18. Feeling fearful					

Brief cope

Please indicate on a 4-point scale how you respond when stressed by performing KMC at home. Tick √ the box that best relates to you.

	1 I haven't been doing this at all	2 I've been doing this a little bit	3 I've been doing this a medium amount	4 I've been doing this a lot
1. I've been turning to work or other activities to take my mind off things				
2. I've been concentrating my efforts on doing something about the situation I'm in				
3. I've been saying to myself 'this isn't real'				
4. I've been using alcohol or other drugs to make myself feel better				
5. I've been getting emotional support from others				
6. I've been giving up trying to deal with it				
7. I've been taking action to try to make the situation better				

University of Ghana http://ugspace.ug.edu.gh

8. I've been refusing to believe that it has happened				
9. I've been saying things to let my unpleasant feelings escape				
10. I've been getting help and advice from other people				
11. I've been using alcohol or other drugs to help me get through it				
12. I've been trying to see it in a different light, to make it seem more positive				
13. I've been criticizing myself				
14. I've been trying to come up with a strategy about what to do				
15. I've been getting comfort and understanding from someone				
16. I've been giving up the attempt to cope				
17. I've been looking for something good in what is happening				
18. I've been making jokes about it				
19. I've been doing something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping or shopping				
20. I've been accepting the reality of the fact that it has happened				
21. I've been expressing my negative feelings				
22. I've been trying to find comfort in my religion or spiritual beliefs				
23. I've been trying to get advice or help from other people about what to do				
24. I've been learning to live with it				
25. I've been thinking hard about what steps to take				
26. I've been blaming myself for things that happened				
27. I've been praying or meditating				
28. I've been making fun of the situation				