Experiences of midwives who are faced with newborns affected by birth asphyxia in rural birth settings, southern Ghana

by

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ABSTRACT

Background: The increasing trend in global neonatal deaths over the past decade has engaged global, regional, and national communities in seeking sustainable approaches to improve neonatal health outcomes. The major causes of these deaths are preterm birth complications, intra-partum related complications (including birth asphyxia), and sepsis. Understanding the dynamic contextual factors underlying these neonatal deaths are important to inform priorities for improving newborn health outcomes in the new Sustainable Development Goal [SDG] 2015-2030 era. Birth asphyxia, a preventable respiratory emergency that leaves survivors with irreversible neuro-muscular deficits, is associated with the quality of antenatal and intra-partum care. The worst affected are people who reside in rural communities within Sub-Saharan Africa where inequitable health coverage predominantly influences survival. In low-and-middle income countries [LMICs], very little information exists on care experiences of midwives regarding birth asphyxia. However, midwives have developed rich experiences in maternal and newborn health as frontline health workers. Predominant factors related to the occurrence of birth asphyxia include lack of access to basic and comprehensive emergency obstetric and newborn care, shortage of skilled staff, lack of basic life-saving devices, care provider inadequacies and poor referral systems.

Aim: To understand, unveil the meanings and articulate the experiences of midwives who are faced with newborns affected by birth asphyxia in rural birth settings within southern Ghana.

Methodology: Interpretive phenomenology that incorporates Heideggerian philosophy was used to explore, unveil the meanings and articulate the experiences of midwives who faced newborns with asphyxia at birth. Thirteen midwives were purposively sampled from rural birth settings in Southern Ghana (Shai-Osudoku District). Data were generated through audio-recorded

conversations (voice text) with the midwives, field notes, and reflective journal. Emerging themes were synthesized from the oral data, verbal transcripts, field notes, reflective journal and commentaries from two second readers to produce detailed understandings of the midwives' experiences. Emerging themes produced a rich understanding of midwives' embodied experiences as they faced newborns with birth asphyxia.

Findings: Rural midwifery practice in Ghana is grounded in harmonious communal relationships within restricted health care spaces where silent suffering occur. Midwives experience emotional drowning and adopt spirituality as coping mechanism when faced with birth-asphyxiated newborns. Midwives encounter moral distress and situation-helplessness within hegemonic power structures. Newly qualified midwives practice without mentorship in unsafe clinical spaces where ethical questions emerge as family members assist in resuscitative procedures.

Conclusion: New knowledge serves as basis for scaling up practices, directing capacity building strategies, developing policies and implementing research-informed interventions to support midwifery practice, prevent birth asphyxia and improve newborn health outcomes in rural Ghana.

Key words: *Birth asphyxia, midwives, rural, experiences, neonatal morbidity, newborn health*

PREFACE

I hereby with this statement, declare that this study is my own original research work and that no part of it has been presented in this university or anywhere else for the award of a degree. This research received ethics approval from the Health Research Office (Panel B), University of Alberta, Canada; Project Name: Experiences of midwives who are faced with newborns affected by birth asphyxia in rural birth settings, southern Ghana; Study Identity: PRO44075, September, 3rd 2015. The thesis abstract was published as a poster at the 29th Margaret Scott Wright Research and Innovation Conference on 6th November, 2015. As the primary author, I. composed the abstract and developed the poster slide. Dr. Solina Richter contributed to poster design, thesis genre and abstract edits. Dr. Sherrill Conroy was involved with philosophical concept refinement and abstract edits. I developed the image titled: 'The synthesis of science is lived in the arts' in chapter 10 as the summative representation of this thesis research findings. The research-based art was accepted in the 'Images of research competition and exhibition' at the University of Alberta on 22nd March, 2016; Object ID: 51.

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We, the undermentioned hereby declare that the preparation and presentation of this thesis was supervised in accordance with the standard guidelines on thesis supervision stipulated by the University of Alberta, Edmonton, Canada: Dr. Solina Richter (Supervisor); Dr. Sherrill Conroy (Supervisor); and Dr. Nicole Pitre (Supervisory Committee member).

DEDICATION

To the source of my inner strength…

In the light of all the sacrifices and efforts made to support my absence from home in this doctoral program, I dedicate this study to my family. To all the midwives in rural practice, you are the silent but prominent heroes I dedicate this research to.

ACKNOWLEDGEMENT

I am highly indebted to all my research participants who in spite of their busy family, clinical and community schedules, made themselves available to share their time, and unique experiences related to rural midwifery practice and care of newborns with birth asphyxia.

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I am sincerely grateful to my Supervisor, Dr. Solina Richter for her patient guidance, encouragement, and support in academic writing and exploring resources to enrich this research and journey through the PhD program. I have been extremely lucky to have a Supervisor who repeatedly read my numerous thesis drafts and final chapters, and promptly provided constructive feedback to refine my ideas. I deeply appreciate the timely responses to my numerous questions in spite of your busy schedule.

I am honestly grateful to my Supervisor, Dr. Sherrill Conroy, who through relentless efforts in repeated readings of my chapters, imparted expert knowledge and guidance to enhance my research experience, particularly in hermeneutic inquiry. I maximized my potentials in the art and heat of thinking and your humour lives with me. Your support in the choices around my doctoral course work set the stage for this research and shaped my thinking in doctoral studies.

I am extremely grateful to Dr. Nicole Pitre for critically reviewing the entire thesis and offering timely constructive feedback at various stages which provided me with deep insights in the chapters of my thesis. I remain indebted for her intense efforts in reviewing the thesis in spite of her busy schedule. This example contributes to my professional development as an educator.

I acknowledge with deep appreciation my Supervisory Committee: Drs. Richter, Conroy, and Pitre, who through constant scrutiny and excellent team work in monthly research review meetings, have been very instrumental in the completion of this thesis. Your mentoring, constructive criticism, role modeling, gentle guidance, and rich expertise, advanced my critical thinking and problem solving skills which have been foundational in enriching both this study, and my pediatric nursing career. You were goal-oriented and kept me outcome-focused. I will forever remain grateful to you as a team.

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I cannot complete this acknowledgement without mentioning my husband, John Ani-Amponsah who sacrificed his comfort to support me in my doctoral studies, and parented our children in Ghana by taking up my traditional mothering role. I also extend this deep appreciation to my mother and family for supporting my husband and I in child care.

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LIST OF ABBREVIATIONS

EmONC	Emergency Obstetric and Newborn Care
GDHS	Ghana Demographic Health Survey
GSS	Ghana Statistical Service
HP	Heideggerian Phenomenology
ICM	International Confederation of Midwives
IGME	Inter-agency Group for Child Mortality Estimation
IMR	Infant Mortality Rate
IP	Interpretive Phenomenology
MDG	Millennium Development Goal
MOH	Ministry of Health
NMC	Nursing and Midwifery Council
NMR	Neonatal Mortality Rate
SBA	Skilled Birth Attendant
SDG	Sustainable Development Goal
SDoH	Social Determinants of Health
UN	United Nations
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
UNPD	United Nations Population Division
USAID	United States Agency for International Development
U-5MR	Under Five Year Mortality Rate
WHO	World Health Organization

CHAPTER ONE: BACKGROUND TO THE INQUIRY

We only see in part; we only see in whole when we engage
(January, 2016)

In this chapter, I provide an overview of the background with details on how the study unfolds. I begin with the events that underlie my interest in this study. I articulate the research problem from synthesized sources from which the research question emerges to guide the research process. The research aim and objectives summarize what the study intends to achieve and I provide explanations of phrases and key terminologies used. In all the discussions, I make explicit my own perspectives and assumptions as a researcher. I conclude this chapter with the rationale and significance of this inquiry.

Beginning a journey

Telling the beginning from the end comes as fun. The seemingly straight road that turns curvy sets one up somehow for surprises. I learnt over time through hard mummy head knocks that problem solving is a life skill that is foundational to birthing my best and remaining acutely focused. Transitioning into the militarized nursing school in 1996 was another life ladder to climb. Here, I learnt through the null curriculum to translate beautiful ideas into brilliant results on practical issues and progress through evaluation. Along my clinical practice, I discovered that pre-determined evaluation criteria were a 'tight box' - a one size that did not always fit all. More so, the periods of inter-professional practice and patient mortality audit meetings often stimulated self-reflections which were pivotal to developing embedded and contextualized knowledge on staff performance, resource availability and patient health outcomes. The edgy moments in my clinical practice stimulated my thinking, questioning, reasoning and reflections. To broaden my experiences, I participated in volunteer activities with several organizations involved in rural healthcare across the country. I unravel the story that sets me on a journey to

find the missing pieces that brings the 'whole' together to illuminate meanings and perspectives in my area of interest – *neonatal survival.*

When I began pediatric nursing in September, 2000, I had very little insight into where my clinical experience was going to lead me, much less to understand the complexities around neonatal health care. My interest in neonatal health originated from working in the Neonatal Intensive Care Unit [NICU] of an urban tertiary health facility. I felt privileged to be recruited as one of the professional nurses to the new NICU as the hospital had found it beneficial to establish a NICU to serve the populace primarily in Southern Ghana. Although the clinical unit was equipped with 4 incubators, and 10 cots, we often had an overflow in the admission capacity of twenty-two (22) neonates that placed staff under pressure due to limited health care resources. Pairing preterm infants in one incubator was not uncommon particularly during months with higher birth rates (April – July), and over periods of strike actions in other public health facilities when we had to admit transferred neonates from these institutions.

We admitted babies from the hospital's maternity unit, pediatric out-patient and emergency departments, antenatal ward, as well as referrals from other health facilities. Knowing that newborns who were admitted as a referral in critical condition could not be referred again elsewhere for ethical reasons, we could not turn away such ill newborns although the NICU was full. Turning away such infants was impossible; we knew the baby in question might not survive the journey to the next level of care. Subsequently, pairing neonates with similar conditions was the only option although not a professionally acceptable practice particularly for fear of infection that is associated with *Klebsiella species*. With the rise in patient admissions, we were also confronted with issues such as overcrowding at the NICU, delayed timelines in feeding the babies, inadequate family-centred care, and poor handwashing practices.

These issues raised questions around what counted as 'acceptable practice' in the face of an ill infant whose life is at stake and waits at the door to be admitted. Is this a trade-off for life in exchange for a potential cross infection and sub-optimal care?

The ratio of registered nurses (RNs) to newborns varied with the type of shift. A typical ratio of RNs to neonates on a morning shift (7.30am - 1.30pm) was 1: 4. On such shifts, the RN often managed the shift with two other nurse colleagues: one or two 2nd or 3rd year nursing or midwifery students, or nurses on clinical rotation within the hospital; and two auxiliary nurses. Although the RNs were primarily responsible for technical care involving health assessment, setting up intravenous lines, and administering medications, the support staff made work lighter not merely by numerical strength but by the experiential knowledge which enhanced clinical orientation to the care of sick newborns. Whilst the afternoon shifts (1.30 pm – 7.30 pm) maintained a ratio of 1:7, it was often worse during the usual 12-hour night shift (7.30 pm – 7.30am). I called them *enduring shifts*. One RN could primarily be responsible for as many as 15 babies (2 critically ill, 3 fairly stable and 10 stable) with the support of one junior nurse, and an auxiliary staff.

Working during the night shifts was not easy. Due to lack of skilled staff, pressure mounted as a neonate's condition got critical, and/or new in-hospital admissions or referred babies arrived at the NICU in moribund (near death) conditions. Taking a break during a shift was a luxury one could not afford. Although I had periodic day shifts, I was predominantly working night shifts for about three years (2000-2003). The RN in the NICU was confronted with ethical dilemmas related to the allocation of scarce resources (incubator, pulse oximeter, cardiac monitor); beneficence and non-maleficence; informed consent; and justice (Beauchamp & Childress, 2009). The distinct professional knowledge in ethical frameworks, and institutional

policies that guided our practice (Austin, 2007; Austin, Bergum & Goldberg, 2003; De Beauvoir, 1985) were often discussed at weekly team meetings, mortality audit conferences, and staff training sessions. In practice, the ethical issues involved in the care of neonates (Beauchamp & Childress, 2009) centered around which baby stays in the incubator and who exits; who gets the pulse oximeter and who does not. Furthermore, in medication administration, particularly for six hourly regimens (quater in die - q.i.d) medications, it was a challenge to adhere to strict timelines when one RN is required to nurse about 8 to 12 babies on a shift. The clinical indications for NICU admissions were predominantly related to preterm birth complications, birth asphyxia (often in moribund states), newborns at risk of sepsis (e.g. when mother's liquor is meconium-stained), macrosomia, birth trauma and jaundice. The majority of neonatal deaths which occurred in these conditions could have been prevented with timely access to skilled care and appropriate health care resources. The loss of a neonate created moments that were characterized by tearful faces and questioning from grief-stricken parents, particularly wailing mothers.

As I write this text today, I still remember the new mother who when wailing, kept on rolling on the unclean floor from one end of the 'nursing room' to the other. I wanted to prevent her from contaminating her body and clothing but navigating cultural sensitivity and clinical knowledge (Al-Shdayfat et al., 2016; Waite, Nardi & Killian, 2013) was challenging in this breastfeeding and expressed breast milk feeding room. Culturally, I knew this act was not a mere display of grief, but an expression of strong emotions and deep relation with the deceased, which symbolizes the highest form of African grieving that is tied to the belief that, a child's death is particularly a grievous evil event not only for the mother, but for the family, and community. I was careful to avoid unmasking any related domination which shapes the construction of the grieving family as the only ones affected in the clinical space.

As staff, we shed tears with bereaved families, and maintained close relationship even after discharge to reveal a nursing humanness that bridges the gap between *the affected and non-affected*. A common phenomenon that threaded through my experiences were the late referrals and late arrivals of pregnant women, mothers and newborns from remote and rural settings, and the critical conditions in which both or either arrived at the urban tertiary health care facility. In majority of the cases, the babies came in a taxi, sometimes accompanied by the new mother and family members, or a junior nurse or alone without any health care provider. This data on neonatal morbidity and mortality in either rural or poor urban communities reflected in global systematic analysis (Black et al., 2010) and research reports (World Health Organization [WHO], 2012a, 2015).

Midwives are the majority frontline health workers in maternal and newborn care in Ghana. Seeing midwives moving from one delivery couch to the other, in white boots, plastic aprons, with sweat on their faces and changing gloves speedily to 'catch' the next baby was not uncommon and appeared similar to running a marathon race. The midwives often told me "this is a *normal experience* for the midwife in tertiary health care facilities". Tension was a daily occurrence in the lives of midwives and NICU nurses. Hearing the NICU doors fling open followed by shouts for help by desperate midwives set NICU nurses on roller coaster experiences. As my colleagues and I already knew, the sound of the flinging doors and midwives' shouts for assistance always signified an emergency and a need to help, often without prior information from the attendant midwives. This lack of communication often sparked quarrels between the NICU staff and labor ward staff. Midwives also often rushed to the NICU to borrow nasal suction catheters, suction machines and bag-and-mask/self-inflating bag to initiate positive pressure ventilation [PPV] for asphyxiated newborns due to a lack or

malfunction of their available equipment. These vivid experiences linger on with memory flashbacks.

The tensions that arose within such resource-limited settings contextualized the impact of health processes on neonatal health outcome indicators. In diverse rural community settings and outreach programs in which I volunteered, pregnant women and newborns had limited options around facility-based care. Seeing pregnant women navigate long, bumpy pathways, and being carried on the shoulders of four men on wood-and-fabric-tied stretchers in rural communities set me thinking deeply about midwives' involvement in maternal and newborn health within the context of existing health care frameworks.

What is birth asphyxia?

Birth asphyxia traditionally refers to failure of the newborn to initiate and maintain spontaneous respiration after delivery with an association to acute intra-partum events (Lawn, Manandhar, Haws, & Darmstadt, 2007). The terms '*asphyxia neonatorum'* and '*birth asphyxia'* are synonymous (Fraser & Cooper, 2009). Etymologically, the word '*asphyxia'* derived from the Greek word *'asphyxia*' means - *pulseless* (Lawn, 2009), or rather, the absence of a pulse. Ellenberg & Nelson (2013) define birth asphyxia as "a group of factors related to interruption of oxygen supply during the immediate perinatal period" (p.215). Lawn (2009) also describes birth asphyxia as a clinical syndrome of hypoxia and metabolic acidosis resulting from hypoventilation. There is however, a lack of standard definition for birth asphyxia (Ellenberg & Nelson, 2013; Lawn, 2009). The imprecise case definition is tied to inadequacies in diagnostic resources and staff capabilities (American College of Obstetricians and Gynecologists [ACOG], 2006; Ellenberg & Nelson, 2013; Lawn et al., 2007; Lawn, 2009). In the WHO guidelines on basic newborn resuscitation, birth asphyxia is still defined as "failure of the newborn to initiate

and sustain breathing at birth" (WHO, 2012b, p.6). This definition is grounded in physical assessment and requires skills in inspection, auscultation, and palpation.

Exploring the research problem

Globally, under-5 mortality rate [U-5MR] has dropped by 53%, from approximately 91 deaths per 1,000 live births in 1990 to about 43 per 1000 live births in 2015 (United Nations Inter-Agency Group for Child Mortality Estimation [UN - IGME], 2015). This reduction was achieved through regional and country action on nutrition, immunization, and treatment of childhood illnesses (Save the Children, 2014; United Nations [UN], 2015a; United Nations Children's Fund [UNICEF], 2014). Although the margin in this reduction is significant, minimal attention has been paid to interventions and programs that address the life-threatening dangers that children encounter as newborns during the neonatal period - the most vulnerable period of their young life (Lawn et al., 2011; Lee et al., 2011a; Save the Children, 2014, 2016). According to a research report (UN - 1GME, 2015), from 1990 to 2015, the decline in global neonatal mortality rate has been slower than deaths occurring in the post-neonatal period (i.e. between 28 days of life to 364th day of life).

Neonatal health is an indicator of global and national well-being that remains an essential (UNICEF, 2014; UN-IGME, 2015), but least integrated component in health policies, health system monitoring, evaluation, and decision-making regarding positive health outcomes (Bhutta et al., 2015; Lawn et al., 2011; Liu et al., 2015). Globally, approximately 6.3 million children under five years of age (U-5) died from preventable causes in 2013 alone; deaths which could have been prevented with simple and affordable interventions (WHO, 2014). Of these, nearly 7,700 newborns died each day from complications related to pregnancy, childbirth and neonatal causes (UN-IGME, 2015). Although the greatest number of these deaths occurred in the

neonatal period (Liu et al., 2015; UN, 2015a), these mortalities are concentrated within the first week of life (Black et al., 2010; Liu et al., 2012, 2015; UN-IGME, 2015; WHO, 2014). Within this period, almost 2 million babies die on the first day of life (Partnership for Maternal, Newborn & Child Health, 2011). More than 80% of all the neonatal deaths are attributed to three main preventable and treatable conditions which are related to preterm birth complications (15.4%); intrapartum-related complications, including birth asphyxia (10.5%); and neonatal sepsis (6.7%) (Liu et al., 2015).

In spite of diverse global interventions, these deaths do not show progressive decline across countries which are the worst affected. Research evidence from global systematic analyses establish that the trend has worsened in recent times with the rise in neonatal deaths from 41% in 2008 (Black et al., 2010) to 44% in 2013 (Liu et al., 2015). Approximately 99% of the global newborn deaths occur in low- and middle-income countries [LMICs] alone (Partnership for Maternal, Newborn & Child Health, 2011). However, about 90% of these deaths are concentrated in Sub-Saharan Africa and Southern Asia (WHO & UNICEF, 2013; UN, 2015a), with Sub-Saharan Africa recording approximately half (49·6%) of the U-5 year global deaths (Liu et al., 2015).

Several countries are still struggling to reduce the major cause-specific neonatal mortality rates (WHO & UNICEF, 2013; Lawn et al., 2011). The worst affected are people who live in rural communities where health inequities predominantly challenge positive health outcomes and predict survival (Issah, Nang-Beifubah & Opoku, 2011; Lori et al., 2012; UN, 2015a). In such deprived communities, the lack of rural involvement in health care planning and capacity building opportunities impact outcomes on the continuum of care (Byaruhanga et al., 2011; Lassi & Bhutta, 2015; Welaga et al., 2013). This troubling trend continues to spark, retain, and

reconstruct global interests and actions (Partnership for Maternal, Newborn & Child Health, 2011; Save the Children, 2014, 2016; WHO, 2012a, 2014, 2015; WHO & UNICEF, 2013). Therefore, understanding the dynamic factors underlying these neonatal deaths is crucial to inform priorities for improving newborn health outcomes in order to achieve set targets; i.e. reduce neonatal mortality to at least as low as 12 per 1,000 live births in the new Sustainable Development Goal [SDG] 2015-2030 era (UN, 2015b; UN-IGME, 2015).

I acknowledge the importance of preterm birth complications and sepsis, identified as two of the three major causes of neonatal mortality. I therefore do not overrule their significance in health planning, and mortality reduction strategies since these may be co-morbid with birth asphyxia. However, in this study, I purposefully focus on birth asphyxia, a preventable respiratory emergency of public health concern that presents as an intrapartum-related complication claiming about one million newborn lives yearly (Black et al., 2010; Lawn et al., 2011; Liu et al., 2015). This avoidable condition leaves affected newborns at risk of poor neuro-muscular and developmental outcomes (Bjorkman, Miller, Rose, Burke, Colditz, 2010; Ellenberg & Nelson, 2013; Helmy, Tolner, Vanhatalo, Voipio & Kaila, 2011; Helmy et al., 2012).

Following birth asphyxia, the infant may suffer irreversible brain damage (Ellenberg & Nelson, 2013; Eunson, 2012; van Doormaal, Meiners, Ter Horst, van der Veere, & Sijens, 2012), seizures (McIntyre et al., 2013), and spastic quadriplegia as a feature of cerebral palsy (Ellenberg & Nelson, 2013). These neurological deficits manifest as learning, or memory disabilities throughout infancy into maturity (McIntyre et. al., 2013). In a severe case of asphyxia, the neonate may suffer mental retardation, later onset of schizophrenia, and life-long functional psychotic syndromes (Golubnitschaja, Yeghiazaryan, Cebioglu, Morelli & Herrera-Marschitz, 2011). Conducting a biochemical analysis of fetal or umbilical blood gas levels is vital for

establishing a diagnosis of asphyxia and initiating the appropriate interventions (ACOG, 2015; Eunson, 2012). However, the medical resources to initiate these diagnostic investigations are rarely available in resource-limited settings (WHO, 2014).

Intra-partum factors leading to birth asphyxia are associated with true cord knot/tie, cord compression (Bernstein & Shelov, 2003; Ellenberg & Nelson, 2013), umbilical cord wrapped around neck (strangulation), and a pulseless prolapsed cord (Ellenberg & Nelson, 2013; Fraser & Cooper, 2009). Other intra-partum factors include prolonged labor related to cephalo-pelvic disproportion, delayed fetal extraction, fetal entrapment, and poor placental perfusion (Fraser & Cooper, 2009). Post-natal factors are associated with pulmonary system diseases such as tracheo-esophageal fistula, pneumothorax, pneumonia, hypo-plastic lungs, and diaphragmatic hernia, and non-pulmonary conditions related to cardiac anomalies (Bernstein & Shelov, 2003).

In Ghana, a Sub-Saharan African country where this study was conducted, neonatal deaths account for approximately 60% of infant mortality (Ghana Multiple Indicator Cluster Survey [GMICS], 2011) with a rate of 29 deaths per 1,000 live births (Ghana Demographic Health Survey [GDHS], 2014). The main causes of these mortalities are consistent with those of other LMICs although in Ghana, the causes vary as follows: infections (32%), prematurity and low birth weight (27%), and birth asphyxia (23%) (GDHS, 2008). These deaths are concentrated in rural communities (GDHS, 2014) where about 49% of Ghana's population reside (Ghana Statistical Service [GSS], 2012; WHO, 2012a) and many neonates die due to poor referral systems, and geographical barriers to skilled care (Issah et al., 2011; Welaga et al., 2013). In Ghana, research gaps and the lack of pertinent data for planning appropriate health interventions has undermined the realities of newborn health issues over the past twenty years (GDHS, 1988,

2003, 2008, 2014; GMICS, 2011). Within the realities of limited health infrastructure across the country, facility-based care tends to be a privilege rather than a right for mothers and newborns.

In Ghana, midwives comprise the majority of frontline skilled care workers in maternal and newborn health care (WHO, 2012a, 2015) and they encounter mounting pressure due to shortage of skilled staff in managing labor and delivery (Gans-Lartey, O'Brien, Oware-Gyekye, & Schopflocher, 2013; Issah et al., 2011). With the low nurse/midwife density ratio of 10.5 per 10,000 population (WHO, 2012a), the recent decrease to 9.3 per 10, 000 population (WHO, 2015) has primed the stage for increased workload in nurse/midwifery practice where poor skill mix has been a pre-existing issue across the country. Improvising, using local resources during clinical procedures is common, and routine staff breaks during a shift are almost a luxury that one cannot afford. Saving newborn lives subsequently become emotionally draining and a morally loaded task. Working overtime as a nurse or midwife in Ghana is a moral obligation, and often, staff do not receive remuneration for time and labor invested. In the case of birth asphyxia, affected families have limited structured support from the government. Although pregnancy schools are organized at the community level, assistance in the form of special education for affected mothers, home care, rehabilitation and welfare support is lacking in Ghana.

Although the prevention of birth asphyxia-related mortality begins with quality prenatal surveillance, it also extends to timely access to emergency care at birth (Enweronu-Laryea, Nkyekyer & Rodrigues, 2008; Floyd, 2013; Lawn et al., 2011; United Nations Population Fund [UNFPA], 2011). However, basic emergency obstetric and newborn health care services are lacking, particularly in rural areas within Ghana (Adanu, 2010; Issah et al., 2011; Welaga et al., 2013). With a crude birth rate of 30.9 per 1,000 population only 67% of pregnant women

benefited from skilled birth attendance although antenatal care (ANC) coverage was as high as 96% (for at least one visit) (WHO, 2015). These realities represent a significant number of births occurring at home or conducted by traditional birth attendants [TBAs) (GDHS, 2008, 2014; GMICS, 2011). In these circumstances, vital data on events surrounding births and deaths, and cause-specific morbidity are lost to oral history.

Arriving at the research question

My coming to the research question began about fifteen (15) years ago. In this phenomenological study, c*oming-to-the-question* involved the process of being taken to task on something, having a focus, being disturbed, and opening up to new possibilities that emerge but moves beyond the initial breadth of the research question (Gadamer, 1960/1989). Opening up to the experiences of midwives was what motivated this inquiry. Based on my urban and rural clinical and community experience, the questions I kept probing were: "How do you make things work in a specific context considering available or lack of resources? What are the possibilities? How do these problems manifest on a continuum? What contextual factors prime success in specific locales? How do midwives as frontline health workers manage to save newborn lives as a core professional duty in resource-limited settings; and how do midwives cope with the ever-present constraints in clinical and community-based practice? This quest, my health care experiences, and the issues discussed above in the research problem, consequently left me with a probing Heideggerian-based question: 'What is it like for midwives practicing in rural birth settings to face newborns affected by birth asphyxia?'

Aim of the study

The aim of this study was to understand, unveil the meanings and articulate the experiences of midwives who are faced with newborns affected by birth asphyxia in rural birth

settings within southern Ghana. As I explored midwives' experiences, I expected that new knowledge would be developed to support midwifery practice towards optimal newborn health outcomes in rural Ghana. Interpretive phenomenology that incorporated Heideggerian philosophy and hermeneutical principles were used to explore and illuminate the meanings embedded within midwives' experiences in rural Shai, Ghana.

Objectives of the study

The ***main objective*** of this study was to explore, develop an in-depth understanding of, and illuminate midwives' experiences as they faced birth asphyxiated newborns in rural practice within the Shai-Osudoku District, Ghana.

*The **specific objectives** were to:*

i. explore midwives' perspectives on how prevailing economic, social, cultural and political influences impact birthing practices and, maternal and newborn health outcomes in rural Shai.
ii. determine the existence of, and midwives' utilization of standard protocols in the care of the newborn within 24hours after birth following the diagnosis of birth asphyxia in resource-limited community birth settings.
iii. understand midwives' engagement with pregnant women, families, and community resources in rural birthing practice, and
iv. explore midwives' interactions with local health care support networks in rural birth settings.

Rationale and significance of the study

The motivation to conduct this study originated from my passion in child health. With very little information about midwives' experiences in newborn care within rural areas in Ghana,

the findings of this study have added new information to midwives' experiences in newborn care and have opened the door to opportunities for future research in midwifery practice and neonatal health. The synthesized findings from this study are expected to provide new insights into how midwives' involvement in perinatal care can be supported to prevent birth asphyxia, and reduce neonatal mortality towards achieving the SDG # 3.2 target - i.e. reduce neonatal mortality to at least as low as 12 per 1,000 live births (UN, 2015b) especially in resource poor communities.

Being an interpretive study, the findings of this research are meant to add to the body of knowledge on inductive studies, and Heideggerian Phenomenology. Considering the potential benefits of locally-adaptable health solutions (Agarwal, Sethi, Srivastava, Jha & Baqui, 2010; Bhutta et al., 2013; Engmann et al., 2012; Welaga et al., 2013), I anticipate that the study findings will inform and guide Ghana's government to scale up health care interventions as national efforts are made to achieve the SDG #3.2 target. In these efforts, families, community members and local stakeholders need to be actively engaged to deliver safe, and competent newborn care. The evidence generated from the experiences of midwives will be useful as a basis for concrete decision-making by the Nursing and Midwifery Council of Ghana (NMC – Ghana), and health care administrators to implement feasible approaches that support in-service training, rural posting, local partnerships, and affected families. These research findings are also anticipated to open up community engagement opportunities and knowledge translation activities that will be of benefit to policy development that aligns with the goals of the Ministry of Gender, Children and Social Protection, Ghana.

Anticipated benefits of this study

The intertwined nature of the pregnant woman and fetal/newborn health establish the need to sustain integrated maternal and neonatal health interventions at primary, secondary, and

tertiary levels of health care. In order to achieve this integrated care, policy makers and health administrators need to increase stakeholder involvement (Byaruhanga et al., 2011; Engmann, Khan, Moyer, Coffey & Bhutta, 2016; Floyd, 2013), address low skilled staff ratios (GMICS, 2011; Issah et al., 2011; Lori et al., 2012), and improve the skill mix of health care providers (Brodie, 2002; Jones, 2012; Smith & Roberts, 2009). At all levels of heath care service and delivery, maternal and perinatal death audits need to be an established nation-wide practice (Kerber et al., 2015) to prevent related future events, and improve health outcomes as specified in the WHO's Every Newborn Action Plan (WHO, 2014).

Research approaches to addressing newborn health issues in Ghana have focused more on surveys, numerical data and trials than exploratory approaches. It is however important to note that linear or hierarchical research approaches do not represent the complexity of evidence needed to present a holistic view of prevailing newborn health care issues. This limitation calls for critical and encompassing views on knowledge development through research approaches that are exploratory, participatory and culturally-driven.

The implementation of neonatal life-saving interventions cannot be done in isolation (Engmann et al., 2016; Lee et al., 2011b; Partnership for Maternal, Newborn & Child Health, 2011; Save the Children, 2014, 2016; WHO, 2010a) in resource limited settings. An integrated and concerted effort of all (including midwives, nurses, health professionals, patient families, communities and stakeholders) is needed to effectively address birth asphyxia-related morbidity and mortality (Save the Children, 2014; UNICEF, 2014; WHO & UNICEF, 2013). Whilst the national shortage of midwives has created lapses in maternal and child health services in rural and remote communities, pediatric nurses are also scarce (Ghana-Canada SickKids Collaboration, 2012), and are barely posted to labor rooms even in urban areas. From clinical

experience, I know that a sustained skill mix of midwives and pediatric nurses allows midwives to concentrate on the mother's health whilst pediatric nurses focus on the care of newborns. This supportive care would reduce midwives' workload, frustrations, and job-related stress. The synthesized data is expected to serve as basis for sustaining training, increasing enrolment of pediatric nurses, and instituting policies that support the allocation of licensed pediatric nurses to maternity units to enrich skill mix towards optimal newborn health outcomes. Based on the study results, it is also expected that newborn health interventions will be integrated more effectively into midwifery training curricula, and safe motherhood programs as a cost-effective approach to improve midwifery practice and maternal/neonatal health.

Explanation of key terminologies

Basic life-saving resources: includes bulb syringes, ambubags (self-inflating), age-appropriate oral and nasal suction catheters, suction machines, mucus extractors, oxygen supply with reserve tanks and functional flow meters, nasal prongs, facial masks, warm towels or wrap sheets, stethoscopes, sphygmomanometers and glucometers.

Birth asphyxia: failure of the newborn to initiate, and sustain breathing at birth (WHO, 2012b). 'Asphyxia neonatorum' is synonymous with' birth asphyxia' (Fraser & Cooper, 2009).

Continuum of care: an approach to maternal, newborn, and child health that integrates health service delivery for women and children prior to pregnancy to labor, delivery, neonatal, postnatal period, and childhood (WHO, 2014).

Early neonatal: relates to the first seven days of a newborn's life.

Midwife: a health care provider who has graduated from a certified or accredited midwifery training program in or outside of the current country of practice and has been licensed by the state Midwifery Council/Regulatory body of the current country of practice to deliver

health service, within the International Confederation of midwives (ICM) competency framework (2011, 2013) and code of practice (2014).

Neonatal death: the death occurring within 28 days of birth of any live-born baby regardless of weight or gestational age (WHO, 2014).

Perinatal: pertaining to the period from 22 completed weeks (154 days) of gestation till seven days after birth.

Post-partum: pertaining to the period from birth to six weeks (42 completed days) following birth.

Preterm birth: a baby born < 37 completed weeks of gestation irrespective of birth weight (WHO, 2014).

Scale up: a comprehensive and expanded strategy to improve outcomes on a larger scale with a focus on equitable coverage, building partnerships, and sustainability (Dickson et al., 2015; WHO, 2008).

Organization of this thesis

I describe how this thesis is organized by delineating the pathway for the reader to make relevant connections between the chapters to enhance understanding of the entire research.

In Chapter Two, I discuss the global and Ghanaian literature on antenatal and intra-partum care, and challenges associated with health systems and midwifery practice that predict newborn health outcomes. My exploration of the literature includes syntheses of the plethora of current and past research evidence to provide a broader understanding of the factors that impact birthing, midwifery practice and neonatal health outcomes. The gaps in data on newborn healthcare delivery which were identified were further explored.

In Chapter Three, I discuss the appropriateness of Heideggerian Interpretive Phenomenology as a research methodology with its foundational philosophical premises that aligned with this study's research question and guided the data generation, and synthesis. I also delved into the discourse on Heideggerian concepts as applied to the clinical issues to illuminate understanding about the deep meanings of midwives' experiences as they faced birth asphyxiated newborns.

In Chapters four to nine (inclusive), I discuss the synthesized data that emerged from the verbal transcripts, narratives, field notes, reflective journal, research log book, and two second readers' commentaries. The six themes which emerged from the synthesized data enabled me to understand, unveil and articulate detailed co-constituted meanings of midwives' experiences as they faced newborns with birth asphyxia. I conclude in Chapter ten with recommendations, and implications for education, research, practice, and policy makers.

CHAPTER TWO: EXPLORING THE LITERATURE ON PERINATAL CARE

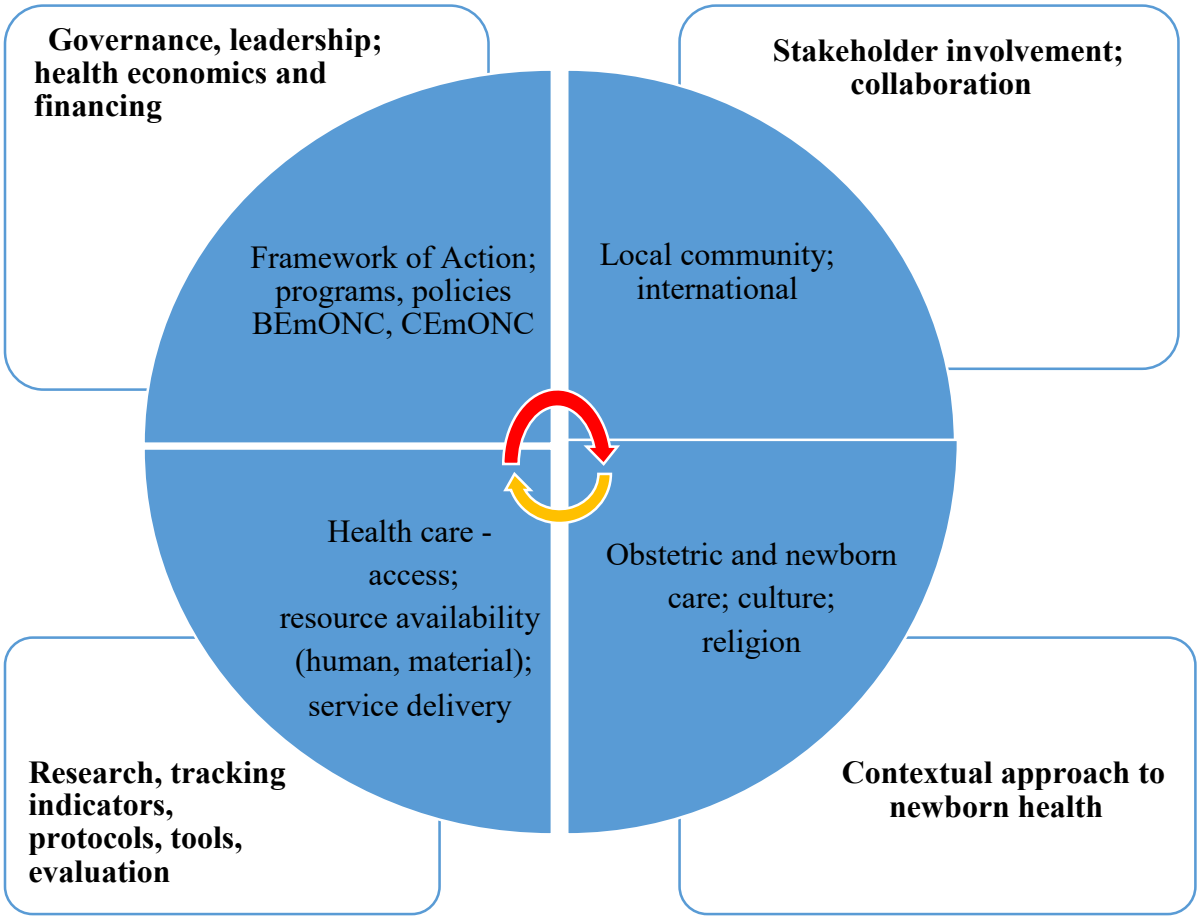
In this chapter, I incorporate past literature into extant ones and synthesize the evidence that supports inquiry into new knowledge on newborn health and midwives' involvement in labor and delivery in resource-limited settings. Electronic databases used to retrieve both peer-reviewed and relevant grey literature included Global Health, Cumulative Index to Nursing and Allied Health Literature (CINAHL), Excerpta Medica Database (EMBASE), Education Resource Information Center (ERIC), Wiley Online Library, HINARI, MEDLINE, PubMed, SCOPUS, JSTOR and Google Scholar. Cochrane databases of systematic reviews, African Index Medicus, PsycINFO, PubMed, Web of Science, Google Scholar, and WHO/UNICEF databases were also explored. Language limiters were applied to retrieve relevant articles indexed in American and British English languages. Truncation symbols such as; * and $ as well as field qualifiers (e.g. adj., ab.) were used in relation to the key words/concepts to retrieve related studies (Centre for Reviews and Dissemination [CRD], 2009). The use of Boolean logic 'AND', 'OR', 'NOT' facilitated a narrowing of the search towards generating a set of relevant literature (Grimshaw et al., 2003).

Key words and MeSH subject headings used in the search strategies within the electronic databases included a combination of indexed terms and words such as 'birth asphyxia', 'perinatal asphyxia', 'neonatal morbidity and mortality', 'maternal and newborn care', 'perinatal care', 'intra-partum care', 'birth outcomes', 'perinatal outcomes', 'neonatal survival', 'nurse/midwife', 'midwives' knowledge',' midwifery competencies', 'midwives' experiences', 'global', 'world-wide', 'rural or remote communities'.

Mapping out the evidence on birth asphyxia-related morbidity and mortality

The major factors related to the occurrence of birth asphyxia inter-relate with each other (Byaruhanga et al., 2011; Fraser & Cooper, 2009; Haider & Bhutta, 2006; Lawn, 2009) at various levels of the health care system (Lawn et al., 2011; Lee et al., 2011a, 2011b; Welaga et al., 2013). The inter-related factors which have been represented in Figure 1, are inherently embedded in the social determinants of health [SDoH] (WHO, 2011a). In the ensuing discussion, I focus on the inter-related elements and attempt to discuss it in a logical manner to explicate the issues which underlie neonatal health outcomes in current health care delivery systems. I begin with governance issues, and progress through health system functions to arrive at health care delivery in resource-limited settings.

Fig. 1 – Birth asphyxia: a myriad of inter-related factors



Governance and health financing: a global view

Health care delivery is a critical priority for human survival that depends on scarce funding. Due to limited individual financial capacity, the majority of a country's population depend on publicly-funded government health care services (WHO, 2015). The quality of health care services provided is tied to government economic systems (Agyepong & Nagai, 2011; Daniels, 2006; Wiseman et al., 2016). In addition, a country's gross domestic product (GDP) per capita (WHO, 2015); and macroeconomic stability (International Monetary Fund [IMF], 2016) influence budgeting, planning and expenditure on health care (Lawn et al., 2011; Wiseman et al., 2016). What the government considers an established priority is a critical factor that determines the disbursement of national funds, and viability of existing health care interventions, and programs (Wiseman et al., 2016). Although the investment in funding for neonatal research has been very low world-wide (estimated at about US$20 million/year), the financial allocation for addressing intra-partum-related conditions is even lower (Lawn et al., 2011).

Neonatal health is a key health indicator of global and national wellness (Black et al., 2010; Liu et al., 2015; UN, 2015b; UN-IGME, 2015), however it is the least integrated component in health policies, health system monitoring, evaluation and decision-making on positive health outcomes in LMICs (Bhutta et al., 2013; Lawn et al., 2011). Out of the approximately 3 million global deaths occurring in the neonatal period (first 28 days of life) yearly, almost 2 million die on the first day of life (Partnership for Maternal, Newborn & Child Health, 2011). These deaths could have been prevented with simple, cost-effective and sustainable interventions that are driven by governmental support (Lassi & Bhutta, 2015; Save the Children, 2014; UN, 2015a; UNFPA, 2011; UNICEF, 2014;). Based on research evidence, it is known that the packages with the greatest effect (i.e. care in the intra-partum period, and of

small and ill newborn babies) have low and inequitable coverage across diverse communities (Issah et al., 2011; Lee et al., 2011a, 2011b; WHO & UNICEF, 2012, 2013). However, these elements are the most sensitive markers of health system function (Lawn et al., 2011; Moran et al, 2012, Smith, de Graft-Johnson., Zyaee, Ricca, Fullerton, 2015).

The new SDG global target is focused on reducing global neonatal deaths to 12 per 1000 live births by 2030 (UN, 2015b). In order to reduce these deaths from 41 per 1000 live births (UN - IGME, 2015) to the projected SDG target (UN, 2015b), the global community emphasize sustained political commitment to program development, fostering supportive policies, and intervention scale ups in health care systems (Dickson et al., 2015; Save the Children, 2014; UN, 2015a). Unsurprisingly, the issues pertaining to child morbidity and mortality rates in LMICs contrast quite sharply with the low incidence in advanced or high-income countries (UNFPA, 2011; WHO, 2012a, 2015). This marked differences are primarily related to dedicated health care funding, supportive politico-economic systems and all-inclusive approaches in health care delivery.

Whilst about 90% of global neonatal deaths are concentrated in Sub-Saharan Africa and Southern Asia - two of the six WHO regions, the deaths are more prevalent in Southern Asia (UN, 2015a; UN – IGME, 2015). The lack of financial capacity and inequitable distribution of limited health care resources in Sub-Saharan Africa (Daniels, 2006; WHO, 2012a, 2015) fundamentally undermines the training (Floyd, 2013; UNFPA, 2011), as well as retention of skilled birth attendants (Lori et al., 2012) which compounds the challenges in health care logistics management (Lawn et al., 2011; Welaga et al., 2013). These lapses in health care resources and services consequently manifest in a country's high morbidity and mortality rates (Bassani et al., 2010; Lawn, 2009; Welaga et al, 2013; WHO & UNICEF, 2012, 2013), with the

most affected residing in rural communities (Adanu, 2010; Engmann et al., 2012; Issah et al., 2011; UN, 2015a; Welaga et al., 2013).

Health focus on neonatal survival is yet to gain sustained governmental attention as a political priority, particularly in LMICs where the majority of the neonatal deaths occur (Liu et al., 2012, 2015; UN - IGME, 2015). Since neonatal survival is intricately dependant on maternal health, it is important to acknowledge their inter-dependence and establish the need to address the conditions that underlie the major and increasing causes of neonatal deaths; i.e. preterm birth complications (15%), intra-partum related complications (including birth asphyxia) (11%), and sepsis (7%) (Liu, et al., 2015). Although the figures in routine global systematic analyses of neonatal deaths per 1000 live births were relatively lower (based on 2008 data) (Black et al., 2010), the mortality trend is increasing (Liu et al., 2015). These trends have been represented in Figure 2 with a focus on the major causes of deaths.

Fig. 2: Major causes of global neonatal mortality with time trends (2008 – 2013)

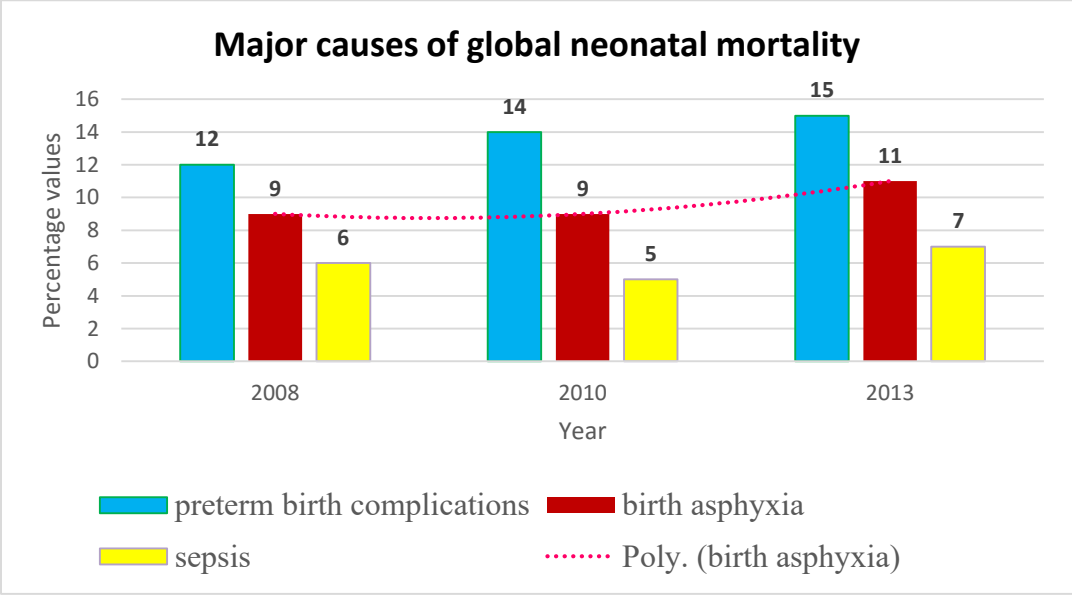


Figure developed from collated global data sources: Black et al., 2010; Liu et al., 2012, 2015

To reduce birth asphyxia-related mortality rates, a country's political will regarding newborn care needs to be translated into practically beneficial activities (Lee et al., 2011a) in the form of financial investment to yield an inclusive data on prevailing newborn health issues and to design sustainable locally-adaptable solutions (Bassani et al., 2010; Lawn, 2009; Lawn et al., 2011). Measures are particularly needed to support newborns in the first week of life when infants are most vulnerable (Save the Children, 2014). It is concerning that the lack of a supportive social welfare system for rehabilitating newborns who have survived birth asphyxia negatively influence the family's hierarchy of needs. The economic hardships with its emotional realities are seen as families make efforts to establish alternatives for meeting child health priorities amidst competing family needs (Hamzat & Mordi, 2007).

To ensure success in health system functions, government budget processes need to support systematic assessment of systemic lapses that limit newborn health care targets (WHO & UNICEF, 2013). This requires establishing functional health systems, dynamic leadership, accountability, community collaboration, and capacity building at both urban and rural levels (Lassi & Bhutta, 2015; Lawn et al., 2011; WHO, 2010). These vital elements have been adopted in the current global 'Every Newborn Action Plan' [ENAP] offer opportunities for health system function and development (WHO, 2014). In order to achieve neonatal health targets, the global community emphasise community engagement approaches through grassroot governance (bottom-up leadership), community ownership and joint participation in programs and interventions (UNICEF, 2014; WHO, 2010).

In LMIC's, government budgeting for life-saving health care resources and skills training need to improve. Whilst health expenditures are variable across countries (WHO, 2012a, 2015), health insurance schemes do not necessarily cover the total cost of newborn health care

(Agyepong & Nagai, 2011; Gyapong et al., 2007) even in emergency situations (Adanu, 2010). This creates a dire need for governments to increase expenditure on health, particularly, for vulnerable populations, and address the WHO minimum recommended US $60 per person (Save the Children, 2016). Although scarcity of resources has been a prominent reason for limited governmental support, it is also important to consider the history of a society's approach to managing resources, and the rationale behind decisions by which a particular resource was permitted to remain scarce (Daniels, 2006; Schrecker, 2008). Although scarcity of resources has been a prominent reason for limited governmental support, available resources need to be allocated based on established health care priorities and maximised in substantial amounts to meet the pre-specified health target - this approach denaturalizes scarcity (Schrecker, 2008).

Whilst discussing governmental support in health care financing, it is also important to consider the mounting web of trade and investment flows as well as relationships between rich and poor countries in this era of globalization (Labonte & Schrecker, 2007) have also increased scarcity issues in LMICs. These flows and relationships are polarized in multiple dimensions (Austin, 2004) and disproportionately affect countries of low economic standing (IMF, 2016). With long standing international debts, the cycle of poverty that grips LMICs presents itself as never-ending and contribute to rippling effects on newborn health care, setting the vulnerable (e.g. pregnant women and newborns) on poor health trajectories.

Knowledge about birth asphyxia and management trends

Knowledge about prevalence, diagnosis and management of birth asphyxia is diverse and evolving. Several studies have been conducted at global and regional levels over the past nine (9) years to investigate the prevalence levels and causes of birth asphyxia followed by recommendations on potential locally-adaptable solutions (Black et al., 2010; Carlo et al., 2013;

Lawn, 2009; Lawn et al., 2007; Lawn et al, 2011; Liu et al., 2012). Countries in low and middle-income ranges, such as India (Bassani et al., 2010; Carlo et al., 2013), Pakistan (Carlo et al., 2013; Haider & Bhutta, 2006), Ghana (Engmann et al., 2012; Enweronu-Laryea et al., 2008; Welaga et al., 2013), Nigeria (Lagunju & Fatunde, 2009; Opara, & Eke, 2010), and South Africa (Buchmann, Pattinson, & Nyathikazi, 2002; Van Heerden, 2012) are still struggling to reduce the incidence of birth asphyxia. In order to achieve the new SDG #3.2, multiple factors such as health inequities, rural-urban disparities, skilled staff shortage and limited life-saving resources which impact neonatal survival on a continuum need to be addressed (UN - IGME, 2015; Save the Children, 2014; UN, 2015b).

Predisposition to birth asphyxia

In order to design appropriate health services and interventions, it is important to explore the related causes of birth asphyxia. The causes of birth asphyxia relate to maternal, intra-partum, or post-natal factors. Maternal factors include: major placental abruptio (Ellenberg & Nelson, 2013); uterine rupture, maternal hypoxemia; ante-partum/obstetric hemorrhage; prolonged labor; poor maternal effort; severe pre-eclampsia/eclampsia; severe pregnancy-induced hypertension (Fraser & Cooper, 2009) and hypertensive disease with vasospasm (Bernstein & Shelov, 2003). Intra-partum factors are also associated with true cord knot/tie, cord compression (Bernstein & Shelov, 2003; Ellenberg & Nelson, 2013), umbilical cord wrapped around neck (strangulation), and pulseless prolapsed cord (Ellenberg & Nelson, 2013; Fraser & Cooper, 2009). Other intra-partum related factors include cephalo-pelvic disproportion [CPD], delayed fetal extraction/ fetal entrapment; abnormally shaped pelvis; and poor placental perfusion (Fraser & Cooper, 2009). Post-natal factors relate to pulmonary system diseases such

as trachea-esophageal fistula, pneumothorax, pneumonia, hypoplastic lungs, diaphragmatic hernia, and cardiac anomalies (Bernstein & Shelov, 2003).

Identifying birth asphyxia

Maternal obstetric history and the events occurring in the intra-partum period enables the health care provider to predict birth outcomes (Adanu, 2010; UNFPA, 2011). The birth attendant must therefore make prior preparation to receive an infant whose respiratory status is compromised at birth. Identifying an asphyxiated newborn requires application of expert knowledge and skills and a sense of urgency to restore normal respiratory function (WHO, 2012b). Physical assessment is conducted with immediacy in order to implement timely life-saving interventions (Fraser & Cooper, 2009; Lee et al., 2011a). The International Classification of Diseases [ICD] version 10 [ICD-10] categorizes birth asphyxia (coded as P21) into severe, moderate and mild and specifically delineates its respective parameters (WHO, 2016).

Historically, asphyxia was categorized into two grades of severity; *asphyxia pallida* and *asphyxia livida.* Infants with *asphyxia pallida* or pale asphyxia need immediate resuscitation due to its severe nature (Haider & Bhutta, 2006). This categorization was replaced by the APGAR scoring system based on which the level of severity of birth asphyxia was determined. The APGAR scoring system named after the author, Dr. Virginia Apgar, an obstetric anesthesiologist was developed in the mid-20th century (Apgar, 1953). This simple and cost-effective scoring system is still used worldwide in clinical practice to assess the newborn's clinical status and grade the severity of asphyxia (WHO, 1998, 2012b) within the 1st and 5th minute after the complete birth of the newborn. Total score at birth is graded on a scale of 0 to 10, where 10 is the maximum score.

The newborn is classified as healthy when a maximum score of 2 for all five parameters are achieved. The APGAR acronym which uses five criteria: skin color (**A**ppearance), heart rate (**P**ulse), reflex irritability (**G**rimace), muscle tone (**A**ctivity), and respiratory effort (**R**espiration) facilitates remembrance of the scoring for birth attendants (Golubnitschaja et al., 2011). Although the Apgar score is a standardized tool for assessing the newborn at the 1st and 5th minute after birth, it cannot be used alone to predict adverse neurological outcomes or mortality (American Academy of Pediatrics [AAP] & ACOG, 2015). As best practice, the AAP & ACOG jointly endorsed the need to conduct an immediate analysis on the gas exchange of umbilical arterial blood and adopt the newly updated version of the APGAR Score reporting form (AAP & ACOG, 2015).

Following the occurrence of asphyxia neonatorum, sonography is used as an initial neuro-imaging assessment to examine term infants with suspected brain injury (Haider & Bhutta, 2006). Sonography is preferred over computed tomography (CT) for neonates since the high water content of the neonatal brain minimizes contrast between normal and injured tissue (Haider & Bhutta, 2006). Magnetic resonance (MR) imaging and MR spectroscopy are also sensitive diagnostic investigations with promising imaging techniques in the examination of neonates with asphyxial injury (Barkovich et al., 2001). Although such diagnostic tests guide clinical management, these equipment-dependent services are not consistently available or do not exist in resource limited settings, such as Ghana.

The effects and prognosis of birth asphyxia

Regardless of the maternal, intra-partum or post-natal causes of birth asphyxia, affected newborns are at risk of long term ill effects (Ellenberg & Nelson, 2013; Haider & Bhutta, 2006). When asphyxiation occurs, the local or systemic decrease in oxygen (O_2) and subsequent

accumulation of carbon dioxide (CO_2) generate the end products of energy metabolism, such as lactate (Helmy et al., 2011). A defining characteristic of asphyxia is profound metabolic acidosis (pH < 7.00), which becomes evident when blood oxygen level is reduced (Poland & Freeman, 2002). During asphyxiation, the speeding up of cellular processes may create a combined effect of cellular energy failure, acidosis and nitric oxide neuro-toxicity, and lipid peroxidation which disrupts structural components of the cell leading to its ultimate death (Haider & Bhutta, 2006). Newborns with compromised respiration require immediate access to advanced and specialized care in a NICU or pediatric unit to restore normal respiratory patterns and improve health outcomes. Therefore, in settings where NICU or a high level nursery unit is geographically and financially accessible, affected neonates are immediately transferred from the labor ward, or obstetric theatre to receive such care. Whilst this specialized care is needed, the reality is that this service is not often accessible, or available to neonates in low or poorly resourced settings (Engmann et al, 2012; Welaga et al., 2013).

Anticipated consequences associated with birth asphyxia include poor neuro-developmental outcomes (Bjorkman et al., 2010; Ellenberg & Nelson, 2013; Helmy et al., 2012; Stolp et al., 2012), long term/irreversible brain injury (Lawn, 2009; WHO, 2012b; WHO, 1998) and cerebral palsy (Ellenberg & Nelson, 2013; Eunson, 2012; van Doormaal et al., 2012). Research evidence establishes that birth-asphyxiated infants may suffer seizures (Helmy et al., 2012), spastic quadriplegia, (Ellenberg & Nelson, 2013) and learning or memory disabilities throughout infancy and into maturity (Haider & Bhutta, 2006). Severe '*asphyxial insults'* may also lead to neuro-degenerative diseases, epilepsies and mental retardation whilst mild asphyxia may be associated with later onset of schizophrenia and life-long functional psychotic syndromes (Golubnitschaja et al., 2011). Based on research evidence (Hamzat & Mordi, 2007; Welaga et al.,

2013) and my clinical experiences, these long term consequences place considerable demands not only on national health resources (Hamer-Rohrer, Smit & Burger, 2012; Hamzat & Mordi, 2007; Lagunju & Fatunde, 2009), but also on the family/caregivers' emotional, social and economic resources as well (Heringhaus, Blom, & Wigert, 2013; Nakamanya, Siu, Lassman, Seeley & Tann, 2015; Wyatt, 2010).

To improve prognosis following the diagnosis of birth asphyxia, therapeutic hypothermia (whole body or selective head cooling) with rectal or esophageal temperatures $\leq 34^0$C is initiated (Edwards & Azzopardi, 2010; Shah, 2010; van Doormaal et al., 2012; Wyatt, 2010) within the first 6 hours after birth (Shah, 2010). Once the therapy is initiated, the newborn's body is cooled to a body temperature of 33.8-34.8^{o}C over 72 hours (Heringhaus et al., 2013). Hypothermia protects neurons from damage by reducing cerebral metabolic rate whilst minimizing the release of excitatory amino acids (glutamate, dopamine), toxic nitric oxide and free radicals (Haider & Bhutta, 2006).

Research evidence from clinical trials (Azzopardi et al., 2009; Gathwala, Khera, Singh, & Balhara, 2010; Whitelaw & Thoresen, 2002) on therapeutic hypothermia has raised world-wide concerns about neonatal death or survival with disability following asphyxia. Wyatt (2010) therefore argues from an ethical point of view that therapeutic hypothermia treatment would increase the survival of profoundly brain-injured children who would have most likely died in the neonatal period. This implies that improved survival of mentally/physically challenged children would generally not appear as a primary improvement in the management of birth asphyxia. This is an ethical complexity in neonatal health care practice that continually generates global dialogue (Heringhaus et al., 2013; Shah, 2010; Wyatt, 2010) about the need for quality

care during pregnancy, labor and delivery (Save the Children, 2014, 2016; WHO, 2009) as means to prevent birth-asphyxia related injuries.

Preventive management of birth asphyxia

The prevalence of birth asphyxia-related morbidity and mortality continues to be a major public health concern in many countries within the two WHO regions; Sub-Saharan Africa and South Eastern Asia (Black et al., 2010; Liu et al., 2012, 2015). Forestalling birth-asphyxia related effects requires effective preventive approaches (Lawn et al., 2007; Lawn, 2009). Whilst health expenditure on long term care of affected newborns creates an economic burden on the health care system, health care providers and home caregivers are also subjected to emotional distress in care giving (Hamzat & Mordi, 2007). The long term irreversible outcomes, coupled with expensive supportive care and the stress associated with care giving, establishes grounds to increase efforts at prevention. To enhance preventive health care for newborns, countries like Ghana, Benin, Bolivia and Malawi have increased female education and student midwifery enrollment rates (UNFPA, 2011) and initiated free maternal and neonatal health care (National Health Insurance Authority [NHIA], 2013; UNFPA, 2011).

Health care delivery service

Pregnancy and labor are physiological phenomena that often progress normally; however, complications may arise in the birthing process that may necessitate emergency health care services and/or referral of the pregnant woman, mother and/or newborn. The kind of health care service that is available to pregnant women and newborns impact health outcomes on a continuum (Save the Children, 2014, 2016; UN- IGME, 2015) as rural-urban disparities disadvantage the vulnerable. These disparities manifest in limited access to food, water, housing,

education, health care, and financial security (WHO, 2011a) and impact the effective implementation of health action frameworks.

Globally-driven frameworks for newborn health actions

Birth asphyxia is a preventable life-threatening respiratory condition of the newborn that requires emergency medical intervention (American Academy of Pediatrics [AAP], 2015; Lawn et al., 2011; Lee et al., 2011a). The prevention of birth asphyxia depends on timely access to skilled care during pregnancy and emergency obstetric/newborn health situations (Buchmann & Pattinson, 2006; Engmann et al., 2012; Fraser & Cooper, 2009; Lee et al., 2011b). To assist in the implementation of interventions, national health actions are developed based on global frameworks and made context-specific to support child health policies. These policies establish a foundation for, and lend support to health programs and interventions. Examples of notable neonatal interventions that have been integrated into ENAP and that thrive on the Safe Motherhood initiatives include Early Essential Newborn Care [EENC] focus (WHO, 2014), Integrated Management of Childhood and Neonatal Illnesses [IMNCI] guidelines (WHO, 2003), and Helping Babies Breathe [HBB] initiative (2015). Other interventions that primarily integrate maternal and newborn health care are 'Basic Emergency Obstetric and Newborn Care [BEmONC], and Comprehensive EmONC [CEmONC] services (WHO, 2009).

In LMICs such as Ghana, the WHO - initiated 'Every Newborn Action Plan' [ENAP] proposed framework of action (Ministry of Health [MOH] - Ghana, 2014) was adopted with deliverables based on country-specific needs and to function as a national point of reference for neonatal health programs and interventions. Although high-impact neonatal interventions such as IMNCI (WHO, 2003) and Kangaroo Mother Care [KMC] are advancing (Lawn, Kerber, Enweronu-Laryea, & Cousens, 2010), neonatal resuscitation lack support in capacity building

and national coverage (Lee et al., 2011b). While development partners introduce innovative practices to improve health and survival in LMICs, these interventions are slow to be translated into policies nationwide due to issues associated with sustainability, health systems priorities, resource maximization, and local involvement (Lassi & Bhutta, 2015; Lawn et al., 2011).

Access to health care

The delivery of maternal and newborn health care within communities is impeded by access issues which manifest as three main delays: i.e. (i) delays in identifying a complication and deciding to seek care; (ii) in reaching care; and (iii) in receiving care (Agarwal et al., 2010; Thaddeus & Maine, 1994). These delays, often predictable, have their root causes in poor transportation networks and weak referral systems (Adanu, 2010; Engmann et al., 2012; Enweronu-Laryea et al., 2008), logistical and financial inadequacies (Magoma, Requejo, Campbell, Cousens, & Filippi, 2010), and mothers' lack of knowledge about health danger signs (Issah et al., 2011). Geographical barriers to accessing health care presents as a major health care issue that is associated with the prevalence of birth asphyxia in the WHO regions, particularly Sub-Saharan Africa and Southern Asia (Back et al., 2010; Liu et al., 2015).

Prenatal surveillance and antenatal care (ANC) utilization

The prevention of birth asphyxia, and other intra-partum-related morbidity and mortality begin with quality prenatal surveillance (Byaruhanga et al., 2011; Lawn et al., 2007, 2009; Save the Children, 2014, 2016). Visits during the ANC period constitute a critical moment in a woman's life where care-seeking for maternal and fetal health present opportunities for the health care provider to support and prepare the woman for a healthy birthing experience. This ANC period also opens up opportunities for early detection of danger signs (Fraser & Cooper, 2009; Wiegers, Boerma, & De Haan, 2010) and developing a trusted care provider-patient

relationship (Fenwick, Hauck, Downie & Butt, 2005; Rodney, Brown., & Laschienko, 2004; Fraser & Cooper, 2009). However, millions of women worldwide still do not attend ANC (at least 4 optimal visits) whilst other women never receive any such care (WHO, 2012a, 2015). For instance, from 2007 to 2014, ANC coverage (at least 4 visits) in Ethiopia was only 19%, Pakistan (37%), Malawi (46%), Kenya (47%), Nigeria (51%), India (72%); and Ghana (87%) (WHO, 2015). Barriers which mitigate the utilization of ANC services include under-staffing, short operation hours (Gottlieb, Belmaker, Bilenko, & Davidovitch, 2011), lack of partner involvement (Magoma et al., 2010; Smith & Roberts, 2009), and prolonged out-patient waiting time (Ekabua, Ekabua, & Njoku, 2011; Gottlieb et al., 2011).

Other factors in Ghana and Nigeria include unprofessional conduct of service providers (Agyepong & Nagai, 2011; Ekabua et al., 2011). Perennial power outages (Ekabua et al., 2011) and commercialization of antenatal screening procedures (Gottlieb et al., 2011) also discourage and impede women's access to ANC. In Southern Israel for instance, Bedouin-Arab women (n=138) reported ANC access and utilization barriers such as travel conditions (58.5%), lack of husband's permission to attend clinics (3.7%), and lack of women's decision-making power over household's funds for health care access (Gottlieb et al., 2011). These women described ANC conditions as *'lahatz'* (Hebrew word meaning: 'distress' or 'pressure'). Besides these factors, low maternal education has also been identified as a correlated factor to the occurrence of neonatal deaths (GDHS, 2014; GMICS, 2011; UN, 2015a). During my clinical experience, I came into contact with some pregnant women who reported that poor staff (nurses/midwives) attitude, skilled staff shortages, lengthy waiting times, and long distances to health facilities negatively influenced their interest and ability to access ANC. Other pregnant women reported lack of trusted care provider relationships and Out-Patient Department (OPD) overcrowding.

Skilled birth attendance

The proportion of deliveries assisted by a skilled birth attendant (SBA) is a critical indicator to measure maternal and neonatal mortality, and is needed for safe birthing and healthy outcomes (WHO & UNICEF, 2013; UNFPA, 2011; United States Agency for International Development [USAID], 2006). Skilled attendance during labor, delivery and post-partum period remains paramount for the prevention of birth asphyxia, and unnecessary maternal and/or newborn deaths (Ameh et al., 2012; Bhutta et al., 2013; Lawn et al., 2011; UNFPA, 2011). The WHO defines a skilled birth attendant [SBA] as:

> An accredited health professional, such as a midwife, doctor or nurse educated and trained to proficiency in the skills needed to manage normal (uncomplicated) pregnancies, childbirth and the immediate postnatal period, and in the identification, management and referral of complications in women and newborns. (2004, p.1).

Midwives as skilled birth attendants [SBAs] facilitate referrals of mothers and newborns from the home or community to higher levels of care for advanced clinical support. By delivering such service, midwives play key roles in the implementation of the Global Strategy for Women and Children's Health (WHO, 2010). In spite of the vital role skilled birth attendance plays in reducing maternal and neonatal mortality, skilled care at birth has been disproportionate with the number of women who need such care at birth (WHO, 2012a, 2015). For instance, in LMICs such as Ghana, Mali, Nigeria, Pakistan and Haiti, the number of pregnant women who benefited from skilled birth attendance between 2005 to 2011 was less than 56% with Haiti being the lowest (26%) (WHO, 2012a). Over this same period, Malaysia and Libya had 99% and 100% of skilled birth attendance rates respectively (WHO, 2012a). This progress is related to the supportive politico-economic system in these countries (WHO & UNICEF, 2012). Although the

need for improved skilled care at birth and midwifery services have been identified across countries, health care systems in LMICs are still lagging in implementing supportive midwifery services towards optimal maternal and newborn health outcomes (UNFPA, 2011). In addition, even though the UN Convention on the Rights of the Child [CRC] established children's right to basic needs, health, safety and security (United Nations Commission on Human Rights [UNCHR], 1990), it is still not accessible to all children (Save the Children, 2014, 2016; Welaga et al., 2013).

To create an enabling environment where newborn health can improve, midwives need to be supported in clinical practice by increasing the number of skilled staff (Issah et al., 2011; McIntosh, Cookson, & Sandall, 2012), and ensuring appropriate skill mix (Brodie, 2002; Jones, 2012; Smith & Roberts, 2009). Basic life-saving resources need to be available at primary, secondary, and tertiary levels of health, and referral systems improved to enhance health care providers' professional capabilities in labor management (Adanu, 2010; Enweronu-Laryea et al., 2008; Floyd, 2013; Issah et al., 2011; Nkyekyer, 2000).

As key frontline workers in Ghana, midwives work under pressure due to staff shortages, and experience work overload (Gans-Lartey, O'Brien., Oware-Gyekye & Schopflocher, 2013; UNFPA, 2011; USAID, 2006). Under such pressurized environment, midwives deliver services in disorganized spaces and encounter poor referral systems with clients who need advanced care (Floyd, 2013). In Cambodia (Ith et al., 2013), Ghana (Gans-Lartey et al., 2013); and Somalia (Ameh et al., 2012), skilled staff shortage created work overload under time constraints and the application of partographs to support labor assessments was subsequently affected such that episodes of fetal respiratory distress may have been missed and later be associated with the

occurrence of asphyxia at birth. To compound this reality, the pressure involved in staff shortages culminates in low staff retention rates (Lori et al., 2012).

Capacity building: Midwifery clinical competencies

Professional competence is fundamental to the provision of safe, ethical patient care, and remains critical to the health and wellness of communities (International Confederation of Midwives [ICM], 2013; International Council of Nurses [ICN], 2012; Johns Hopkins Program for International Education in Gynecology and Obstetrics [JHPIEGO], 2013). Ignorance and professional incompetence among health care workers pose threats to patient safety and generate ethical-legal issues that can be too costly to manage (Ashcroft, 2008). Therefore, investing in the health workforce is a cost-effective approach that also strengthens health care systems (Adegoke & van den Broek, 2009; Enweronu-Laryea, Engmann, Osafo & Bose, 2009; Floyd, 2013; Lee et al., 2011a; UNFPA, 2011). However, continued practice with minimal professional development opportunities is a reality in LMICs that impedes the provision of safe competent care (Ameh et al., 2012, Carlo et al., 2009; Enweronu-Laryea et al., 2009; UNFPA, 2011). For example, in Cambodia, skilled care workers (midwives, nurses and doctors) encountered challenges in the management of birth asphyxia due to limited knowledge in delivering EmONC and application of partograph (Ith, Dawson, Homer, & Whelan, 2013).

Even though eclampsia is an underlying cause of birth asphyxia (Fraser & Cooper, 2009), midwives lacked institutional permission to administer magnesium sulphate (MgSO4) to women experiencing eclampsia (Ith et al., 2013). This medication prevents eclamptic seizures- a complication that reduces fetal oxygenation and increases risk of asphyxia. In other circumstances, midwives also lacked the skills necessary to resuscitate an asphyxiated newborn as demonstrated in an experimental study (pretest-post-test design) in Ghana (Enweronu-Laryea

et al., 2009). In this experimental study, the researchers found that 20% of midwives attending births (n=26) were unable to pass the post-test on neonatal resuscitation after an initial training (Enweronu-Laryea et al., 2009). Of these, 69 % (n=18) were from primary health care facilities, but compared to their urban counterparts, the midwives who practiced in rural communities were less skilled at using neonatal resuscitation self-inflating bags (Enweronu-Laryea et al., 2009). Under the Better Medicines for Children [BMC] project in Ghana, poor monitoring in sick children, lack of staff training and non-availability of emergency drugs in hospitals were identified as factors that contributed to poor child health outcomes (WHO, 2011b).

In a quantitative study measuring self-efficacy perceptions of practising midwives in Zambia, statistically significant increases in self-efficacy perceptions and knowledge of neonatal resuscitation were observed after a 4-day training period (Carlo et al., 2009). This research finding established that the increase in self-efficacy perceptions were retained at 6 months follow-up despite an erosion of neonatal resuscitation knowledge and skill performance (Carlo et al., 2009). The study findings of Ith et al. (2013) corroborate that of Carlo et al. (2009). Research findings established that SBAs who were midwives (n= 21), lacked basic resuscitation knowledge and skills, which undermined self confidence in clinical care (Ith et al., 2013). In this Cambodia-based study, the midwives self-reported lack of skills in deep suctioning, bag-and-mask ventilation, and passing endotracheal tube for both suctioning, and patient-assisted ventilation (Ith et al., 2013).

Research gaps and the issue of missing data

Globally, statistical records on approximately two thirds of all deaths are lacking. In all, 85 countries representing 65% of the world's population produce low quality 'cause of death' data whilst 74 countries lack such data altogether (WHO, 2012a). However, to reduce neonatal

mortality, coherent research approaches that capture data on the common causes of perinatal deaths and the respective events surrounding these deaths need to be examined (Lawn et al., 2009, 2011; Kerber et al., 2015). In resource-limited settings, substantive data on neonatal health is often absent in health information systems as evidenced in unregistered home births, and neonatal deaths (GDHS, 2008, 2014; GMICS, 2011; WHO, 2015). In Southern Israel where health facilities are not computerized, incomplete data on women's ANC records have been identified as A challenge to research-informed interventions (Gottlieb et al., 2011). According to World Health Statistical Report (2015), the weakness underlying empirical data collection and estimation in most countries undermines the implementation of target-specific interventions. This is because the figures presented in these annual research publications are characterised by significant uncertainty (GDHS, 2008, 2014; WHO, 2012a, 2015).

Beyond this uncertainty, the existing literature on maternal and child health issues in LMICs have a long history of investment into research approaches that focus on the collection of numerical data primarily through surveys and other quantitative approaches at the expense of qualitative data (Bassani et al., 2010; Chandra, Ramji, & Thirupuram, 1997; GDHS, 1988, 1993, 2003, 2008; Lawn et al., 2007; Liu et al., 2015). Quantitative studies that focus on the clinical management of birth asphyxia have also generated substantive statistical data using systematic reviews (Lingappan et al., 2015; Lutomski et al., 2015; McGuire, Fowlie & Evans, 2004; Tan, Schulze, O'Donnell & Davis, 2005). Although the statistical evidence in research data direct policy actions and child health interventions (GMICS, 2011), it does not provide an encompassing data that is needed to inform the complex human issues surrounding birth asphyxia. Researchers argue that the experiences of health care providers, and families in caring

for birth-asphyxiated children are limited (Heringhaus et al., 2013; Nakamanya et al., 2015), but particularly sparse in LMICs where global neonatal deaths are concentrated.

Whilst qualitative research on the experiences, perceptions, views, attitudes and coping of parents who have children living with the short and long term effects birth asphyxia is sparse (Heringhaus et al., 2013; Nakamanya et al., 2015; Nassef, Blennow & Jirwe, 2013), the data on direct care providers' views and perspectives is even more limited. After exploring the various databases and using the specified search strategies, only a few qualitative studies were found regarding parental and family care of babies with asphyxia neonatorum. Although several quantitative studies have been done with midwives, nurses, physicians and traditional birth attendants about life-saving measures for newborns with asphyxia, no qualitative studies were found that focused on midwives, nurses or other health care providers' care experiences with birth asphyxia. This skewed approach to addressing newborn health issues yields incomplete evidence about the multi-faceted and complex nature of circumstances surrounding the occurrence of intra-partum related complications such as asphyxia neonatorum (Lawn et al., 2011). Given this paucity of data, there is a need to diversify research approaches in order to capture encompassing data regarding the multiple realities that surround birth asphyxia to ultimately reduce asphyxia-related morbidity and mortality.

Socio-cultural and religious influences on obstetric and newborn care

The survival of newborns is influenced by dominant birth-related beliefs, values, taboos, of mothers, spouses/partners and the community. These cultural inclinations (Byaruhanga et al., 2011; Denham et al., 2010; Gyekye, 2003; Gyimah, 2006) influence health care seeking behaviors of pregnant women and potentially threaten maternal/newborn survival. Illiteracy and superstitions (Gyimah, Takyi, & Addai, 2006) further drive community members to patronise the

services of unskilled birth attendants/ traditional healers, but this is not risk free and interventions often lead to poor health outcomes (Ekabua et al., 2011).

In Africa, the belief that pregnancy and labor are guided by nature is also tied to superstitions when maternal complications or poor neonatal outcomes occur. Research in African countries (Ekabua et al., 2011; Magoma et al., 2010) including Ghana (Denham et al, 2010; Gyekye, 2003; Gyimah, 2006; Gyimah et al., 2006) echo culture as explanatory agents in maternal/neonatal morbidity and mortality. The beliefs, values, taboos, practices and totems of communities inherently influence health care seeking behaviours (Wilkinson & Callister, 2010). For instance, male dominance over females often called 'patriarchy' entrenches male authority within traditional structures in most African societies (Nwakwuo & Oshonwoh, 2013; Jansen, 2006; Gyekye, 2003). In this power relationship, the man is, according to established cultural right, regarded by the society as head of the family, and hence conceived as the 'master' whose decision within the family structure is both final, and holds binding in all matters including women, and neonatal health.

In rural Tanzania, traditional structures predetermine women's ability to seek care as husbands and elders in the Maasai and Watemi communities act as key gate keepers in women's reproductive health, deciding where women should deliver their newborns (Magoma et al., 2010). Traditional beliefs and indigenous knowledge play significant roles in health care delivery at the community level. As identified by Byaruhanga et al. (2011) in focus group discussions involving fathers of newborns in rural Uganda, a non-breathing or non-crying newborn was referred to as a '*tired'* baby. Noise was therefore made by banging metallic objects such as a hoe, *panga* or axe in order to initiate crying (Byaruhanga et al., 2011). To facilitate the revival process, such babies were turned upside down in order to allow fluid to flow from the nose and

mouth, or water sprinkled on the body, or fanned with a cloth or banana leaf, or toe was bitten (Byaruhanga et al., 2011).

In Ghana, pregnant women often report late to health facilities in critical conditions that endanger the fetus, increase maternal health risks, and create neonatal emergencies. From clinical experience, the most common conditions have been identified as severe pregnancy-induced hypertension [PIH] and premature rupture of membranes. Another vital factor that has been minimally documented but continues to influence women's decision making on early reporting to the labor and delivery unit is maltreatment from health care providers at health care facilities. Researchers have identified delays in seeking health care (Bazzano, Kirkwood, Tawiah-Agyemang, Owusu-Agyei, & Adongo, 2008; Moyer, McLaren, Adanu, Lantz, 2013) and late referrals (Awoonor-Williams et al., 2015; Dassah, Odoi & Opoku, 2014) as setbacks to achieving optimal maternal and neonatal health outcomes in Ghana. The phenomenon associated with late reporting to the labor ward is also a cultural sign of endurance amongst pregnant women to demonstrate physical strength and resistance to labor pain at home prior to moving to the health facility. In the cultural sense, 'strong women' need to endure labor pain until the amniotic sac ruptures, or 'Show' (operculum release) is observed.

Having gleaned from diverse research evidence, I conclude this chapter by arguing that optimal newborn health can be achieved when midwives as frontline health workers in maternal and neonatal care practice are supported to deliver safe and competent care (Brodie, 2002; Clark, Mitchell, & Aboagye 2010; Floyd, 2013; Issah et al., 2011; Lori et al., 2012; UNFPA, 2011; WHO, 2010). This support must be research-driven and locally-adaptable with sustainability at the core of interventions (UN, 2015a, 2015b). Addressing birth-related morbidity and mortality is a moral imperative with a collective responsibility to ensuring neonatal well-being, building

healthy communities and preventing defective generations. In this perspective, Jeremy Bentham, the moral philosopher and political radicalist (1748 -1832), argues that ‘rights’ only tend to be a ‘wish’ when not supported, legally protected, and enforced. As Bentham offers, ‘want ‘cannot be considered as ‘supply’; therefore, a wish for an established right (right to health) is not that right at all, except when provisions have been made to ensure that ‘right’ is established.

In the next chapter, I discuss the research methodology with an emphasis on the ontological and epistemological foundations of Heideggerian Phenomenology, and African Philosophy as an approach to explore the experiences of midwives who face newborns affected by birth asphyxia in rural Ghana. I also discuss the research methods that delineate the study ethics approval process, data generation and synthesis.

CHAPTER THREE: RESEARCH METHODOLOGY AND METHODS

The ideal is to understand the phenomenon itself in its unique and historical concreteness (Hans-Georg Gadamer, 1975).

In this chapter, I discuss the research methodological approach used to address the study's research question. To achieve this, I discuss how the ontological and epistemological foundations of key philosophers illuminate the phenomenon under exploration towards our understanding. I include discussions on how interpretive inquiry as a research approach facilitates our interpretation towards this understanding. I provide contextual details of the study setting with descriptions of the ethical processes, as well as population, and sampling procedures. I incorporate standards for achieving methodological rigor, and elucidate the procedures related to data generation, synthesis and management.

Exploring research paradigms

The increasing statistical trends in neonatal morbidity and mortality (Black et al., 2010; Liu et al., 2015; WHO, 2016) confronts the entire global community with the reality that our quantitatively structured world continues to offer fractional responses to multi-faceted human issues (Mayan, 2009; Polit & Beck, 2012; Polit & Hungler, 1999; Silverman, 2000). Health care professionals, researchers, educators, policy makers, administrators, and stakeholders continue to engage with the statistical reports (Liu et al., 2015; WHO, 2012a, 2015; UN, 2012, 2015a) to implement post- Millennium Development Goal [MDG] 2015 health priorities (Liu et al., 2015). Having engaged with the global literature on birth asphyxia, I echo Heringhaus et al. (2013), Nakamanya et al. (2015), and Nassef et al. (2013) who express concerns that globally, the stories behind the figures on birth asphyxia-related morbidity and mortality are sparse. Each statistical data point in our quantitatively structured world reflects a story that illuminates not only the

occurrence (Mayan, 2009) with a potential for prevention, but also the dominant issues surrounding the sequence of similar events (Kerber et al, 2015; Mills, 2011). In these multiple realities (Mayan, 2009; Polit & Beck, 2012; Polit & Hungler, 1999; Silverman, 2000), Albert Einstein reminds us that "not everything that counts can be counted" (Harris, 1995).

Typically, in the NICU where I spent eight years in clinical practice, we as direct care providers knew through observations that parents who spent more time with their asphyxiated babies were able to establish baby-mother/parent bonding, asked questions frequently about health care interventions, and were often less anxious about being in the NICU. With minimal anxiety, the parents gradually built confidence in expressed breast milk [EBM] cup and spoon feeding, and changing diapers. Parents of preterm babies also developed confidence through repeated practice in turning their babies in the oval-shaped 'cloth nest pod'. The parents also became a support network for each other as well as newcomer parents as they shared their stories through conversations. These parental strengths improved neonatal health outcomes which helped to decrease length of stay for the babies in the NICU. These qualitative data complemented the statistics on 'admission and discharge rates' and shaped the Unit's policies on family visits. Living this experience of birth asphyxia in the clinical unit with a family-centred focus in the contextual realities shaped our thinking, challenged existing visit rules, and repositioned as direct care providers to deliver competent health care to neonates as professionally required in the Code of Ethics (ICN, 2012).

As I reflected on the gap in the global research data that drives this study's research question, I thought through current global health initiatives related to the 'Global Health Strategy for Women and Children's Health' (WHO, 2010) and the 'Unfinished Business – A Promise Renewed' to end maternal and neonatal deaths at country levels (UNICEF, 2015). One thing

was certain; quantitative research approaches could not appropriately address this study's research question, and the study was filling a research gap. Notwithstanding, I acknowledge that statistical measurements, cause-effect relationships, and manipulation of variables in quantitative research establish numerical evidence (objective data) in care giving among human population. However, the subjective nature of human beings requires attentiveness to an inductive and exploratory research approach (Denzin & Lincoln, 2003; Frank, 2005; Morse & Field, 1985; Munhall, 2007, 2012; Patton, 2002; Polit & Beck, 2012; Streubert-Speziale & Carpenter, 2011).

Embracing 'Interpretive Inquiry' [IP]: The mode of inquiry

When very little is known about a phenomenon, explorative research that enables us to understand, to discover the meaning of lived experiences, and to gain deep insights about the prevailing phenomena is adopted to direct thoughtful courses of action (Bergum, 1991; Morse, 1991; Morse & Field, 1985; Polit & Beck, 2012; Polit & Hungler, 1999). In doing this, researchers and participants mutually engage in the social production of new knowledge that is contextually co-constituted (Addison, 1992; Conroy, 2003). In this qualitative research paradigm, we broaden our perspectives through in-depth understandings of the phenomena of interest from participants' and researcher's viewpoints. These data enable us to produce textual descriptions and interpretations in specific contexts (Conroy, 2003) as it illuminates the multiple facets of the phenomena (Denzin & Lincoln, 2003; Pitre, Kushner, Hegadoren & Raine, 2015; Polit & Beck, 2012; Richter, Dashora & Jarvis, 2015).

In my deep search for a qualitative research approach that could best address this study's question, I explored 'Narrative Inquiry' (Clandinin & Rosiek, 2007; Connelly & Clandinin, 1990; Riessman, 2008), 'Grounded Theory' (Munhall, 2007, 2011; Polit & Beck, 2012; Streubert & Carpenter, 2011), 'Ethnography' (Atkinson, Coffey, Delamount, Lofland & Lofland, 2001;

Fetterman, 2010), 'Participatory Action Research' (Greenwood & Levin, 2007; Stringer, 2007), 'Phenomenology' - descriptive and interpretive (Benner, 1994; Heidegger, 1927/1962), and 'Discourse Analysis' from multiple sources. I engaged in series of consultations with my research supervisors who are experts in the field, other qualitative researchers, and enrolled in a qualitative graduate course. I gained rich knowledge from journal articles, textbooks, qualitative research conferences and workshops, research reports, and in peer review sessions. Since the purpose of this study was to understand, unveil the meanings and articulate the experiences of midwives, Interpretive Inquiry was identified as the research approach that would most appropriately address this study's research question. From the standpoint of interpretive phenomenology (Gadamer, 1975, 2004; Heidegger, 1927/1962), it is possible to examine questions about ourselves, develop interpretations in time, explore human subjectivity in the expanse of our world and specific context, and explore respective interactions with the phenomena of interest (Frank, 2005; Gadow, 1994; Van Manen, 1990). As embedded meanings are examined, the relational dimensions of the phenomena enable us to make explicit the much needed contextual recommendations that establish the social significance of qualitative research (Bergum, 1991; Conroy, 2003; De Beauvoir, 1985; Dreyfus, 1991).

I therefore, in this study, adopted Interpretive Inquiry to explore, understand, and illuminate the experiences of midwives who are faced with newborns affected by birth asphyxia in rural Shai birth settings within southern Ghana.

Entering the world of hermeneutics

The inherent philosophical perspectives in phenomenology ground researchers in the exploration and understanding of everyday lived experiences without pre-supposing knowledge of those experiences. The two main phenomenological approaches evident in the nursing

literature are: Descriptive (eidetic) Phenomenology and Interpretive (Hermeneutic) Phenomenology (Cohen & Omery, 1994; Omery, 1983; Polit & Beck, 2012). Descriptive (eidetic) Phenomenology has a focus on describing and seeking essence in human experiences (Converse, 2012; Dowling, 2007; Leonard, 1994; Salmon, 2012). Interpretive Phenomenology goes beyond description to unveil the meanings through understandings gained in the art and act of interpretations, and which posits us to articulate the human experiences (Conroy, 2003; De Beauvoir, 1985; Dreyfus, 1995; Frank, 2005; Gadow, 2000; Heidegger, 1927/1962; Koch, 1995, 1996). The interpretive paradigm in phenomenological studies has its roots in the tradition of hermeneutics, which basically refers to the art of interpretation (Moran, 2000; Pascoe, 1996). The term hermeneutics originates from the Greek verb *'hermeneuin'* which means to interpret (Heidegger, 1927/1962). In Greek mythology, the word *'Hermes'* actually used to refer to the messenger of the gods who acted as a liaison between the gods and humans, thereby linking two worlds (Moran, 2000).

Interpretive Phenomenology as a qualitative research approach also offers reflective ways of exploring, understanding, and interpreting human lived experiences (Conroy, 2003; Gadamer, 1975, 2004; Heidegger, 1927/1962; Van Manen, 1990, 2002). Interpretive (Heideggerian) Phenomenology has its basis in the prominent work of Martin Heidegger (1889-1976), a distinctive philosopher, considered as the foremost instigator of modern hermeneutics. In his classic writings and famous book '*Being and Time',* Heidegger argued that our presuppositions cannot be suspended or laid aside (bracketing) as this is an artificial task since human beings are always situated in a historical/socio-cultural context (1927/1962). Heidegger asserted that phenomenology needed to explore a philosophy of the ontological rather than focus on experiential epistemology (1927/1962). Therefore, Heidegger explored the ontological question,

'What is the meaning of Being''? (Dreyfus, 1995; Moran, 2000; Welch, 1999). In his dialogical writings, Heidegger (1927/1962) rejected both Cartesian epistemology with its philosophy of the mind-body dualism and the conception of humans as 'subjects' who are separate from their lived world. Similar to Heidegger, Gadamer, a prominent19th century philosopher grounded in Heideggerian thinking, also rejected the notion of subject-object *divide* to reflect his discontentment with Cartesian dualism where self is seen as 'subject' that is uninvolved in the external world (1975, 2004).

According to Heidegger (1927/1962), the whole process of human existence is interpretive hence it needs to be approached with a quest for revelation and holistic understanding, rather than settle on fixed judgements. Inherent to interpretive inquiry is deeper questioning, reflection, focusing, intuiting (Conroy, 2003; Van Manen, 1990) and total immersion in the research data (Pratt, 2012). This calls for an engagement with one's contextual background in order to understand the totality of life experiences (Frank, 2005; Gadamer, 2004, 1975; Heidegger, 1927/1962). Gaining this understanding requires the application of a shared language – a language which posits us in a linguistic sphere where an understanding of each other is enacted (Gadamer, 1975, 2004; Gadow, 1994) as experiences are shared. We need to acknowledge that our everyday language and its meanings are dynamic, context-specific and ever-changing. To Gadow (2000), our words are engaging, interpretive and moving. As I engaged with research participants (midwives) in this study and sought meanings embedded in their experiences, I looked forward to co- enacted and co-shared study findings that would be co - created as a woven tapestry.

Philosophical underpinnings of Interpretive Phenomenology [IP]

The philosophical tenets and methodological processes in IP enable us to explore the ways in which our physical and social environments shape our social relationships and intersubjective experiences. Understanding the philosophical and methodological underpinnings of phenomenology requires total immersion of the researcher in the research process; which takes time, effort and sustained commitment (Conroy, 2003; Pratt, 2012; Van Manen, 1990).

Being-in-the world. Heidegger (1927/1962) referred to our basic human activity as *being-in-the world*. Humans are born into a pre-existing world with its unique contexts and practices that shape our life-worlds. Within this world, we are constantly adapting to the situations in which we find ourselves (Heidegger, 1927/1962). As we seek meanings to our existence, Heidegger argues that it is the *'there being'*- the openness with which we approach our world that meaning is revealed or disclosed to us (Conroy, 2003; Grondin, 1990). Heidegger's prominent work in 'Being and Time' (1927/1962) primarily focused on his claim that Dasein (that is us insofar as we are minded beings) is *being-in-the-world* (Esfeld, 2001). Dasein (German word meaning *'being there'*) is a central concept in Heidegger's 'Being and Time' and remains the pivot on which IP spins (1927/1962). Dasein is the specific mode of '*Being'* of humans, and primarily an agent that is action-oriented with humans who play particular roles in the disclosure of our 'Being'. This, at least in part, defines Dasein's existence.

Heidegger establishes that Dasein is tied to *'being-with'* (Mitsein) (that is, tied to other people) and is orientated towards the future (Conroy, 2003; Dreyfus, 1991; Esfeld, 2001; Gadow, 1989). This implies that for Dasein to be-in-the world is for Dasein to *be-with* 'Others'. This association establishes the claim that we are ontologically dependent on relationships with other

minded beings in a social community as long as we also are minded beings (Esfeld, 2001; Hansen, 1979). Since our fundamental way of being-in-the world is *'Sorge'* (meaning 'concern for' or 'care for'), Heidegger implores us to demonstrate caring attitudes towards others (1927/1962). This he argues is fundamental to our human existence since human beings are always living hermeneutically, trying to find significance and meanings in the worlds in which we live (Dreyfus, 1995). We however need to understand that there is no privileged foundational view of the world that is atemporal and ahistorical, and our presuppositions, views and perceptions cannot be laid aside as they are legitimate parts of *'Being'* (1927/1962). On the basis of this view, the interpretive phenomenologist is included as a legitimate part of the research encounter- as *being-in-the world* of participants (Grondin, 1990) rather than an outsider who is only looking-in from an external stance (Benner, 1994).

Life-world (Lebenswelt). Heidegger (1927/1962) refers to the different worlds in which we already find ourselves as *life-worlds*. The world is conceived as a priori, it is not an objective entity out there, or subjective in here, and we cannot be separated from the life in which we live. Our *life-world* is imbued with meanings through inter-subjective experiences with others in a shared language (Gadamer, 1975; Stewart, 1995). It is within our evaluation of this inter-subjective *life-world* that our experiences establish deep meanings. This life-world is a world of phenomenon that co-relates with our experiences (Moran, 2000). In the qualitative research life-world, participants engage in research in their own natural contexts, and not under controlled environments (Cohen, 1987) as is typically known in the positivist paradigm (Polit & Beck, 2012; Van Manen, 1990). Van Manen (2011), further supports Heidegger's notion on the life-world by offering that the four fundamental lifeworld themes that guide our existential reflections on the human experiences are lived body (corporeality), lived human relations

(relationality or communality), lived space (spatiality), and lived time (temporality). As argued by Van Manen (2011), each of us can inhabit different lifeworlds at different times of the day. In the time of our *life-worlds*, humans become constituted in culture, language, family, community, society, and associations. This is what Heidegger explains as *thrownness* which portrays persons as already situated in their world (Heidegger, 1927/1962). In this world, humans are not mere physical entities among other physical creations (reductive physicalism), but persons who engage in a meaningful world with the mind and body as a unified whole (Heidegger, 1927/1962).

Modes of interaction or encounter. Individuals interact with their world in three modes that Heidegger describes as 'readiness-to- hand' (*Zuhandenheit*), 'unreadiness-to- hand' (*Unvorbereitetheit*), 'present-at-hand' (*Vorha*nden). Readiness-to- hand (*Zuhandenheit*): Heidegger argues that our primary stance towards the world is much of an engagement with it rather than a detached observation of it such that as humans, we do not simply open our eyes and look at objects around us in our environment (1962). We are more likely to lay hold on things and use them as we see them around us in terms of their relevance for our intentions. Our intentionality as humans is therefore primarily shaped by this orientation to action which can make the things around us appear as *'ready-to-hand'*. Heidegger exemplifies this with a hammer. The carpenter who is familiar with the use of the hammer does not contemplate or theorize about the hammer; rather it is something he/she picks up and uses to accomplish a purpose. Having the status of an instrument, tool, or piece of equipment, it serves to accomplish an action or project in an inescapable manner. For instance, in our domain of clinical practice, when we pick up a tool, device, or any equipment (e.g. thermometer, sphygmomanometer), we know what to do with it in a manner that enables us to accomplish our planned interventions towards optimal patient health outcomes.

In contrast to 'ready-to-hand', Heidegger describes 'present-at-hand' as a mode of engagement in which we look at or observe something, or entities. In visualising this entity, the one who looks at that particular entity is concerned with the bare facts of that entity, and mainly focuses on theorizing, reflecting, or philosophically contemplating about the entity. For Dasein, the history or usefulness of that entity may not be of concern to an intended project. Heidegger posits that when we encounter entities in this present-at-hand mode, we typify things as primarily subject-object in structure. Further into the discussions on the modes of engagement, Heidegger uses the analogy of the hammer. As argued, if for some reason the hammer breaks down, it takes on a different status and subsequently becomes a problem to be fixed, an object to be thought about. The hammer becomes something '*unreadiness-to-hand'* which gets in the way of a project or action to be accomplished. According to Heidegger, humans have mistakenly developed their explanations of the world by taking things as primarily *present-at-hand*; that is, by treating things as mere items or objects to be observed from an isolated and objective stance. This sort of objective thinking has been extended to human agents as if their primary manner of existing were *present-at-hand* for things; and more so to Being itself, as if Being were a mere entity or thing (1927).

Conceptual basis of understanding within Interpretive Phenomenology [IP]

Phenomenological concepts that enable us to understand how humans experience and live within their world include: embodiment (Cameron, 2006; Gadow, 1994; Merleau–Ponty, 1962; Bergum, 2003), time (Conroy, 2003; Heidegger 1927/1962); and space (Bishop & Scudder, 2003; Bollnow, 1961; Dreyfus, 1995). Other phenomenological concepts include: corporality (Gadow, 1994; Merleau–Ponty, 1962, 2002); relationality, subjectivity (De Beauvoir, 1985; Gadow, 1994, 1989; Heidegger 1927/1962); mood (Conroy & Dobson, 2005; Dreyfus, 1995;

Heidegger, 1962); Self & 'Other' (Buber, 1966, 1970; Macmurray, 1995; Taylor, 1991, 1993); and power (Foucault, 1988). These Heideggerian concepts explain influences in the interpretation of our experiences (Gadamer, 1975, 1960/1989; Heidegger, 1962) and thus poise us to understand the epistemological and ontological foundations of experiences through the lens of IP. In this study, these phenomenological concepts emerged in unique patterns within the lived experience of participants. In the following section, I explain the way that each concept shapes or explains human experiences, and I include a glossary of Heideggerian concepts as used in IP (Appendix Q).

The Body-Object. The historical and socio-cultural contexts in which we live continue to constitute our 'being' such that it influences the way we perceive our bodies – our corporal nature and that of others. Humans are not mere machines (Heidegger, 1977, 1962; Zitzelsberger, 2004), and the body is not a brute object without selfhood (Gadow, 2000). In obstetric practice, midwives as direct care providers conduct fundal palpation to establish fetal position, and may have the opportunity to visualise a fetal body part that projects on the mother's abdomen. In fetal auscultation, the midwife also meets the woman in an intersubjective manner as body parts meet through touching with the fetoscope. This physical or bodily presence reveals unique responses particularly when our body becomes the object of an interim gaze. The body possesses the ability to engage in interpretive processes related to our experiences. In clinical practice, Foucault (1988) contends that the patient is neither the subject of his/her disease nor his body a mere object upon which a disease seizes. Therefore, in conducting clinical assessments, the health care provider (e.g. nurse/midwife) understands how the assessment findings relate the person as a social being, to the observed phenomenon (Foucault 1988), particularly when guided by hermeneutic principles (Frank, 2005; Pascoe, 1996; Pask, 1995).

Relationality/communality. Humans do not exist in isolation. Heidegger's conception of the world involves a network of meaningful relationships with others, and their practices (1927/1962), including language that facilitates our understanding in this togetherness (Gadamer, 1975, 2004). In this shared relationships, the unifying mode of '*Being'* for Dasein and its world provide a fundamental way of understanding Dasein's character of *Being-with* (Dreyfus, 1991). We therefore live in and are shaped by the communities within which we interact with in everyday life (i.e. *life-worlds*) in an intersubjective manner (Gadow, 1994; Pratt, 2012) as we engage socially - this forms who we are (Cohen, 1987). To gain a holistic view of humans in this relational context, we need to understand persons as self-interpreting beings who make meanings of their lived experiences (Conroy, 2003) in interactions with others. In the network of our relationships, circumstances such as illness, separation, loss, and death place affected persons in a difficult stance. As humans, we are able to reach, comfort, demonstrate care and show a sense of humanness through warmth and empathy (Austin, 2004; Gadow, 1994, 2000). These elements are central to nursing and midwifery care. It also permits the recognition that part of others' existential nature constitutes a *being-with* others - *Mitsein or being-with* (Heidegger, 1962).

I-Thou. Life involves a meeting, giving an opportunity for one to relate or encounter the 'Other', where the '1/Self' (One's inner life) approaches or accesses the 'Other' as Thou (the inner life of the 'Other') (Buber (1966, 1970). Macmurray rejects Descartes idea of mind-body split since this creates a disembodied Self where 'Self' is placed at distance from reaching the 'Other' (You) (1957/1995). This is an objectification of the 'Other' where the 'Other' is 'You' and the Self/subject is 'I' (Macmurray, 1957/1995). The meeting of I - Thou is therefore intended to solidify a mutual human relationship which requires meeting the 'Other' with our whole Self (Buber, 1966; Macmurray, 1999). Contextual differences however influence the

manner in which Self relates to the 'Other', such that in extended communal/family systems, solidarity is socially-derived and broadly shared.

Embodiment. Embodiment is the lived reality of who we are (Bergum, 2003), and refers to the term of existence in which experience takes place (Merleau–Ponty, 1962; Sartre, 1969). This lived reality opens up a sensuous or tactile space within which a relationship is established with the 'Other' (Aoki, 1991). Since our body is the centre of lived meaning that offers us the opportunity to experience our world (Gadow, 1994; Merleau-Ponty 1962), we engage with the world with a mind-body unity intersubjectively, for the most part as embodied agents rather than as passive observers or detached minds (Heidegger, 1962). Hence, our lived bodies are not simply complex physical organs and parts, but embodied- a dynamic complex of vital capacities that enables us to relate with other people, in a moving fashion within time. Discussed in the context of research, researchers make textual data embodied by including sensuous and emotional but clear and rational language to establish socially-shared meaning (Gadow, 2000).

Lived time and space*.* Humans are temporal beings: our past shapes our future; we carry our past experiences inscribed on our bodies reflective of our existence as stone tablet memoirs. Time in phenomenological studies is conceived in a non-linear fashion comprising the present, the past and the future (Heidegger, 1977; Walsh, 1999), and is considered as a fundamental structure in our everyday existence and interpretations (Heidegger, 1927/1962). Heidegger reveals that Dasein dwells in three temporal dimensions which are (i) thrownness (already in the world with ties to its past); (ii) projection (living into the future which engages us in possibilities, with a disposition of *Being* that is yet to be discovered- not yet been); and (iii) fallen-ness (living in the present world with a preoccupation of prevailing concerns as they present themselves). These time frames are interwoven (Bollnow, 1961; Schalow & Denker, 2010), and typically

pervade our mood. Therefore, one cannot provide a comprehensive account of another without considering its dimensional historicity (Dreyfus, 1991; Heidegger, 1927/1962).

Heidegger (1962) offers that our *being- in-the-world* is not only grounded in time but is also situated in space, i.e. spatial, situating us in our location of experiences, known as situatedness- '*the- there'*- either from a remote distance *(yonder) or close to them (here).* This *situatedness,* related to our *Background* grounds us in the description and interpretation of our experiences. As argued by Gadow (1994), in the space where our imagination operates, relational expressions about care are created. Heidegger's (1927/1962) notion on 'space' goes beyond physical distance to include something that absorbs our attention, described as '*pure concern'* (Dreyfus, 1995).

Modes of existing or of 'Taking a Stand'. Heidegger's (1927/1962) Being-in-the-world is based on the notion of direct epistemic access to the world with a mind-set that our thought content is ontologically dependent on the manner in which the environment presents itself to us (Esfeld, 2001). Dasein's activity and its way of Being manifests a particular stand on what it actually means to be Dasein (Dreyfus, 1995). Being exists in three modes with others in the world i.e. own up (*authenticity*), disown (*inauthenticity*) or fail to take a stand in its unsettling ways of Being (*undifferentiated*) (Heidegger, 1962). Authenticity (*Glaubwürdig*): the term authentic refers to a mode of existence in which one is truly oneself - 'owness' (Heidegger, 1927/1962). Authenticity involves originality, creation and discovery that require demonstrating an open attitude to life (Taylor, 1991). Being-in-the-world with a sense of genuineness is a positive way in which Dasein makes itself comfortable in the world (Dreyfus, 1995, p.194). Authentic individuals relate in the world with a sense of genuineness about their thoughts and

actions (Dreyfus, 1995). However, it is "absolutely not the case that humans can dwell in the authentic all their lives" (Dreyfus, 1995, p.239).

Inauthenticity (*Uneigentlichket*): inauthentic Daseins relate to their world in a disengaged nature and integrate into other peoples' world views, represented as a non-commitment to true care about self (Dreyfus, 1995). Anxiety is seen as threatening, and places Dasein in a world where one is unable to act, seemingly want to choose, but disowning true connection with others, this is an inauthentic mode of existence (Dreyfus, 1995). Inauthentic behaviour potentially mitigates against safe, ethical and competent practice (Berg, Lundgren, Hermansson & Wahlberg, 1996). A transformation from inauthentic to authentic existence is referred to as the *'Gestalt switch'* (Dreyfus, 1995).

Dasein is said to be undifferentiated (*Undifferenziert*) when given to public-ness, dropping its state of quality or originality. For instance, when we are unable to demonstrate advocacy skills to remedy an adverse situation, we take on an undifferentiated mode of existence. Individuals living in undifferentiated modes forget to demonstrate care (Conroy, 2003; Conroy & Dobson, 2005). Interestingly, Dasein has been noted to exist in an undifferentiated mode most of the time with anxiety related to its unsettledness about the inability to take a stand on itself, hence uncovering its unsettledness (Dreyfus, 1995). The possibility of existing in any one of these three modes of existing is what Heidegger (1962) refers to as '*mineness*', that is, having a certain comportment which gives us a stand on what it means to be Dasein- a specific way of owning up or disowning unsettledness.

Entering the 'Hermeneutic Spiral'

Interpretation, conceived as an ongoing, interactive and evolving task within a communal world, remains integral to the phenomenological research process (Gadamer, 1975; Heidegger, 1962). Moran (2002) and Smith (2007) support Heidegger's concept of the Hermeneutic Circle (1962) by establishing that the circularity involved in interpreting and understanding a phenomenon involves questioning, uncovering meanings, and engaging in further questioning. The 'Circle' is therefore not a logically vicious one (Heidegger, 1962).

Our interpretation occurs through the 'fusion of horizons' (Koch, 1996) which Gadamer (1975) developed. The 'horizon' refers to everything that can be observed from a specific vantage point, but this horizon is not a closed one, it is always in motion and not static (Gadamer, 1976). The fusion occurs when different vantage points come together, but this calls for openness to the standpoint of another (Gadamer, 1975).

Since the nature of Being and interpretation is an open and never-ending one, Conroy, Heidegger's co-thinker advances the dialectic on 'Hermeneutic Circle' by re-envisioning and establishing the 'Circle' as a 'Spiral' that integrates Hermeneutic Principles of Research (2003) (Table 1). These principles are fundamental to unveiling what is hidden but needs to be discovered. The spiralling nature of the interpretive process is aimed at understanding the meaning of Being, through co-constituted knowledge, and diverse interactive foot prints to further our understandings, and to ultimately advance questioning to illuminate phenomena - this is the essence of Dasein living with others (Conroy, 2003).

Table 1. Hermeneutic Principles of Research

Num. (#)	Guiding principles in hermeneutic research
1.	Seek understandings of the participants' world of significance through immersion in their world (Addison,1992; Benner, 1994)
2.	Make explicit the shared world of understanding between the researcher and the researched
3.	Immerse oneself in the hermeneutical circle throughout the research spiral
4.	make explicit the immersion of the researcher in the hermeneutical circle
5.	Draw out what is hidden within the narrative accounts and interpret them based on background understandings of the participants, the educators and the researcher
6.	Enter into an active dialogue with the participants, the educators, the trustworthiness checkers, the narrative itself as spoken and written (Addison, 1992)
7.	Maintain a constantly questioning attitude in the search for misunderstandings, incomplete understandings, deeper understandings (Benner,1994; Addison, 1992)
8.	Move in a circular progression between parts and the whole, what is disclosed and hidden, the world of the participant and the worlds of educators and researcher (Leonard, 1994)
9.	Engage the active participation of the participants in the research process: the implementation and the interpretation (Plager, 1994)
10.	Encourage self-reflective practice by the participants through participation in the research and through offering a narrative account of the researcher's understandings and interpretations
11.	View every account as an interpretation based on a person's background (Plager, 1994)
12.	View any topic narrated by the participant as significant at some level to the participant.
13.	Deem every account as having its own internal logic; whatever is brought to an interview is significant to its bearer, consciously or not
14.	Access and make explicit participant understandings through their own modes of existence, mode of engagement while being sensitive to one's own modes of existence and of engagement and foregrounding
15.	Be aware of one's use of coping tools in any of the modes of existing.
16.	Engage in the spiral task of hermeneutical interpretation along with the participants
17.	Keep track of movements in understanding (Benner, 1994)
18.	Work with participants to see which points are salient
19.	View IP as an interpretation of participants' interpretation
20.	Look beyond the participant's actions, events and behavior to a larger background context and its relationship to individual events (Addison, 1992)
	Adapted with permission from: Conroy, S. (2003). A pathway for Interpretive Phenomenology. *International Journal of Qualitative Methods, 2 (3),* 1-43.

Conroy's approach integrates both Heideggerian philosophy and hermeneutic principles of research into six 'Research Aspects'. These 'Research Aspects' include (i) attending to footprints and engaging in concurrent preliminary interpretation; (ii) in-depth interpretation; (iii) second reader introduction to the narratives; (iv) paradigm shift identification; (v) exemplar development; and (vi) principle development (Conroy, 2003). The three foundational facets incorporated into this study are: (i) adopting an openness to change and input from participants throughout the study; (ii) supporting active contribution of the participants to the hermeneutic spiral, and (iii) built-in ongoing reflection and interpretation by both researcher and participants, made applicable to the six 'Research Aspects' (Conroy, 2003). This methodology is not applicable in a linear sense, but it is dynamic and responsive to the ebb and flow within the whole research process (Conroy, 2003).

Three - fold structure of interpretation: Fore - structures of understanding

Heidegger (1927/1962/) established that we cannot embark on the task of interpretation in a vacuum, therefore, we need our 'fore-having' (*Vorhabe*), fore-sight (*Vorsich*t) and *'fore-conception'* (*Vorgriff)* of the entity itself; that is the three-fold structure which forms our 'Background'. Therefore, this Background cannot be bracketed (Heidegger, 1962). Conroy (2003) further explained that in the *Background* of our existence, we find a web of relations which enable us to grasp a sense of meaning through the '*fore-structures*' of understanding in the hermeneutic task of interpretation.

According to Heidegger's notion on interpretation, humans come to understand without being consciously aware of the cognitive processes that enable us to do so – this is what is referred to as '*fore-having' (Vorhabe).* These overlooked processes are described as *taken-for-granted skills* (Leonard, 1994). Since our interpretation is rooted in something of which we

already have knowledge, this forms a background in which *Dasein* dwells in 'familiarity with' to provide contextual interpretations that advance a questioning attitude (Dreyfus, 1995). So for instance, asking the question: 'what is the meaning of *'Being?'* presumes a pre-ontological understanding of *Being* - a *fore-having*. Interpretation that is grounded in 'f*oresight (Vorsicht) refers to* our understating that is tied to a point of view we already have or understand or see in advance (Dreyfus, 1995). *Fore-conception (Vorgriff):* Gadamer (1975, 2004) posits that we are already embedded in a social, cultural and historical world; a '*situatedness'* which shapes our thinking processes when interpreting. From the position of *fore-conception (Vorgriff),* Gadamer (1975, 2004) posits that we are already embedded in a social, cultural and historical world; a 'situatedness' which shapes our thinking processes during the interpretation of our lived experiences (Gadamer, 1975, 2004).

African philosophy in 'home' research

My native origin, rural familiarity, and multi-leveled experience in research, education and practice, enriches my background, and grounds me in the three-fold *fore-structure* of understanding this study's context and its inherent issues. As an African, I embrace contextual philosophy to advance the thinking of what it means to be. I extend Heideggerian philosophic perspectives on 'Being' by drawing on Honorary African philosophers such as; Kwame Gyekye (1995), Kwasi Wiredu (1980, 1996), Ayi Kwei Armah (2010) and Desmond Tutu (2000). These scholars engaged in discursive analyses on the relevance of culture, context and historicity in African existence, and discussed their impact on our human experiences towards understanding the African, thereby enriching African research.

Integrating foundational elements of African philosophy

African ontology is typically spiritualistic in nature and grounded in the belief that both the spiritual and non-spiritual worlds are real (Gyekye, 1995; Wiredu, 1980, 1996; Wiredu & Gyekye, 1992). People live in communities within existing social structures that are typically hierarchical in nature, and the elderly (by birth age or political authority) have an epistemological monopoly over the young. African traditional thought and historical past is embodied in proverbs, traditional stories, folk tales, folk songs, beliefs, and customs that are often transmitted orally, and rarely in written texts. African philosophers and researchers reflect and engage in discursive analyses on fundamental concepts related to person, being, existence, culture, causality humanism, and communitarianism. The concepts which interconnect with interpretive phenomenological concepts are discussed in the ensuing sections.

Communality in African societies. Communality and individualism are co-existing opposing concepts in African societies. There is however a natural inclination to assume and exhibit communal values which is the norm that is traditionally indoctrinated from infancy through adulthood. Balancing the two systems of values with its obligations to self and to the community is less of a choice if one is to feel accepted as part of the *'group'*. It is socially expected to connect to others with an extended self, relinquishing '*beingness alone', and taking on 'beingness with others' (*Menkiti, 2006). This backbone of African ethics emphasizes a 'we' thinking rather than an 'I' thinking, and the reverse creates dismemberment (Armah, 2010). African people thus grow up knowing and reminiscing; 'I am because we are'; 'you are because we are'. This is the concept of *Ubuntu* explained by Archbishop Emeritus Desmond Tutu in his book 'No Future Without Forgiveness' (2000).

Africans live in an extended family system, and they consider as part of their own families, people who live in their communities, but are not their blood relatives. The tie of African relationality to patterns of living is a social lubricant that creates connections between people, reduces social isolation, increases a sense of belonging, and maximizes emotional support from others to improve community mental health and well-being. It is therefore a concerning phenomenon for Africans to express appreciation for individualism above communality in contemporary African living (Oppong, 2012; Wiredu, 1980). This knitted community framework is a foundational block for building communities. In recent times however, this 'family network' is partly tainted with issues of abuse in this era of increasing urbanization and globalisation (Oppong, 2012). The forms of abuse are numerous, but commonly corporal punishment for minor offences such as failing to wash dishes, sexual and verbal abuse, child neglect, starvation and trafficking break family and community ties.

I am currently removed from my African geographical location by reason of academic training in a Western society and to an extent have been exposed to individualistic values that I sometimes struggle with. As I juxtapose my *background* with the research data in this study, I uphold *open-mindedness* and embrace the mutuality of Ghanaian and westernized patterns of living to inspire possibilities for creating rich and meaningful understanding of midwives' lived worlds in rural practice.

Understanding who a 'Person' is in the African context. How a person is conceived in West Africa culture varies from other African cultures. Among the Bantu people in Central and Southern Africa, human beings are conceived of as nothing more than essential energies or vital forces; these constitute the integrity of one's whole being (Tempels, 1959). As argued by Kaphagawani (2006), persons are distinguished from each other at least, because of their unique

personalities and behaviours. In the Ghanaian culture, the conception of a 'person' presupposes a belief in the psychological causal interaction of entities and events (Gyekye, 1987). Gyekye (1987) argues that a person is composed of three (3) fundamental elements; i.e. body (honam); soul (okra) and spirit (sunsum). All these three fundamental elements constitute a person with a manner of interaction with the internal and external environment. Gyekye (1987) asserts that the soul has a causal influence on the body such that activities affecting the body also influence the soul. Subsequently, what happens to the soul reflects on the body. The belief in the bio-psychological causal interaction of diseases and illnesses is therefore the whole basis of spiritual and/or physical healing within an African context.

In the context of this study, the above review of philosophical, theoretical and conceptual underpinnings of qualitative inquiry, interpretive phenomenology, and African philosophy contribute to inform the chosen study methods.

Exploring the research setting

This qualitative research was conducted in Ghana, a West African country located in Sub-Saharan Africa; bordered on the east by Togo, west by Côte d'Ivoire, on the north by Burkina Faso and south by the Gulf of Guinea and the expanse of the Atlantic Ocean. Ghana has a total land area of 238,537 square kilometres (International Organisation for Migration [IOM], 2011) and was the first of the colonized countries in Africa to gain independence from British imperialism on March, 6th 1957 (GDHS, 2014). Ghana is a coastal country with a tropical climate and two main seasons: the wet (rainy) and the dry (also known as harmattan; hot and dusty air flow from the Sahara Desert (Nations Encyclopedia, 2016). Although temperatures vary with the season, the average range is 21°C to 32°C with extremes up to about 43°C., and relative humidity of 50% - 80 % (Nations Encyclopedia, 2016). It is humid in the south due to the

proximity to the Atlantic Ocean. Although green with vegetation in the south and mid-regions, the northern part of the country is predominantly dry with savannah plains. With a total population of approximately 26.79 million in 2014 (World Bank, 2016); about 47% of the population reside in rural areas whilst 53% live in urban communities (WHO, 2015). The increasing rural-urban migration patterns continue to raise concerns and questions on the need for government to support rural development (GDHS, 2014). Rural communities in Ghana are sparsely populated, and people farm and depend on natural resources such as lakes and rivers for subsistence living.

Ghana's Gross Domestic Product [GDP] in 2010 (31,548.40 billion USD), has risen to $39.82 billion hence placing the country in a lower middle-income status (World Bank, 2016) with GDP per capita of 1,872.07 cedi or 1,318 USD (WHO, 2012a). Ghana depends on its leading export commodities, that is cocoa, timber, and gold, as well as on service and industry sectors to build its economy (GDHS, 2014). Social amenities such as roads and health facilities are inadequately resourced, and lacking altogether in some communities, particularly in remote rural settings (GDHS, 2014; Issah et al., 2010; Welaga et al., 2013; WHO, 2011b). Between 2005 and 2009, about 30% of Ghana's population were estimated to be living on <$1/day (WHO, 2012a). Whilst life expectancy for men and women is 56 and 57 years respectively, adult literacy rate is 65% (WHO, 2012a).

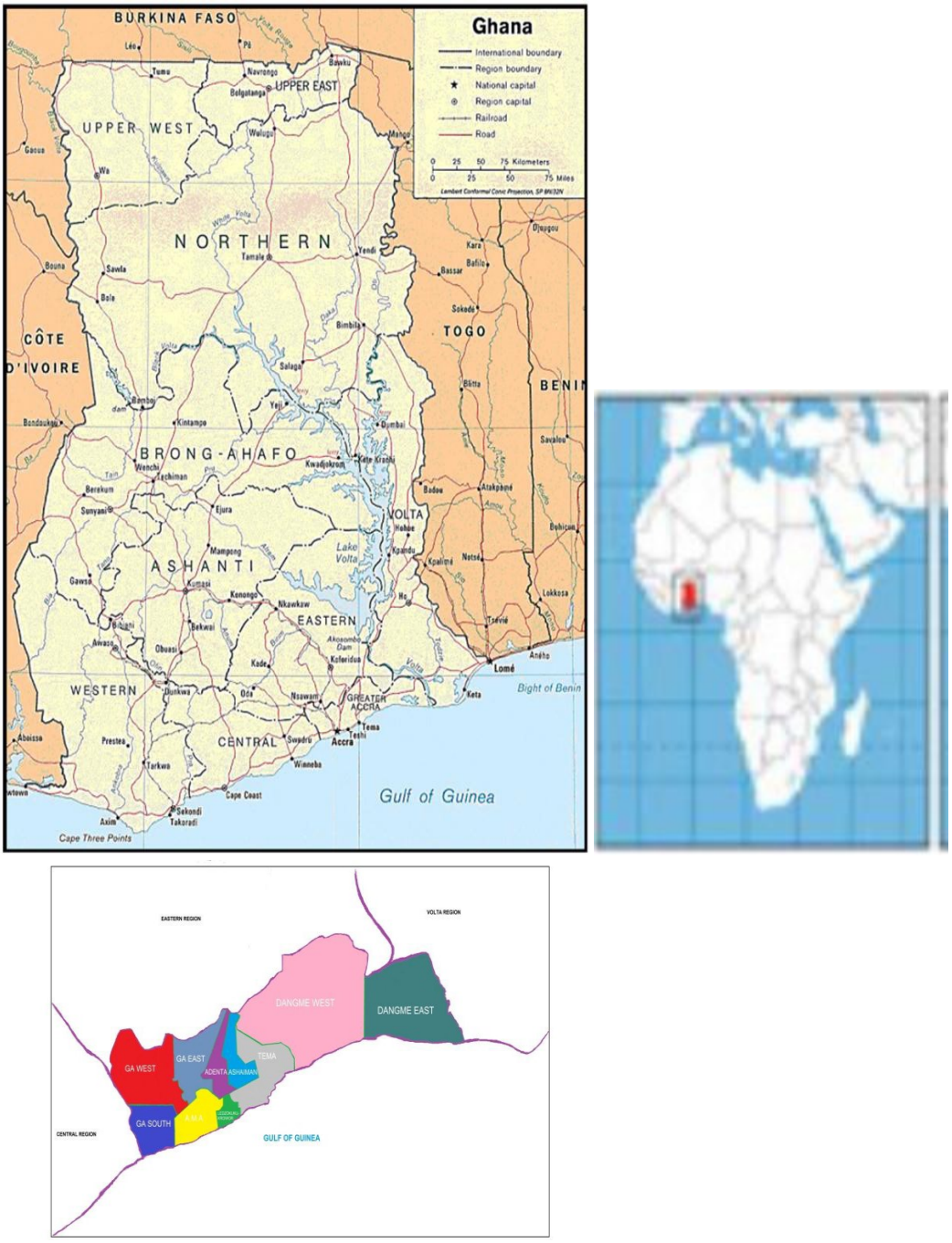
Ghana has been fractioned into 10 administrative regions which have been further decentralized into 170 districts (GSS, 2012). The MOH-Ghana is the main body that is primarily responsible for policy formulation, resource allocation, coordination and regulation of stakeholders, and monitoring and evaluation of the health sector's activities (GHS, 2013). Regional, district, and community health facilities provide tertiary, secondary and primary health

care services respectively (Gyapong et al., 2007; MOH-Ghana, 2007, 2008). Ghana's progress towards the MDG #4 target (i.e. reduce Under – 5-year-old mortality rate [U-5MR] by two-thirds by 2015) target was rated as 'insufficient' on the basis of the slow decline in U-5MR, and average annual reduction rate of 2.5%; therefore, the target was not met (UN-IGME, 2015; UN 2015a). Nursing/midwifery personnel constitute the majority of health professionals involved in the care of maternal and newborn health (GDHS, 2008, 2014; WHO, 2012a, 2015), but number only at 24,974, resulting in a low density ratio of 10.5/10,000 population (WHO, 2012a). The recent global statistical report established a decrease to 9.3/10, 000 population (WHO, 2015) which raises concerns for health systems function, health care provision and the new SDG 3.2 target (i.e. reduce neonatal mortality to at least as low as 12 per 1,000 live births).

The study place

This study was conducted in the rural south eastern part of Ghana (map; Fig 3), specifically the Shai-Osudoku District, located within the Greater Accra Region (Shai- Osudoku District Assembly Annual Report, 2014). The Shai-Osudoku District is one of the sixteen (16) districts in the Greater Accra region of Ghana and its administrative capital is Dodowa (Ghana Districts, 2006). Although this district has the largest surface area in the Greater Accra region, it is one of the four rural districts in the region. Historically, this district was part of the Dangme West District, but was re-demarcated in June 2012 by L I 2137 (Shai- Osudoku District Assembly Annual Report, 2014).

Fig 3: Map of Ghana showing section on Shai-Osudoku District (Former Dangme West District)



The Shai- Osudoku district has a total population of about 58,885, out of which approximately 48.2% (28,383) are males, and 51.8% (30,502) are females living across 167 communities (Shai- Osudoku District Assembly Annual Report, 2014). Within the Shai-

Osudoku district, midwifery staff strength is as low as 22 (Shai- Osudoku District Assembly Annual Report, 2014); which brings the midwife: female ratio to a negligible number of 0.007: 1. In Ghana, midwifery practice is guided by global Action Frameworks such as BEmONC, and CEmONC (WHO, 2009) in ANC services, labor, deliveries, post-natal care, and referral of clients. Community residents in the Shai-Osudoku District depend on the Volta River primarily for domestic uses and economic gains (fishing and transportation) across other communities (Ghana Districts, 2006). Primary means of affordable transportation is the trotro[1]. In the communities where this study was conducted, rice, corn, mango, banana, and fish (tilapia) farming are the predominant economic activities. In the remote communities, some portions of the land look white-spotted. Upon inquiry from local residents, I was informed that these lands were originally a river bed. In this expanse, residents harvest the dried river shells from the soil and depend on it as an economic resource for daily living. These shells which are heaped into mounts of about two feet from the ground are crushed into powder and used as wall paint for building maintenance and community esthetics.

Gaining entry: the ethical approval process

This study underwent five levels of review prior to approvals from: three (3); ethics boards; one (1) district health administration; and one (1) Regional health directorate. The study proposal was first submitted to; University of Alberta (U of A) Research Ethics Board (REB) (Panel 1). After approval (Appendix A), a copy, and an introductory letter from the School of Nursing, University of Ghana (Appendix B) was submitted with the research proposal to the Noguchi Memorial Institute for Medical Research (NMIMR), University of Ghana. After the study was approved (Appendix, C), copies were attached to the research proposal and submitted

[1] A 12- 20 seater mini bus that has a back storage compartment for carrying goods such as farm produce, foodstuffs and clothing in sacks. Overhead carriage keeps strapped domestic animals such as lambs and goats well secured.

to the Dodowa Health Research Centre [DHRC] for district approval which was granted (Appendix D).

Following this procedure, the three initial approval letters and an introductory letter from the School of Nursing, University of Ghana (Appendix E) were submitted with the study proposal to the Greater Accra Regional Health Directorate and Shai-Osudoku District Health Administration simultaneously for approval which were granted (Appendices F and G respectively). This five-level ethical and institutional review procedures took a total of eleven (11) months (April, 2014 – March, 2015). After receiving all the study approvals, I now had permission to access the research participants (midwives).

Ethical considerations

The personal and probing nature of qualitative research raises ethical concerns related to conflict of interest, voluntary consent, right to withdraw without penalization (Munhall, 2007; Polit & Beck, 2012; Streubert-Speziale & Carpenter, 2011) and participant distress (Morse & Field, 1985). Although as the researcher, I aimed at obtaining in-depth data on midwives' experiences, probing questions could not be determined in advance but were developed during the interactive dialogue (Nunkoosing, 2005). Therefore, it was essential that I adopt openness to participants' verbal and non-verbal cues during communication (Munhall, 2007) to avoid imposing undue stress on participants.

Adopting a relational ethics approach was critical in building a mutually trusting relationship (Bergum, 1991) with the midwives. This occurred through several visits and off-tape conversations about health care delivery as well as clinical education, including familiarising myself with routine activities in the birth facility. Knowing that the cordiality of the research-participant relationship depends on trust (Pask, 1995; Walker, 2007), I ensured ethical

comportment (Bergum, 1991) by active listening and by showing respect for participants' views whilst searching for understanding in midwives' shared experiences.

Anonymity. To ensure that research participants were free from retribution for their participation and/or because of untoward disclosure of ill-advised clinical practices, pseudonyms were used. In addition, I kept all textual and electronic data locked and password protected, access to which was restricted to my Research Supervisors and I only. All personal identifiers were avoided in the field notes, reflective journal, audio-tapes, and verbal transcripts. With confidentiality guaranteed, the research findings will eventually be presented to the midwives, Shai-Osudoku District Health Management Team (DHMT), NMC-Ghana, Ministry of Health-Ghana, Ghana Health Service, Ministry of Gender, Children and social protection of Ghana, local stakeholders.

Written informed consent. I explained the nature and purpose of the study to potential participants (midwives) as specified in the research information sheet (RIS) (Appendix H). As part of recruitment procedures and ethical obligations, questions asked by the midwives were duly answered. All the midwives who were approached regarding the study expressed interest in voluntary participation. On the scheduled date of research conversations, each participant was given time to read and ask questions on the Written Informed Consent Form (Appendix I). The two forms (Appendices H & I) were filled in tandem and signed in duplicate, and respective copies given to midwives for personal record. The signed copies of both forms were securely locked in my personal home cabinet whilst in Ghana. On arrival in Canada, all the research files were kept locked at the Faculty of Nursing, University of Alberta.

Participants' well-being. The well-being of participants in research is paramount and requires a commitment to minimizing risks and maximizing benefits associated with the research

(Belmont Report, 1978; Nuremberg Code, 1947). Therefore, in this study, the principles of beneficence and non-maleficence were upheld by ensuring that participants who were recruited, decided to participate in the study on voluntary basis without any form of coercion (Munhall, 2007; Polit & Beck, 2012; Polit & Hungler, 1997). The risks and benefits of this research were explained to each participant (Mayan, 2009; Polit & Beck, 2012; Silverman, 2000) as outlined in the Research Information Sheet (Appendix H) including the right to withdraw from the study at any given time without justification or fear of retribution. None of the participants withdrew from the study.

Anticipated risks. In this study, conversations involved sensitive issues which could potentially evoke emotional distress within midwives as past experiences were shared. Therefore, advanced arrangements with a Clinical Psychologist (Appendix J) located at a public health facility registered under the Ghana Health Insurance scheme were made in case participants may wish to access clinical service with family and/or professional support. The midwives were pre-informed of the availability of a Clinical Psychologist's service prior to signing the Written Consent Form and reminded in conversation sessions. None of the participants accessed the services of the study's psychologist. Where needed or requested by a participant, a break period was offered during conversations, and the audio-tape was paused accordingly. The potential risks and benefits of this research were explained to the midwives whilst emphasising personal right to remain or withdraw from the study at any time without fear of penalization (Belmont Report, 1978; Nuremberg Code, 1947) or losing one's job.

Population and sampling

The basic but important principles that guide qualitative sampling are appropriateness and adequacy (Patton, 1990, 2002). Adequacy demands generation of data that is sufficient and

substantial enough to enable the researcher to develop a full and rich description of the phenomenon under study (Patton, 2002, 1990). The District Health administration provided me with an introductory letter to confirm study approval (Appendix F), and dispatched copies of these letters ahead of me to all the midwives in the respective birth settings to give prior notice, and sensitize midwives about the study.

Recruitment and sampling procedures

The district health administration team introduced me to the walled District map to identify locations of potential participants. This map was a useful resource in locating the birth facilities as it enabled me to develop a mental image of the geographical locations with its respective terrains. The inclusion criteria for this study were: midwives who had practiced in the Shai-Osudoku District continuously for at least three (3) months, and voluntarily wanted to participate in the study. The exclusion criteria were: midwives who had less than three months' experience in the district.

To achieve appropriateness in sampling, participants who met the inclusion criteria, and could best inform the research were approached (Polit & Beck, 2012) in person, and given the research information sheet (Appendix F) to familiarise themselves with the study. Midwives who lived the experience, met the inclusion criteria and were willing to participate in the study were purposively and conveniently sampled, and voluntarily recruited to inform this research (Hesse-Biber & Leavy, 2006; Lincoln & Guba, 1985; Munhall, 2012; Patton, 2002; Polit & Beck, 2012).

Table 2
Demographic data on study sample[2]

Birth settings	Number of midwives (N)	Professional registration with regulatory body	Means of transportation across communities/referral
8	13	Yes; all midwives	Walking, okada[3], taxi[4], boat, trotro

Thirteen (13) midwives (Table. 1) practicing in birth settings within rural communities in the Shai-Osudoku District voluntarily participated in this study. The nature and purpose of the study which had been specified in the Research Information Sheet (Appendix H) were explained to midwives; questions were duly answered. I made visits to all the respective birth settings at least four (4) times and at most eight (8) times to establish rapport, build trusting relationships, and generate data that ultimately enriched the data included in my research journal and field notes. A convenient date and time for audio - recorded research conversations were arranged with the midwives who volunteered to participate in this study. These dates and times were often rescheduled on arrival at the birth setting due to labor and primary health care emergencies. Numerous trips to the various birth settings were often a trial, as it became necessary to wait on site for an opportunity to engage in a research conversation so that the maximum available time could be used by the researcher.

[2] Other details on demographic data which act as personal identifiers have been omitted to ensure participant anonymity.
[3] Local motor cycle with a rider and 2-3 pillion riders often without helmets, and hold on to rider with a waist grip. A faster means of transportation for domiciliary midwifery and referrals. Carries luggage of riders in the space between the rider's handle bars.
[4] Primary means of safe transportation; IV fluids can hang on multi-functional upper interior handle during referral.

Data generation, synthesis and management

Data generation

The primary source of data for this study consisted of: one-on-one, private face to face in-depth conversations with thirteen (13) midwives practicing in rural birth settings in the Shai-Osudoku district. In qualitative inquiry, research conversations are a traditional way of generating data from participants; while conversations create a relaxed milieu that stimulates reflection, and permits further probing (Koch, 1996; Munhall, 2007, 2012). Conversations are preferred over interviews in phenomenological research because of their free-flowing and unstructured nature which promotes active participation in communication (Conroy, 2003). Through this process, participants are able to tell their stories in whichever way they want without feeling dominated in the conversations (Koch, 1996). Participants also demonstrate confidence and express non - verbal cues (i.e. increased and decreased tone in voices, facial grimaces and different postures) as conversations progress, and as personal experiences are shared.

On the scheduled date of our audio-recorded research conversation, our communication began with talks on events of the day as a form of ice breaker. To promote free-flowing conversation sessions, I maintained a harmonious and relaxed atmosphere by agreeing to the preferred place for the conversation, keeping eye contact, humming cues in varying tones, and making relaxed facial grimaces during communication. All thirteen midwives (N=13) were engaged in research conversations once (Round 1; R #1). Six (6) of the midwives were interviewed a second time (R# 2) to probe and elucidate meaning towards an understanding of the shared experiences. A third conversation was arranged with three (3) of these 6 participants

to further explore the phenomenon in order to increase in-depth understanding of the experience of facing an asphyxiated newborn (i.e. phenomenon under exploration).

All the audio-taped conversations lasted between thirty-five (35) minutes (mins) to one hour and fifty-seven minutes (1 hour, 57 mins). All the conversations were audio-recorded, back-ups saved and password-protected electronically on an external storage device kept under lock and key, access to which is restricted to my doctoral supervisory committee. Spacing in between and across participants' conversations was done to enable me to engage in preliminary reflective interpretations following each conversation with an openness to discover meanings in the voice and oral text (Conroy, 2003). Data generation thus occurred concurrently with synthesis after each conversation (Conroy, 2003; Polit & Beck, 2012). Other sources of data incorporated included my observations of participants' verbal and non-verbal cues (i.e. body language).

My position within the data. Insider research is arguably inherently biased in terms of data generation and data selection (Field, 1991), data synthesis, formulation of conclusions and dissemination of study findings. As a Ghanaian and researcher, I position myself as an insider who is familiar with the socio-cultural context of the study setting. However, I also was new to this particular study setting, therefore an outsider. I thus needed to remain open to the research data in order to see the experience in whatever form it showed itself to me (Conroy, 2003; Munhall, 2007, 2012). To achieve this from an insider perspective, I kept a reflexive journal of my bias, beliefs, preconceptions, motives and personal views, and made reflexive notes of what was said and unsaid, and things I have taken for granted, and/or things that were new to me or that I found surprising.

Knowing that research is a knowledge-making activity, I had to move from unknown- to -known (Polit & Beck, 2012). Whilst doing this, I asked myself questions in relation to why I was thinking the way I did. In order to produce research findings that were truly reflective of the phenomenon under exploration, a delicate and honest balance was required throughout the inquiry process (Polit & Beck, 2012). My position as an insider-outsider existed along a continuum. As a partial insider, being familiar with the context in which midwives practice placed me in both advantageous and non-advantageous positions. The advantage was that my background knowledge of the research context enhanced my ability to gain entry into the study setting with ease. As I approached the data, my background knowledge also provided a lens through which I viewed midwives' practice. This lens facilitated the development of insights towards an interpretation, and deeper understanding (Bergum, 1991) of midwives' experiences. On the contrary, I struggled with my taken-for-granted assumptions which included midwives' availability, vehicle and motor cycle transportation service times, and return hours. Again the ethics approval and study introductory letters revealed my social and academic identification as an outsider (Canadian student), and an 'expert' (PhD candidate) which inherently positioned me as a 'knower and power holder'. The aura of westernised education and the honor attached with being part of the privileged minority education group confronted my insider values and reduced my energy levels as I consciously made persistent efforts to bridge the power gap particularly in the initial sections of conversations with midwives. I navigated the tensions in this power imbalance through repeated familiarization trips and informal conversations with the midwives.

Data synthesis

Consistent with IP, data synthesis is an iterative process which requires a reflective approach, an attitude of openness to the data (Conroy, 2003), the immersion of self, and a need

to dwell in the data (Munhall, 2007; Polit & Beck, 2012). The whole interpretive project involves back-and-forth processes as presented in Fig. 4. Approaching this mutually-created data with a reflective approach supported the development of a synthesis that offered deeper co-constituted understanding of the meanings in the lived experience (Larkin, Watts & Clifton, 2006). I adopt Conroy's (2003) Pathway for Interpretive Phenomenology with the six Research Aspects' as this study's hermeneutic guiding framework for data interpretation and synthesis.

Synthesising data in a 'Hermeneutic Spiral' framework

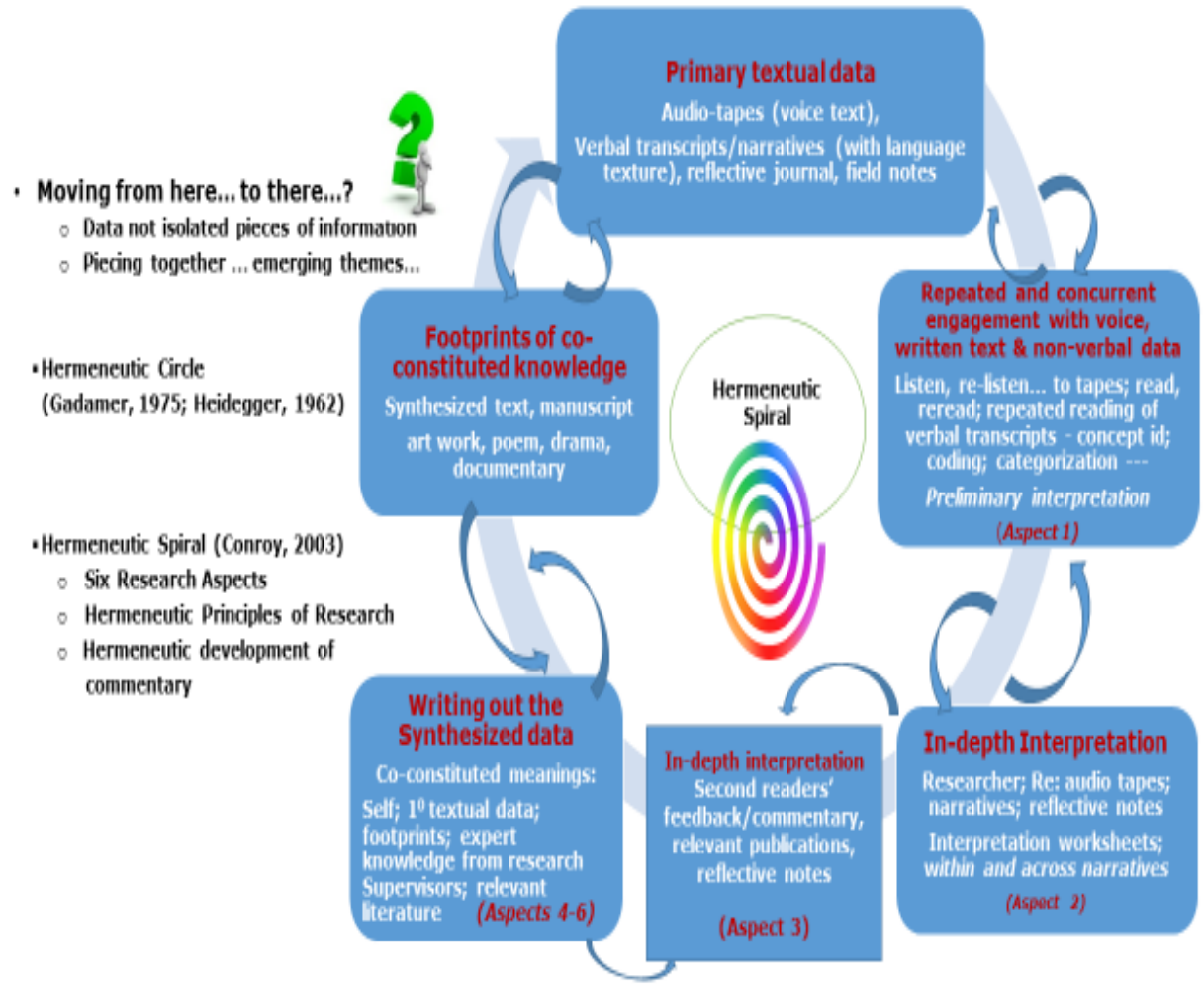
Conroy's Pathway (2003) is focused on interpretation and understanding within the hermeneutic spiral where the six Research Aspects (listed earlier) facilitated data interpretation with the Hermeneutic Principles of Research (HPR). In this spiral, the researcher and participant both reflected and built on an interpretation towards enriching understanding of the phenomenon under exploration (Conroy, 2003). As I engaged in the mutual generation of these data, I constantly examined and reflected on how my *life-world* and these encounters with the midwives impacted my *fore-understandings* towards a fresh understanding of the phenomena.

The text and body language including facial expressions and gestures, created a woven tapestry out of which art and poetic expressions emerged. Synthesizing these research data was anything but simple as I tried to remain flexible, and fluid in my thoughts and reflection. Putting together midwives', two second readers' and my words into my research words was a heavy task that upheld methodological rigorous processes (Richards & Schwartz, 2002). I had to follow where the data was leading. I therefore drew on the counsel and expertise of my Supervisors to propel me along the encounters and back and forth in the evolving data which posited me to develop Fig.4 to facilitate my understanding as a novice hermeneutic researcher on the processes

and tasks involved in the project of interpretation. I questioned my thoughts as I engaged in the iterative processes of interpretation in the Spiral (Fig .4).

Writing out the text was anything but easy. This writing process birthed my hidden potentials in creative thinking for the most part during engagement with my doctoral supervisors, during daily health walks, waiting periods at the bus or train transit stations, early morning reflective moments and while cooking.

Fig. 4 **Finding my way through the interpretation processes...**



Research Aspect 1: attending to footprints and concurrent preliminary interpretation. I identified footprints such as: values, beliefs, norms, and symbols. I also kept an 'ongoing log' on my reflections, decisions, encounters as supplementary research documents to both track my thoughts and create an audit trail on the research process and contribute to further interpretation. Probes used during each conversation were dependent on the flow of communication (Koch, 1996), and I aimed to maintain a relaxed atmosphere by smiling, and maintaining eye contact as culturally appropriate. Data generation occurred concurrently with synthesis to develop preliminary interpretation of what participants had said – verbally and non-verbally whilst moving between the past, and present (historicity) experiences to inform their future -temporality (Heidegger, 1962).

Second Aspect: In-depth interpretation. I aimed at gaining an in-depth interpretation of the data. I immersed myself in the data by repetitively listening to the audio-taped conversations (voice text), reading the verbal transcripts, and continuously reflecting on the research data, and my experiences. At the outset, transcribing the audio-taped research conversations appeared to be a straightforward task, but it was not as easy as I imagined. Reflecting on each verbal transcript in this fashion thus offered me the opportunity to develop and rethink additional questioning and probing statements and to identify the need for further clarification. In addition to the verbal transcripts, I wrote a précis of what the participant and I had each said.

Non-verbal modes of communication such as pause, silence, and laughter were also recorded in the narrative (Table 3). I developed an Interpretation Worksheet (sample as Appendix S) where repeated engagement with the voice and textual data, enabled me to develop face value meanings, identify similarities in phrases and concepts, and hermeneutic interpretation of the data. Similar concepts were colour-coded in Microsoft Excel and grouped into categories

in columns. Each line of the typed transcript was numbered and a column reserved at the right hand side of each Excel sheet for labelling categories. The left column was reserved for critiques and comments on the conversation and other emerging information related to the phenomenon in question. I grouped similar concepts into categories and searched for meanings in and between the categories and narratives.

Table 3
Transcription legend

Notation	**Legend**
…5s	Signifies a pause less than 5 seconds
…5s…	A pause lasting 5 seconds but not greater than 10s
…10…	A pause lasting 10 seconds or longer
Voice emphasis	In transcribed text: use of 'underline': e.g. participant was displeased
[ ] square brackets	My words representing expression of words, and non-verbal cues in conversations, italicized e.g. [*Stands up*]

In the Third Aspect, I engaged two second readers who signed Confidentiality Agreement forms separately (Appendix M and N), to comment on the textual data whilst looking for the obscure within the contextualized experiences of the research participants. This process enriched the data and supported data integrity. Gadamer (1975) established the need for a constructive dialectic process by asserting that interpretation requires integration between explanation and

understanding of the text. Emerging themes were summarized into textual data in combination with data from field notes, reflective journal, and second reader commentaries to obtain detailed understanding, to provide an all-inclusive rich account of midwives' experiences of babies with asphyxia neonatorum. Themes that emerged (beginning from Aspect 1) were reappearing concepts that run through in and between narratives consistently.

Fourth Aspect: Paradigm shift identification. In this paradigm shift, my way of 'seeing' and coping with the world of midwives took a different turn on my understanding in a manner that influences how I will interact with midwives in the future. I assumed that midwives working alone in resource-limited rural communities could not engage in optimal professional practice. I came face to face with the reality that midwives explore, create, utilize and maximize local resources to save lives irrespective of the time of day and service demands - this was my 'hermeneutic turn' (Hoy, 1993). In this shift of existence, I turned towards authenticity and away from Heidegger's inauthentic or undifferentiated existence (1927/1962).

Aspect 5: Exemplars. An exemplar is a particular case representation that demonstrates consistency in concerns, attitudes, meanings, knowledge, and skills that are common to a participant's experiences of their lived world. In the findings sections, exemplars that were identified have been annotated to reveal alternative possibilities in a course of action.

Aspect 6: Principle development**.** Principle development enabled me to generate potential research outcomes (Conroy, 2001). Whilst I engaged in interpreting footprints, a multitude of footprints were developed which encouraged further development of research questions and principles over time. For instance, in this research, I developed an art representation of the study findings in which particular traditional emblems symbolizing

Ghanaian philosophy, reveals midwives' success, challenges, and capacities in rural community practice (Appendix T)

Data management

In this study, scanned copies of all signed participant forms (Research Information Sheet and Written informed consent form) and signed, second reader and transcriptionist confidentiality forms were password protected. Whilst travelling to Canada, all the field data (signed forms, audio-files of conversations, verbal transcripts, field notes, reflective journal and study approval letters) were kept in my carry-on luggage and locked. On arrival in Canada, the forms and all the research data were filed and kept securely locked in a metal cabinet at the Faculty of Nursing, University of Alberta, access to which is restricted to the doctoral supervisory committee.

All pages of the transcripts were coded and numbered sequentially to match with participants' pseudonyms and respective conversation numbers. All the electronic data were preserved on a password-protected memory device, backed up by my doctoral supervisor on a secure internet server at the University of Alberta to ensure data security. As required by the University of Alberta, all the research data (paper, electronic or digital copies) will be preserved for at least five years before any of these data will be destroyed. Since data synthesis was ongoing, this study's ethics approval (University of Alberta-REB 1, Canada; NMIMR- IRB, Ghana) were renewed in September, 2015 (Appendices O and P) to allow access to midwives in the event of a need to contact any of the study participants.

Assessing trustworthiness of the research

Methodological rigor in any qualitative research is required to demonstrate trustworthiness and integrity within the research process (Sandelowski, 1986). To ensure

trustworthiness in this qualitative research, I adopted Munhall's (2007, 2012) evaluation criteria which draws on Heideggerian philosophy. These criteria involve ―One P (meaning a phenomenological nod of agreement when listening to or reading the text) and Ten R's. Nodding is done in agreement that the researcher has grasped at least partially the meaning of participants' experiences. The Ten R's represent; readability, representativeness, resonancy, recognizability, revelations, raised consciousness, relevance, responsibility, reasonableness, and responsiveness.

Readability: To achieve trustworthiness in phenomenological studies, Munhall (2007, 2012) argues that the narrative text should be readable, understandable, and concretely presented. I avoided jargons in all documentation related to participants; the Research Information Sheet, Written Informed Consent form, and second readers' narrative text. Similarly, the transcriptionists and second readers' confidentiality agreement forms were developed using simple English language (Grade 12 level).

Resonancy: The interpretations of participants' experiences need to resonate with their shared experiences and be representative of their experiences. The researcher verified from participants whether the synthesized data conformed with what they said or expressed. In order to achieve resonancy, I approached the conversations with an attitude of openness through all communication with participants including the textual data. Quotes and metaphors expressed by participants have been expressed in theme titles, poems, art representation, descriptions and interpretations to firmly ground the synthesis directly in midwives' own words (Pringle, Drummond, McLafferty, & Hendry, 2011). Participants verified the synthesized data before it was finalized. This established confidence in the data and its interpretations.

Representativeness: To establish representativeness, multiple data sources (verbal transcripts from audio-taped conversations, field notes, reflexive journal, and second reader

comments) were used to represent several dimensions of the research process, as well as participants' experiences.

Recognizability: Some aspects of my participants' experiences were familiar to me based on my past experiences. This recognition enabled me to interpret midwives' experiences within a given histo-socio-cultural context as I unveiled the meanings embedded in these experiences. I drew on my background which posits me to recognise and share in participants' experiences within a network of our relationships.

Revelations: Reflexivity was an ongoing activity in this study. This stimulated constant questioning of my own values and assumptions, the research question, the purpose of the study, and the entire process of inquiry. I strived to obtain a revelation of participants' experiences by noting what was revealed to me in order to explore what was being concealed towards a deeper understanding of midwives' experiences. I achieved this by thinking critically, immersing myself in the data, keeping a reflexive journal, and entering the hermeneutic spiral with an open and questioning attitude (Conroy, 2003) to see things as they appeared to me.

Raised consciousness: Whilst keeping a reflexive journal, I drew on my *Background* and focused on gaining new insights, things not yet thought of, as participants shared their experiences towards a newer understanding.

Relevance: Research findings need to bring us close to our humanness as we address prevailing research problems in context. With anonymity guaranteed, the findings of this research will be presented to the NMC-Ghana, MOH-Ghana and stakeholders to address the contextual realities in newborn health care needs, health system issues, and support for midwives in rural practice. It is expected that these findings will serve as a basis for improving midwifery practice towards optimal newborn health outcomes in rural Ghana.

Responsibility: As a researcher, I am responsible for ensuring that this study and its processes are conducted in a sound and ethical manner. Ethical and institutional procedures have been duly followed to protect participants from retribution or harm.

Reasonableness: All research activities are expected to sound reasonable, including the interpretation of participants' experiences and the rationale for the study. This study and its processes have therefore been clearly specified and subjected to scrutiny by my research supervisors. The second reader blind-read the verbal transcripts and provided preliminary interpretation of the textual data research conversations.

Responsiveness: This involves sensitising people to rethink personal preconceptions and to act in response to the study. To establish responsiveness in this study, participants were encouraged to reflect on their preconceptions and views about their experiences with an open attitude. Arrangement was made with a clinical psychologist to support participants who may have required psychological support during our conversations. As a researcher I had to remain responsive to participants' verbal and non-verbal cues to identify hidden signs of distress that our conversations may have triggered or caused (Dickson-Swift et al., 2006; Nunkoosing, 2005; Polit & Beck, 2012). No occurrence of such distress was observed or reported in this study.

Processes to secure the study's 'trail of evidence', procedures involved in the conduct of the whole research process have been thoroughly described to generate further footprints (Conroy, 2003). I also kept a log of all research events, decisions and activities in my field diary and a reflective research journal to complement the voice text and other textual data. I acknowledged my own values, beliefs, and presuppositions, and documented them in my personal journal to constantly reflect on them. This activity is valuable in phenomenological

research (Heidegger, 1927/1962), as it enables me to situate myself in the *life-world* of study participants (midwives) (Munhall, 2007).

As I present the synthesized data in the ensuing chapters (4-9), I used pseudonyms to mask the identity of the participants as quotes tagged with # 1, # 2, and # 3 to make reference to excerpts from round one, two and three of research conversations respectively. This was to ensure anonymity and confidentiality of the participating midwives. The discussions of the six major themes which emerged from the synthesized data are presented as follows: navigating power boundaries; relational stirrings in spatial bearings; the cost of being-with; experiencing equipment and technology; gazing newborn blue bodies; and unveiling an emerging light in temporal dimensions. The themes are presented in Chapters 4, 5, 6, 7, 8, and 9 respectively. Although the discussions are presented in distinct chapters, five concepts which thread through all the six study themes are relationality, loneliness, moral distress, spirituality and resilience.

CHAPTER FOUR: NAVIGATING POWER BOUNDARIES

In this chapter, I present the study findings with a focus on the elements in the machinery of power that both controls maternal and newborn health, and impacts rural midwifery practice. To situate the reader, I begin with discussions on how the power of culture, tradition and territorial influences engender critical maternal health outcomes that correlates with poor neonatal health trajectories. Imagine you are racing through a lonely forest with one shoe half laced in an attempt to escape a vicious animal? What would your reactions be towards a small or even innocuous looking creature that may be as deadly as an impending asphyxia? One who stands to assert authority against such vicious power must be agile and not exhibit frailness. However, a multiplicity of foundational and contextual elements shape agility and frailness. I bring this analogy to midwifery health care service in rural remote communities.

Pacing on thorns and thrones

As a native of Ghana, I am grounded in familiarity with societal norms, values, traditions, taboos, and local customs that advantage me to integrate emic (insider) perspectives to enrich this study (Polit & Beck, 2012; Streubert & Carpenter, 2011). Throughout this study, I have had to acknowledge the power, culture and tradition (thrones) that define and govern the people I worked with (midwives). Therefore, whilst interacting with local health authorities, communities, and midwives with this insider knowledge, I related with cultural sensitivity in a manner that I could not have taken-for-granted (Mayan, 2009). My proficiency in the local dialects (Akan and Dangme), simple dressing outfits, and greeting people with honorary cultural titles such as ‘Madam, Maame (mother), Master, Opanin (meaning ‘Elder man’) enabled me to integrate into the community with ease during my study trips. As customarily expected, one had to accept water as a guest when offered (even when not thirsty) to reflect respect and

togetherness. In addition, maintaining eye contact whilst expressing words like 'please, thank you' also facilitated my interactions with the local people when I needed help with finding my geographical bearings, and means of transportation to access midwives. Typically, the okada riders would wait for me in the evenings till about 6pm (for free for about an hour) since midwives were often available between 3-5 pm. I was often the last passenger for the day. Living out these traditions enhanced my transport safety and security.

My position as an insider although advantageous (Mayan, 2009) equally evoked tensions (thorns). I explain here. For the most part, we, the people of Ghana as part of our core values, do not '*nnsi efie ntomago wɔ abɔntene' or 'nnsi effisem wo abonten' (Akan language - literally meaning, 'do not discuss home issues in public').* In this study, some of the verbatim quotes and non-verbal (silent yet loud) communication from midwives are thorns (language) that potentially create tensions for thrones (community leaders, and health authorities). It is therefore an act of courage that I, as a Ghanaian woman, write this text. This is also a risk which places me beyond the accepted socio-cultural margins and approved paths of my native origin. In these margins, I dream, I envision, I birth, I give to newborn care. I therefore navigated the tensions arising from my immersion in the research data, and (re)presentation of this study's findings (Holmes & Gastaldo, 2004; Lyotard, 1991), by drawing on my background experience; and the expertise of my doctoral supervisors. I also drew on existing literature and practical wisdom in relation to the context (Aristotle, 1976) to communicate lingual characteristics in both verbal and non – verbal forms (Gadamer, 1975).

Midwives and TBAs: A dominion clamor in maternal and newborn health care

Skilled birth attendants (midwives, doctors) have been identified as a critical resource for saving both maternal and newborn lives (Save the Children, 2014, 2016; UN, 2015a, UN, IGME, 2015, WHO, 2014). However, in communities where midwives and TBAs deliver services to pregnant women, the tensions that exist between the two have been least explored. The decrease in Ghana's nursing and midwifery personnel per 10, 000 density population from 10.5 (WHO, 2012a) to 9.3 (WHO, 2015) are not mere statistical evidence but forces that spread risk to the vulnerable, and shape on a continuum midwives' experiences in rural maternal and newborn health care. Between 2007 to 2014, only 67% of births in Ghana were attended by SBAs (WHO, 2015). Whilst 16% of births were conducted by TBAs, relatives and friends also assisted in 12% of the deliveries (GMICS, 2011). Furthermore, from 2009 - 2011, home births accounted for 31% of deliveries; and of these, 50% were assisted by TBAs (GMICS, 2011). Specifically, in rural communities, about 53% of births are conducted by TBAs (GMICS, 2011). Women living in urban areas are therefore able to gain access to SBAs in health care facilities while women in rural areas are more likely to be delivered by a TBA (Adanu, 2010; GDHS, 2008, 2014; GMICS, 2011).

An interesting phenomenon observed in these research data is the limited power sharing and tug of war over women and neonatal health care service in rural communities. Although the midwives in rural Shai communities support women throughout the antenatal period, they 'risked' losing the pregnant women to TBAs during labor and delivery. The pregnant women accessed TBAs for labor and delivery service although nationally, maternal health care is free under the Ghana National Health Insurance Scheme [NHIS]. This is a complex reality that confronts midwives in rural clinical practice. All the midwives (N=13) discussed relational

experiences with TBAs. Afua Lillian (R #1), the only midwife in this rural setting narrates the tensions that exist between midwives and TBAs in the community:

> That is the challenging one because there are TBAs also around, it's as if that is where they [*pregnant women*] used to go before I came, so if you don't build a strong interpersonal relationship with the pregnant woman, you might end up losing her to the TBA. Once I also did my personal research about that and someone told me that, they [*pregnant women*] really have trust in the TBAs than the midwives *[Midwife stares at me with an engaged look into my eyes*]. Especially with the pregnancy school they [*pregnant women*] attend, they expect more [*raised tone of voice*] from the midwife. The challenge we face around is the TBAs who are always around to even catch our babies from the so-called [*sneered gesture- extends hands away from her body*] skilled delivery that we do here!

The *life-world* in which we live presents us with limited choices around the realities that confront us and we do not necessarily choose our experiences, but we face them as they present themselves to us (Heidegger (1927/1962). This is what Heidegger refers to as a *life-world* of phenomenon that correlates with our experiences in a manner that causes us to adopt a specific mode of existence (1927/1962). In rural communities, the *life -world* of midwives are imbued with meanings in trust, and caring that are embedded in inter-subjective experiences with pregnant women, and 'Others'. The 'Other' (Buber, 1966, 1970) is the TBA who is distant from 'Us'/ 'We' (i.e. midwives). This distance not only connotes an 'Us' and 'Them' divide, but also a scramble for 'power over' in pregnant women's health as well as their and newborns.

Lillian's use of words such as 'lose', 'catch', and 'our' typifies' authority', 'influence,' 'territorialism', and 'control' in a distant midwife -TBA relationship. In this power relationship, midwives seek to 'win' by consciously demonstrating caring attitudes *in-order-to* attract women to facility-based birthing services. This is also a tug in which midwives' way of *being-in-the-world* in this competitive relationship reveals a hidden self in the sneering bodily and vocal expressions; these gestures are the silent, yet powerful unspoken/unsaid words that signify 'disdain', 'belittle', and 'underrate'.

In another research conversation, a midwife narrates how women and their newborns' lives are endangered after utilizing local herbs and concoctions that are administered by TBAs as the pregnant women 'believe in' TBAs (embodied trust). Midwives' *thrownness* portrays persons as already situated (Heidegger, 1927/1962) and living within a dominant culture (Leonard, 1994). In this milieu, midwives contend with the cultural authority in traditional medicine and find themselves tied to the social community in an inter-subjective *life-world.* In this *life-world*, time, expediency, and immediacy predict maternal and neonatal survival. Knowing that the onset of labor is a critical stage for pregnant women, and the fetus as transition is made from intra-uterine to extra-uterine life, Akua Laura (R#1) shares her distressing experience:

> … our challenge is that most pregnant woman believe in TBA's so they go there for concoctions, that is [*…5s*], traditional herbs <u>and when there are complications, they rush them here late!</u> [*lays emphasis on words by increasing tone; also burrows eyebrows with an upset facial expression whilst stretching hands towards the labor ward direction*<u>]</u>.

Whilst some women came to the health care facility after initial attempts with the TBA was unsuccessful, some women came from home without initial contact with a TBA. Yaa Amanda (R#1) reveals how personal/family choices influence birth outcomes:

> The lady was in labor and she came here half dilated; so about one hour she could not even bear down I thought she went to see a TBA before coming here, so after delivery, she was distressed and the baby was asphyxiated, …5 secs [*look of sadness in face*].

According to Heidegger (1927/1962), our understandings and interpretations take place within a historical, social, and political context that we cannot remove ourselves – this is our background. This background is also a knowledge base – a mind-body power base that builds our capacities to think critically. In this study, midwives drew on their backgrounds to interpret women's responses to labor and birthing using the fore-structure of understanding; fore-having *(Vorhabe*) Heidegger (1927/1962) that is also tied to a questioning attitude (Dreyfus, 1995). Yaa Amanda identifies an issue of health and social concern - late reporting which is a common phenomenon in Ghana. Particularly among pregnant women, late reporting is a cultural sign of endurance in which the woman demonstrates physical strength and resistance to labor pain at home prior to moving to the health facility. The woman who endures the labor pain at home until 'Show' is observed (operculum release), or amniotic sac ruptures (waters break) is culturally hailed as having a 'strong womanhood'. Late and inappropriate means of referrals have also acted as major setbacks to achieving optimal neonatal health outcomes (Awoonor-Williams et al., 2015; Nkyekyer, 2000; Nwameme, Phillips, & Adongo, 2014).

In the Helping Babies Breathe Initiative, the prevention of intrapartum-related complications such as birth asphyxia, rests on the power of 'time' (AAP, 2011). Timely clinical interventions in the form of oral suctioning, and positive pressure ventilation must be delivered within the 'Golden Minute' (i.e. within one minute of birth) in order to save the newborn's life (AAP, 2011). Similarly, the woman who is unable to access emergency obstetric service (Save the Children, 2014; UNFPA, 2011; WHO, 2014) when experiencing labor complications (e.g.

obstetric haemorrhage, prolonged labor, fetal head entrapment) endangers the fetus to birth asphyxia (Fraser & Cooper, 2009). One midwife who practiced alone in a rural setting discusses the dominion clamor with TBAs, but adopts an embracing relational approach: Adwoa Linda (R #1) shares her unique relational working experience with TBAs:

> Senkye is having about nine (9) communities. They have TBAs, those who are trained from Lele hospital before we came to capture them, and said that they are under our district. So they are trained there and because I am fine with them I used to go to them when they deliver, I used to give them soaps. And also the villages are far so we use to take motor, there's no car to take. So if the woman in labor cannot come, they would call me because I have given my number to them and am also having their number. So they use to call me and I will go to help them to deliver the baby in the house.

Akosua Adrienne who shares a similar relational experience (R #1) that encourages TBA referrals of pregnant women to the health care facility:

> At first there was only one midwife, so when she comes during the day and closes at night, it makes it difficult for mothers who are in are labor at night so they ended up delivering at home with the help of Traditional Birth Attendants, so it reduced the number of people who came to deliver in the hospital. But now…*5s*, we have midwives so they are now coming. But at first when they were not coming it affected our returns and their care. So convincing them to come was challenging. You know, delivering at home, they have to squat [*Hands pointing downwards*] so when they come, some say they can't lie on the bed.

> [T*he TBA's have their own set-up that the women go to*]…they [*TBAs*] deliver them [pregnant women], and give them traditional medicine. I remember last year we educated TBAs so most of the time, she [TBA] refers her clients.

The power of culture and social structures on midwifery practice and neonatal survival

Culture is a socially-engrained element that allows us to identify and accept the multiple ways in which we can be shaped by that culture to which we can open up ourselves for a personal reconstruction or an enrichment from other cultures (Heidegger, 1927/1962). In African societies, culture, spirituality, gender, hegemonic structures, and economic status influence pregnant women's health care seeking behaviours (Ekabua et al., 2011; Gyekye, 2003; Gyimah, 2006). The survival of newborns is subsequently influenced by dominant birth-related beliefs, values, taboos, and partner authority. These cultural inclinations (Byaruhanga et al., 2011; Gyekye, 2003; Gyimah, 2006) potentially threaten newborn survival. Illiteracy and superstitions (Gyimah, Takyi & Addai, 2006) influence options regarding health care. According to Heidegger (1927), the group from which we most often do not stand out, is tied to culture; one that is understood as an ontological phenomenon in its own right. Abena Lisa (R # 1) shares her rural experience regarding food taboos for pregnant women that increases risk for maternal anemia, intrauterine growth restrictions, and nutritional disorders:

> We are Shai's in this community. If you are pregnant they [*community*] don't want you to eat eggs and snails, but snails are full of protein. If you are getting to the latter part of your pregnancy, you have to stand and pound fufu[5] [*a staple food similar to potatoes*]

[5] The cassava, cocoyam (root tuber), or green plantain is cooked and pounded in a large wooden mortar and pestle in a rhythmic manner till all the lumps smoothen out, and turns out as a sticky whitish-yellow, or purple (cocoyam mixture) meal that is molded round, served and eaten with soup in a bowl.

> they claim it enhances fast delivery. And also when you are pregnant, you don't have to remove your [*finger or toe*] nails with blade or else your child will be a thief.

Domestic activities such as pounding fufu are a healthy way to exercise at home, however, for pregnant women who are classified as 'high risk', this muscular activity endangers the woman to premature contractions, and lower abdominal pain which may trigger premature onset of labor. Again for women who cannot afford nail clippers, the finger nails may trap bacteria and be a source of infection to the fetus whilst performing an external genitalia wash. In another conversation, Maame Breanna (R#1) discusses culturally-restricted food for pregnant women and the role of traditional medicine in African birthing:

> …they [*pregnant women*] take herbal concoctions. Those people [*raises tone of voice*], …they do not attend clinic. What they do is to take herbal concoctions, but when they come and I advise them, they do not take it again. The mothers are not supposed to take eggs and if they do, their babies will be thieves.

In a similarly-connected narrative, Akosua Adrienne (R#1) tried to explain the linkage between traditional eating style, financial insecurity, low literacy levels, and healthy eating which present themselves as risk factors for birth asphyxia:

> Here their main dish is banku[6] and some [pregnant women] too, most of the time, eat banku and pepper. There are enough fruits around but I don't know, if they don't know how to take it and we Africans have the mentality that it's only the rich that take meat, so certain foods like herring which will boost your blood level, they don't like taking it! [*swings head side to side*]. You have to educate them that it's good to eat things like that,

[6] Corn meal that is cooked and molded into a round shape. It is traditionally eaten in a doughy texture with blended pepper, tomatoes, onions and salt. The quantity of fish that is added depends on family affordability. The men/partners often get the largest portion of the fish.

> and we also give them practical examples. We even went to the extent of milling soya bean to sell to them at the maternity so they add to their soups, stews, and porridge to help boost their blood level…5s...It can be poor financial status but I believe that something like groundnut, keta school boys[7], herring, with 1 cedi or 2 cedis [*counting fingers*], you can get, but ignorance is also part. This place they don't like eating the dry fish… like tuna…so we educate them that they should add more leaves to the foods since it can also boost your blood level. Some too don't know the fruits here. Here for instance, mangoes are in season and the Dodowa Health management also advised us [*midwives*] to add vitamin C to supplement. If you the mother have anemia…if you are weak and you are pushing, automatically you will have a problem [*raises tone of voice*], so that will also contribute in a way to the birth asphyxia.

Beliefs surrounding the ill health of a baby at birth sometimes lead the desperate family to seek discharge against medical advice. One such traditionally classified illness is 'asram' – a spiritual illness which conventional medicine cannot cure at health facilities, therefore, parents subsequently seek the traditional and/or spiritual healing. In one research conversation, Ama Rosina (R #1) unveils the realities midwives faced as families believed that birth asphyxia was a spiritual and evil illness that the baby suffered as a punishment on the mother by an enemy:

> …they believe that '*ani bɔni'* [*evil look from an enemy*] or '*asram*' has been afflicted on the mother by someone that has resulted in this condition. So when it happens that way, most of the women say they will take their baby home.

Pregnancy-induced hypertension (PIH) and pre-eclampsia are maternal risk factors for asphyxia neonatorum. When discussing the views on cultural influences that impact newborn care in rural

[7] Small-sized herrings

communities, Yaa Amanda (R # 1) narrates how the community/family belief in pedal edema is also misinterpreted as a twin gestation:

> Once a woman was pregnant and had edema, I checked her urine and I had 2 plus (2++) [raises eyebrow, increases tone of voice]. I sat the relatives down [flaps hands down] and I told them to send her to Asaaka [*referral centre*] but they [*family*] said she will give birth to twins. So I told them it is not twins but it is really a disease but they did not go the first day, and I went there [*pregnant woman's home*] the second day. So they [*family of pregnant woman*] sent her and immediately they got there [*referral centre*], the woman started fitting […>10…], that's my experience [*swings head from side to side whilst repeatedly blinking eyes*].

The cultural beliefs in which people are embedded shape individual and community thinking and determine courses of actions in a manner that Heidegger calls our attention to understand, and synthesize in-order-to become thoroughly enlightened about one's self (Heidegger, 1962). Akosua Adrienne (R# 1) elaborates further:

> ...most people here are anemic, and with cultural practices, like the use of pad, they prefer the use of cloth which if not taken care of well, can lead to infection [*face droops, slightly increases tone of voice*], then because they attend TBAs more, traditional medicine too becomes a problem. So we inform them on why they are experiencing certain things during their pregnancy.

Pregnant women's choices on birthing are not only a matter of preference for TBAs, but that of skilled personnel shortage in rural communities. Beyond the midwives' observations of cultural issues related to hygiene practices and maternal anemia, they also identified that women's socio-economic dependence on men was a predicting factor in skilled birth attendance. Rather than

being *undifferentiated* about pregnant women's choices and the gaps in health literacy, midwives adopted an authentic mode of existence to teach the women about health and safety. Besides personal choices, the power of cultural authority in the family structure also endangers neonatal health and raises concern around women's financial capacities in health care. In such situations, the exercise of power in whatever form, makes visible the effects of its influence (Foucault, 1988). Abena Lisa (R # 1) explains:

> No, they [*pregnant women*] don't seek permission from their husbands to obtain health care, but they need to take money from their husbands before they come here [*health care facility*]. So when their husbands don't give them; they do not come. When you ask them why they did not come, they tell you 'their husbands said they did not have money'. They say that's the only time I [*pregnant woman*] can take something small from them [*husband*], because immediately I deliver I don't get anything from him [*husband*].

The NHIS in Ghana was established by the National Health Insurance Act 650 in 2003 and became operational in 2005 as a pro-poor measure to replace the previous 'Cash and Carry' health care system (Agyepong & Adjei, 2008; NHIA, 2013). Under this new health funding scheme, pregnant women and newborns access free care under an exemption policy for free maternal and newborn health care nation-wide coverage (NHIA, 2013). This reform became necessary due to health care affordability and access issues in the previous 'Cash and Carry' system (NHIA, 2013). In this study, midwives reveal pregnant women's economic dependence on their spouses which draws attention to the need to include partners/spouses in health care service delivery.

The 'power tool': Neonatal health outcome audit

Perinatal outcome audit is a health promotive approach that includes circumstances that surround not only mortality but also morbidity. This is an emerging term in contemporary times that has been recommended as a mechanism to explore the issues surrounding newborn morbidity and mortality. Perinatal outcome audit draws on historicism that is entrenched in hermeneutics as a mode of thinking which accords significance to specific contexts, historical period, location and culture (Heidegger, 1927/1962). Pulling research evidence to lived experiences, we come to understand that history benefits us by protecting us when we draw on it to resolve questions of the present moment (Foucault, 1988). According to Kerber et al. (2015), perinatal outcome audit is:

> the process of capturing information on the number and causes of all stillbirths and neonatal deaths, or near misses where applicable, with an aim towards identifying specific cases for systematic, critical analysis of the quality of perinatal care received in a no-blame, interdisciplinary setting in order to improve the care provided to all mothers and babies (p.2).

Whilst perinatal death audit focuses on the circumstances occurring at 22 completed weeks (154 days) of gestation, during delivery, and up to seven completed days after birth that leads to death (WHO, 2016), neonatal death involves deaths occurring at birth and up to 28 days after birth. Data on the circumstances surrounding deaths in low-resource settings are scarce albeit critical for health planning (Save the Children, 2014; UN – IGME, 2015; WHO, 2015), policy development (GMCIS, 2011), and the prevention of similar future occurrences (Mills, 2011). Neonatal mortality audit is an emerging mechanism that is yet to gain grounds at various country

levels (Kerber et al., 2015) although verbal autopsies have often been used to generate data on the causes of child mortality (Manortey et al., 2011).

The lessons learned from mortality audit conferences shape recommendations that aim at preventing similar future events (Mills, 2011). The benefits of neonatal mortality audit have been established in the findings of a systematic review in which Ivers et al., (2012) established that, where the audit is accompanied by feedback, it impacts a greater influence on health care practices and outcomes if an action plan drives targets to address issues identified. Although mortality audit is not a process for apportioning blame or shame, it has been identified as a mechanism for placing blame and demonstrating power hierarchies (Kerber et al., 2015). Adwoa Linda, the only midwife in this birth setting shares her experience[8] (R# 1):

> When you are with the mother … you will be praying so that nothing should be happening to the baby, because if something should happen, you will not feel happy, because the district or the community will be asking so many questions about it…you would be sent to a small office to be questioned. They [*District health management*] will not call you to a board meeting but you would be sent to a small office to be questioned *[raised tone of voice; props up in chair; eyes wide opened, fixes gaze at me and raises eyebrows]*.

The learning opportunity which mortality audit presents needs to be tapped in order to appropriately address remediable factors to potentially save lives (Carter & Guthrie, 2007; Mills, 2011). Whilst the audit process reveals the inherent contextual realities in rural locations that impact newborn health outcomes, it also makes evident the pressures experienced by frontline health care providers.

[8] Phenomenological exemplar: archetypical of influential power

An excerpt from my research reflective journal

During one of my duties in 2005, I took over shift as the Nurse-in Charge of a NICU. A preterm baby (28 weeks gestation) of a high profile legal dignitary had been admitted in critical condition with low oxygen saturation levels. The neonate was kept under close observation in an incubator and was supported with cardiac monitor, pulse oximeter and peripheral intravenous access for infusions and medications. About four hours into the shift, the neonate began to exhibit signs of respiratory distress as evidenced by flaring of the alae nasae, deep subcostal and intercostal recessions. Working as a team on the newborn with another pediatric medical officer was supportive but the neonate did not survive in spite of all resuscitative measures. By the next morning, I was notified to attend a mortality audit meeting – that was locally nicknamed *'Oboronko'* (a judgmental meeting). That was my first and last encounter in this health care facility but I still remember vividly the events surrounding this occurrence. As soon as I entered the room and saw the medical team seated, it heightened my anxiety which the pediatrician noted and reassured me it was not a blame-apportioning session. Although I was reassured, I was the only nurse in the room, and it felt like being in a court room.

Today, narrating the events surrounding the newborn's health outcome raises questions which are: why was I the only RN in the room if neonatal death audit is a learning platform to improve patient health outcomes? How should core data on neonatal care and mortality be collected to prevent such deaths, improve staff performance? What mechanisms are needed to make neonatal death audit locally adaptable for improved patient health outcomes? What did my death audit experience mean to my other NICU nurse colleagues? Since I knew a mortality audit meeting was not a practice for the NICU at the time, I also wondered if this audit meeting was anyway influenced by the 'social status' of the mother who was a Legal Personnel? Through

these thought processes, I entertained the notion that neonatal mortality audit is a mechanism of power that has been inappropriately used over the past years.

Finding a balance: Researcher - participant power relationships

Conducting research in rural communities is interesting but it also has multi-layered complexities. I narrate these experiences based on documentation from my research field notes. When the researcher is from a high-income country or possesses advance professional and/or academic credentials, it facilitates access to local communities in resource-limited settings. By virtue of this privileged social status, researcher-participant relationships project dynamic features with risk for manipulating participants. Research participants equally expect circumstantial changes with respect to the phenomena under exploration. Afua Lillian reveals this reality in our conversation (R #1):

> …we have been fortunate to have you as a researcher, to have a research on this and it is as if you have now become an intermediate between us and our authorities above, so you will now be our voice.

Yaa Amanda (R#1) also caught me in this muddled trap with her words which have kept me reflecting on life-saving issues in rural, remote and community-based practice:

> I am pleading, if there is anything you can do to help us, like…*10s*… providing us with the suctioning machine, gas oxygen, etc.

The power boundaries in research also appear blurry in a cultural context, and revealed in a language where it is a socially accepted norm to address people by title prior to first name even in non-formal interactions. It becomes a muddled trap for researchers when participants constantly address the researcher by honorary cultural titles such as: ‘Anti’ (spelling without the ‘e’); ‘Madam’ or ‘Sister’ during conversations. For the most part, being addressed with this title

during conversations with midwives made me uncomfortable and placed me in the superior-subordinate trap, and face to face with the insider-outsider dichotomy. Midwives persistently addressed me by such titles irrespective of my insistence to be called by first name; this was a cultural front.

Ghana is the place I received my primary cultural orientation, but it took several casual visits using face-to-face chatting (10 - 15minutes), and telephone chats (5 – 7 minutes) on life experiences in rural health to minimise the 'formality gap' in our relationship. Navigating this social norm was not an easy one. The research information sheet and District introductory letter were critical components in the credentials that set the stage for a formal relationship. Throughout my experiences with midwives and the local community, I saw myself at three levels at least for the most part as an insider; 'being a Ghanaian; a woman, and nurse. At another level, an outsider as a non-native community member, and graduate student in an advanced country. I had to work with, and around these levels to somehow bridge the wide gap, and be conscious of the potential dominant monological authority of the researcher (Frank, 2005).

As I conclude this chapter, I reminiscence the influence of power in traditional structures that trivialise realities which in turn increase fetal/newborn vulnerability. This is also a connection which brings to the fore, socio-cultural elements that are engrained but fuel newborn health care issues on a continuum. In the next chapter, I discuss the stirrings that occur between midwives, pregnant women and newborns in rural community practice.

CHAPTER FIVE: RELATIONAL STIRRINGS IN SPATIAL BEARINGS

In this chapter, I present the findings of this study involving midwives' unique experiences as they faced newborns with birth asphyxia in rural community practice. To situate the reader in the study findings, I begin with discussions on how spatial locations influence midwives' relationality in rural practice. The spaces in which we live summon a relative invocation of the 'why' and 'how' of matters in an attempt to explain the 'when' and 'where' of occurrences. The weavings of the multiple facets challenge our understandings, and call us to wholly examine their inter-connectedness rather than to partition the elements.

Relationality in Ghana

Relationality or communality is a central theme in phenomenology (Frank, 2005; Dreyfus, 1995; Gadamer, 1975; Gadow, 1994; Heidegger, 1962). It is the lived relation we maintain with others in the interpersonal space that we share with them (Van Manen, 2011). Ghanaians are noted worldwide for their warm embrace not only of their kind, but of foreign nationals as well. It is customary to receive visitors or strangers with kind-heartedness. As is the perception, through this act of kindness, we receive family and community blessings for the generation here and those yet to come. We believe in oneness, togetherness and unity. It is not only the coming together of our physical selves but of our spirituality as well. Here, we acknowledge our humanness and the future of the unknown, as well as the space where we believe our ancestors go and we meet them. Ghanaians believe in the Ubuntu concept commonly demonstrated in social gatherings such as outdooring (naming ceremonies), traditional marriages and community durbars. In the need to come together, however, some express divergent views that set others on a different path. On this different pathway, values adopted that are engrained in individualism, lie opposed to the Ghanaian values of oneness, togetherness and a 'we' thinking.

Our communality is further expressed in adages, proverbs and stories. For example, as the adage goes 'ɛyɛ yɛ nyinaa dea' (Akan language meaning it is for us all), and 'ɛyɛ yie – a-, ɛyɛ ma yɛn nyinaa' (if it goes well, it goes for the good of us all). The same holds true for the opposite version of this adage. Communality similarly manifests in a common Ghanaian proverb, often spoken to parents, 'your child is my child'- 'he/she is our child', he/she is not yours alone but belongs to us a family, and community; hence the child's health status concerns us all. The head of a family, or a community leader is therefore culturally empowered to lead and guide parents in health care decision making that is supposed to be beneficial for the community good. For instance, the family head can influence parental decisions on choices around place of birth, and use of traditional or Western/orthodox medicine for a child's illness. Typically, existing social structures are hierarchical in nature and in this environment, the elderly have an epistemological monopoly over the young.

Midwives' relational encounters in rural practice

Midwives' way of *being in the world* is reflected in clinical and community practices and in everyday lived experiences. These experiences are influenced by an interconnectedness between the past, present, and potential future events (Dreyfus, 1991; Heidegger, 1962). Heidegger's notion about *'space'* goes beyond distance or mere objective space to include something that absorbs our attention and which needs to be thought of as '*pure concern' – Sorge* (Dreyfus, 1995). Therefore, for Heidegger (1978) something is considered near when a person has a *'concern'* for that particular thing. By 'paying attention to' issues (Nortvedt, 2001; Scott, 2006); and those things that present themselves to us, we come to understand the lived meanings and significance in the experiences of midwives facing newborns with asphyxia neonatorium in resource-limited settings.

In rural Ghana, midwives live, work, and interact with pregnant women within an enacted space where inter-subjectivity in communal relational values, and professional ethics in patient care are foundational to building friendly networks with women in culturally-engrained settings. As traditionally established, chiefs or community leaders are culturally empowered to oversee community affairs in all matters pertaining to health, and wellness for community good. Abena Lisa, the only midwife in this birth setting discussed her graceful encounter with this community, and the Chief and Elders (R # 1):

> Oh! I have! As for friends in town, hmm… I have p-l-e-n-t-y! [*voice emphasis*]; and also sometimes when they organizing harvest at their churches, I go there. Even sometimes they don't invite me, but I will hear someone is naming her child - she delivered here; then I will go, ahah! So as for funeral, almost every funeral, I am there with them, ahah! Even when I go to Melipo [*midwife's family residence in the next town*], on the Saturday, I will come to the funeral and go back. Weddings too, mostly I go, ahah! So it's like now, I am part of the town, mmhhh [*raises tone of voice, smiling and gesturing in chair*]. I am part of the community. They really appreciate the work am doing. Even when am going on leave, I have to inform the chief and elders.

Community leaders also demonstrate commitment to the birth facilities to establish their belonging. Esi Shea (R #1) explains:

> I think my other colleague has made this requisition [*for health care items*], especially the MP [Member of Parliament], he wants to help us with those things, yeahhhh! [*speaking leisurely*], *...10s*..So we are still on it. Sometimes you write the requisitions and the memo, [*but*] it takes time.

Midwives work in rural communities that hold strong values in a sense of oneness that is revealed in communication. As we relate with a sense of genuineness and a language the other appreciates, the unbearable heaviness of *being* is shared (Charon & Speigel, 2005). Esi Shea (R #1) identified the importance of communicating in the peoples' language:

> You have to come down to their level to speak their language otherwise …they will think you are above them. So sometimes you have to come down to speak their language, move with them, then they will think "I can come to you at anytime".

The 'space' i.e. clinical spaces in the geographical context, absorbs the attention of midwives as they practice in rural settings. In this study, Akua Laura (R#1) shares a similar relational experience with the community:

> It is wonderful working in the rural setting and when you relate with them well, you gain their trust, and anything you tell them, they listen and anywhere they see you [*smiling*], they will call you. They [*community health volunteers*] are sort of volunteers, but let me say, back-bone of the clinic. They are people in the community who have nominated themselves to help us... [*We*] have their phone numbers… it is a list in the labor ward, and some are on our phones, so anytime you need them, you call. If it is not going through, you go to [*the*] labor ward and call another person [*and they are ready to help*] anytime, I even have one around with us now [*pointing to the person sitting nearby under the tree in the facility yard*].

In contextualizing experiences (Heidegger, 1962; Richter, Parkes & Chaw-Kant, 2007) with birth asphyxia in this study, we gain insight, not only of midwives' lived worlds but of the meaning of their lived worlds. Abena Lisa (R #1) narrates further on how a neonatal death at her facility can

break the graceful relational ties she has with her; this could have a negative lasting effect on the midwife's practice within this community:

> …and in a small community like this, immediately one mother loses the baby at your facility and the news gets to the community, you are finished! [*increases tone of voice, opens eyes widely, and slaps her palms against each other whilst swinging head side to side…5secs*]. They will be saying as for this facility, when you go there to deliver, you wouldn't come home with your baby. The news will go all around …[*long stretch on the word 'all' as sounding like 'aaaaallll'*].

Midwives integrated cultural values and spirituality in their obstetric practice in order to deliver safe and respectful maternity care within a competing environment where women preferred TBA services on account of flexible birthing options. Esi Shea (R #1) provides insights into how she navigates women's preferences and choices around birthing:

> ...we receive them; we have this labor ward [*pointing to the labor*]. Sometimes they're comfortable with their parents, and their relatives around so you involve them. You ask "who do you want"? They say "I want my husband to be with me, I want my mum to be with me, to pray with me" and all that, so you allow them during labor too. Sometimes you allow them to adopt any position they want, because, eemm, eemmm, at home, the TBAs, that is what they do. They [*pregnant women*] will tell you, "all my deliveries, I have been kneeling" so that means, she'll kneel and do it, and that means you have no choice than to do it [*fixes gaze at me, makes series of swinging hand movements*], otherwise the woman won't push, because she has made up her mind that this is what she wants!

Adwoa Linda (R#1) feels a sense of commitment to the community and subsequently demonstrates an authentic relationship in her communal relations with minimal focus on herself:

> If you are a midwife and you are in a community and there is a case and they call you, you have to go [*nods head*], and attend to the case. You are not supposed to travel a lot, because they might bring a case whilst you are not around, and they would have to send the case to the hospital. When this happens, your people [*community remembers*] will not be happy with you.

The role of the midwife in Ghanaian rural communities is core to the members' socio-cultural and, economic well-being. Since *Sorge* is about Being and caring for each other (Heidegger, 1962), humans welcome the *'Other'* with a heart of hospitality and an attitude of openness (Cameron, 2004; Palmer, 1983). Obaa Ryana narrates communal support from taxi drivers in the locale (R #1):

> With the taxis drivers, when we are referring, we have drivers who are reliable, we have their numbers. We call them if there is an emergency, if they are not around, they call another driver who is close by. We discuss any problem to the chief and elders, and we have community health committee and members, so anything concerning the facility, we discuss with them and come out with the best solution. [*The taxi drivers*] reduce it [*transport fare for pregnant women and newborns*]. When you are boarding a taxi to Maaba [*referral centre*], they charge GH¢7 but with us, they charge GH¢5. When we get there, they help take the client to the ward, they just do not leave, and they sometimes bring you [*midwife*] back [*smiles*].

Consistent with Heideggerian concept of community, the community is 'me' and each person belongs to the other. In this communal sense, Self relates not only with the 'Other' as an individual but as a community (Macmurray, 1999). This is *Sorge* - showing concern for one another as humans, evident in such a manner that part of others' existential nature is *to be-with other*s (*Mitsein or being-with*) (Heidegger, 1962). Afua Lilian who is also the only midwife in another rural birth setting, expressed a different experience of her communality in rural practice (R # 1):

> The community is not much involved in the welfare of the clinic; that is what I have experienced so far. There is no interpersonal relationship between health workers and community members… Once, I also did my personal research…and someone told me that they [pregnant women] really have trust in TBA's than the midwives…*5s*..You tend to do everything you can just to save the baby because this mother needs her baby and even you, as a midwife will earn a bad name in the community if you should lose the baby. People will think you are not qualified.

In between Afua Lillian and Abena Lisa's narratives is a common thread that links the death of a neonate break to a break in midwife's graceful relationship with the community. It is concerning that community members blame midwives for a neonate's death with minimum or no consideration of existing contingencies, or limited health care resources such as lack of skilled support staff.

Relational encounters in rural research: excerpts from field notes

In my numerous research field trips, community members were open to me as a 'stranger'. Taxi drivers,' Okada' (motor) riders, farmers, (both young and elderly) and school

children showed me the way when I missed my bearings in my search for information on locations and transportation routes to birth settings. Late evening travels became usual for me since midwives were available for conversations mostly in the late afternoons to evenings (2.30 – 6 pm). From the villages to Accra (urban area), local people gave up their travel seats for me as they identified I was a stranger and a woman too. Community members in this locality knew themselves well enough to an extent that they were able to identify strangers in their locale. We as humans are influenced by our encounters with others, evident in such a manner that part of others' existential nature is to be-with others (*Mitsein or being-with*) (Heidegger, 1962). To me, this was a heart-touching experience that wells within me a sense of humanness on a daily basis. This is a contextual difference that plays a significant role in the manner in which we relate to each other within our communities.

I share a research relational experience. It is the harvest time for the year and there is a business boom in corn sale - whether fresh, cooked or roasted on the hub. The breeze is becoming far cooler than usual; it is suddenly turning dark around us in the vehicle, and I could not see clearly. I looked out through the windows and saw it was raining heavily ahead of us, the clouds were very dark. We finally arrived at Somanya under a heavy down pour of Amazon rain. I alighted from the *trotro*; an umbrella would not have even rescued me from soaking. I was stuck under a Taxi park shed where I took refuge with other passengers. I jumped into a 5-seater local taxi knowing we would be leaving for *Asutsuare* (a town before Mamle) soon but I was wrong. The taxi would not move until all seats were filled. The taxi finally moved and we arrived at Asutsuare where I hopped onto an okada to meet Lillian for a scheduled conversation. I was taken by surprise as I under-estimated how terrible the roads could get. The red soil roads were very mushy and slippery, impeding car, motor bicycle and vehicular access. It is quite a

remote rural community and we were trapped in the middle of the lonely road. The okada kept sliding sideways; I grabbed tightly onto Kwasi, my master rider's shirt and he secured my backpack in front of him as he anchored himself in the seat. I was trying to hide my fears but he sensed by my tight grasp to his shirt, and reassured me we would arrive safely. As a novice pillion rider[9], a woman and 'stranger to this community', my inter-subjective experiences with Kwasi enhanced our relationship such that he offered to wait for me (for free) to complete the research conversation and ride me back to the nearest town where I could access transport to my residence in the city.

The spaces where these experiences occurred are places where imagination operates, and relational expressions about care are created (Gadow, 1994). In this chapter, I have discussed how human lives (being) and material resources (entities) encounter each other in a created space where an openness of unconcealment emerges, and brings closer the distance between 'being-there' and entities (Schalow & Denker, 2010). In the next chapter, I discuss how the diverse stirrings in rural midwifery practice drive mental and physical alertness, and stimulates creativity in critical thinking in order to problem solve about patient health challenges.

[9] Sitting behind the master rider; holds on tightly to rider with a waist grip for fear of falling

CHAPTER SIX: THE COST OF *'BEING-WITH'*

In fulfilling our professional mandate, 'we' as health professionals are called to 'be with', to 'be present with', to 'attend to' patients' health needs. This however comes at a cost, - a price professionals have a duty to pay. Providing care to patients calls forth a deeper emotional investment which makes the very nature of caring problematic. Particularly in nursing/midwifery, being-with the patient around the clock is a privileged responsibility that carries with it the emotional realities of witnessing moribund infants, of intervening through resuscitation, and of expecting healthy babies and mothers. When health outcomes are less than desirable due to health system lapses (Melvin, 2012; Taylor-Ford, 2013), resource shortages, health inequities (Agarwal, et al., 2010; Andrzejewski, Reed & White, 2009) and dominant hegemonic structures the vulnerable are marginalised. In this chapter, I discuss midwives' experiences of 'being-with' asphyxiated newborns in rural community practice.

Exploring the cost involved in direct care-giving

The cognitive processes and actions involved in providing care for ill patients causes emotional suffering in health care professionals and leaves many disengaged; a health concern that has been widely documented in the plethora of existing literature (Austin et al., 2013; Beauchamp & Childress, 2009; Leinweber & Rowe, 2008). Concepts which have emerged in relation to caring for ill clients include; moral distress (Austin, Bergum & Goldberg, 2003; Taylor-Ford, 2013); secondary traumatic stress (Figley, 2002; Leinweber & Rowe, 2010); job burn-out (Floyd, 2013), and compassion fatigue (Austin, Goble, Leier & Byrne, 2009; Melvin 2012; Severn, Searchfield & Huggard, 2012). Historically, however, more emphasis has been placed on research with a focus on solving clients' problems than about the care provider's health (Alasad, 2002; Austin, Bergum & Goldberg, 2003; Brodie, 2002; Lori et al., 2012).

Heidegger portrays Dasein as the specific mode of *'Being'* of humans - humans with individuality who play particular roles in the disclosure of our *'Being'*. Humans identify that *being-with* is an aspect of *being- in -the -world* that makes possible our encountering of others (Dreyfus, 1991). *Dasein* is tied to '*Being-with'* (*Mitsein*) (that is, tied to other people) and is described by Heidegger as our normal social way of being (1927/1962). In this study; midwives (n=6) practiced alone as skilled birth attendants with support from Community Health Nurses [CHNs], Enrolled nurses [ENs], and Health Care Assistants [HCAs]. Of the remaining seven (7) midwives, 6 practiced with the support of colleague midwives; and one (1) practiced alone with the support of auxiliary staff.

Midwives' experiences: The cost of being-with moribund asphyxiated newborns

In rural spaces, the lack of health resources makes newborn health care a challenge. In this milieu, time is a fundamental structure (Heidegger, 1927/1962) in midwives' life- saving efforts that are shaped by multiple factors such as the time of the day, and logistics primarily skilled staff support, life-saving devices and transportation. Practicing in resource-limited settings as a frontline health care provider in maternal and newborn health is marked by complex limitations. Knowing that the threat of health complications, disease, disability, and death confronts us as humans, we are brought to a place of struggle against nature (Daniels, 2006). This is a battle in which midwives (Mollart, Skinner, Newing, & Foureur, 2013; Roxburgh, Taylor, Murebwayire, 2009), newborns, new mothers, pregnant women and families are united in vulnerability as the quality of health systems predict and determine health outcomes. In the Upper-West Region of Ghana for instance, Issah et al. (2011) discovered that about 60% of midwives (N= 155) were absent from duty due to ill health related to chronic medical conditions (hypertension, diabetes, or chronic heart disease). Although the health of midwives working in

resource limited settings have been identified as challenging, their bio-psychosocial health has been poorly researched.

Typically, in the remote areas of Northern Ghana, it is not uncommon to find only 3 midwives providing care to a population of about 70, 000 (Issah, et al., 2011). In this Southern-based study, the majority of the midwives (n=9) were resident on the CHPS compound, and primarily worked alone as skilled staff supported by CHAs and CHNs. These supporting staff worked on predetermined day shifts from Mondays to Fridays, and on weekends, there were lean numbers of staff as the name goes; 'skeleton or lean staff' were maintained on duty to deliver care. Although the NHIS offers free maternal and neonatal care, the cost of emergency medical/obstetric transportation is not covered. The background discussed above sets a practice stage on which midwives struggle to save lives (Floyd, 2013; Lori et al., 2012).

Practicing in such resource-limited settings create inevitable tensions in midwives, causing moral distress in the reality of issues (Brodie, 2002; Conroy, 2003). Midwives dwelled in these tensions and were called to respond in a morally appropriate way - to be present with the '*Other*' (De Beauvoir, 1985; Gadow, 2000; Heidegger, 1927/1962). In this study, working alone as midwives was a common phenomenon that was characterized by distress. Afua Lillian (R # 1) the only midwife in this rural health facility explains the means by which she accompanies pregnant women in labor to the referral centre for advanced care:

> She [*heavily pregnant woman*] has to manage especially at midnight, sometimes on a motorbike [*okada*] when there is no taxi. You [*pregnant woman in labor*] have no choice [*increases tone of voice with a sense of seriousness*] than to go on the motor; sometimes we go with them and their relatives on the motorbike. You will pick another motorbike,

> but in a case where there is only one motorbike, you give them the referral note to go with their support person.

The geo-social context with its intricate health care challenges related to timely skilled care support, poor transportation and communication networks rendered both midwives, ill newborns and their families vulnerable to emotional and physical stress, and fear of impending death of the newborn. In a follow-up conversation (R#2) with Afua Lillian, she shares her experience:

> …sometimes you see yourself shaking. There was one case whereby the client came in labor. The membrane bulged. That is when I was able to rupture it and saw the baby was in distress. …so I tried also to resuscitate to see if the baby would respond to resuscitation. So I was cleaning and felt the heartbeat. I proceeded on cleaning fast to revive the baby. That day… hhhmm [*hums*], I did all my best to ensure the baby was fine. The baby was gasping [*for air*] so I had to refer the baby since I didn't have oxygen. It was during the day, so they went with a taxi. They went with a relative… I was alone and there was another client who was also in labor, so I couldn't leave that client and go with the relatives. I asked myself – what if something happens to this baby in the car? If I had gone with them at least I know I will go with my ventilation bag and continue to be bagging [PPV] till we get to the referral center.

Similarly, Afua Lillian (R#1) explained that she worried, and often wondered if her best had been enough:

> Since I am alone, you feel like giving out all your best to save the baby and you become disturbed psychologically. As I said from the beginning it is very traumatic. So you just give out your best, however the outcome. As you have done your best in terms of reviving the baby and you are able to send [*the baby*] to the referring points with the

> relatives, maybe the kind of urgent care that they give you, sometimes you feel relieved, but if it is being delayed, you tend to be so anxious for them to make sure your baby is okay [*looks worried, props up in chair*]. Even though you have done your best, when you are not able to follow them too, by taking their phone numbers, you keep calling [*increases tone of voice, looks worried in her face*], just to find out if the baby is okay.

In *'responding to'* patients' needs, the lack of system support that enable us to 'be with' ties us to a real or perceived moral wrongdoing that leaves midwives with the kind of unrest that mimics '*mental torture'.* As Heidegger argues, care (*Sorge*) is in *being-there's* relation to its world, and being engaged with the Other that requires showing a concern for (*Sorge*) in relating with others. Dasein encounters others in its everydayness, which implies that for Dasein to *be-in-the world* is for Dasein to *be-with* 'Others'; *being-with-one-another* as its kind of Being. This association establishes Dasein as existential and ontological; portraying that we are ontologically dependent in relationships. Akosua Adrienne (R #1) adds her voice to the conversation the distress associated *being-with* without *being-there, being- present-in-person*:

> So we take their numbers, give them the mother's birth records and the referral letter and we get a taxi for them so they go but they pay for the fare. On their way to the facility you call them constantly to find out whether they have gotten there and been attended to.

The concerns and frustrations that relate to working in remote rural settings also lie not only in women's health-seeking behaviours. Esi Shea (R#1) explains with a sense of immediacy:

> They are not attendants here, but attendants at the other facilities…the overbanks [*over the river*] …and even, I had a case that someone had not gone for antenatal for throughout the nine months [*look of surprise on face*], come to labor, and say "I don't have a card"! You don't have a choice; you have to do the delivery! So immediately they

> [*pregnant women*] come, you run a quick eemm, eemm, tests, the Retro, the HIV [*counting right fingers*], the HB [*hemoglobin level*] and all that, and they'll come very late when they are almost in the second stage [*of labor*]. So normally you have to do it quickly, you do the delivery.

Late reporting to the labor ward is a common phenomenon not only in urban communities in Ghana, but in the rural as well. This poses as a risk to the newborn, and makes the infant vulnerable to birth asphyxia as transition is made from intra-uterine to extra-uterine life. Afua Lillian (R#2) narrates the concerns with late reporting and the advance preparations she makes for such occurrences:

> … some will come…*5s*, with normal pregnancies… some might come with head in perineum [*baby's head in perineum*]. You have to make sure that even after a delivery, you set up your delivery instruments.

This phenomenon is not only related to financial limitations but a cultural expectation that projects women as enduring and strong. In the rural space, midwives also possess unique differentiations in identity, and competencies, and they demonstrate multiplicity of capabilities that extend in diverse directions which generate afresh when obliterated at one end by challenging situations (Deleuze & Guattari, 1988). When faced with crisis situations in rural practice, midwives connect to something else to create new ideas that challenge the elements of existing concepts (Drummond, 2005). Health care crisis situations thus create opportunities and diversities, and a release from rigid patterns of thought (Holmes & Gastaldo, 2004). In these patterns, time is a crucial factor for the newborn's survival. Akua Laura, the only midwife in this rural birth facility narrates her experiences (R# 1):

> Most of the cases come at night…[*I*] am the only one but if you are lucky and it did not rain, then the nurses [*CHNS, ENs*] come to work, but where they live is far; 30 minutes [on average], but you need just one minute to save that newborn's life. You will do your management and observations and write everything down within your reach, and your mobile phone should be in reach. So, even if you need help, you will be in gloves. You can call for a car who will take the mother to another midwife or hospital.

Abena Lisa reveals the challenges of being-with a woman who is new to her at the birth facility, and comes in labor with risk of asphyxia to the baby:

> Yes! First time you are seeing her! Yes! [*giggling, look of surprise, eyes widened*], and she is in labor! [*swings head side to side, increases tone and pitch of voice*], and they [*pregnant women*] come in a critical state, so you can't send them back [*increases volume of voice*]. I have two CHNs and one EN, but none of them have midwifery background! [*swinging head from side to side*]. I am the only midwife. [*look of frustration – eyebrows raised, pointing to self, isolating right index finger from the others*]. It is not easy at a-l-l [*emphasis on 'all*']. When you see the baby can't breathe well, the baby is not crying, the baby can't move, then you will just be shivering [*gesturing with hands and entire body]*. This might lead to you losing the baby, because what you are expected to do, you may sometimes forget...*5s*... because you are panicking! It is not easy at all when you are alone, because the other nurses are not midwives. If they are midwives, even they may tell you what to do; but you are alone…and the panicking alone will let you lose the baby!

In Abena Lisa's narrative, the keywords which relate to 'practicing alone' are 'panic', 'loss', 'forget', 'not easy', challenging. These words and the unsaid [*bodily gestures*], connote anxiety

and a state of distress in a literal sense (*face value*) in the midwives' practice. As described by Heidegger (1962), anxiety grips us when the familiar world which assures our security suddenly breaks down; in this *'world-collapse'*, we realise that the significance of things is completely lacking. As Dreyfus (1991), Heidegger's follower uses an analogy to explain that when a piece of equipment breaks down, it reveals the nature of equipmentality in its entirety, so anxiety also represents a breakdown that reveals the characteristic nature of Dasein and its world (Dreyfus, 1991). From a methodological perspective, if panic leads to the loss of a life of a newborn then this is certainly not anxiety, but fear. Heidegger (1927/1962) borrows heavily from Kierkegaard's concept of fear (1843) to establish that fear is a mode of disposedness that discloses specific events that will potentially occur in our world, and in a cognitive sense, we actively let go of ourselves to meet the possibility of that particular occurrence (Heidegger, 1962)

Anxiety demonstrates its *being-there* in its *being-out-for* its most unique can be (Schalow & Denker, 2010). To define who we really are, humans choose to play a role, that is where our way of '*being*' flourishes, and we choose anxiety to develop intrinsic meanings and make sense of ourselves. But what is this significance of things? In our state of anxiety, we take for granted that intelligibility is produced. Ama Rosina (R#1) narrates the stress involved with communication lapses, repeated trials in search for a referral facility that can admit the ill newborn who lays in her hands:

> Most at times you have one midwife on duty at a time and we are short of midwives too. The relative who will accompany you is going to look for money and is not back, the baby's condition is deteriorating, so in trying to save the baby's life you explain to the mother that you have to take the baby to the nearest hospital…Sometimes when you go to

> the hospital you called, they will say they don't have beds and others so you have to keep going round and it takes a lot of time…actually they will see the baby, they will tell you they don't have a bed [*morose facial look*] and that you can try another hospital [*swings head from side to side in contention*]. Sometimes you will be going away and they will call you back.

The vulnerability of the newborn is heightened as midwives seek advanced care in loneliness. Turning away or refusing to admit patients including ill babies at public health facilities is not an unusual phenomenon in Ghana. The repeated experiences related to delays in time-sensitive care of critically ill (including moribund asphyxiated newborns) raises deep ethical concerns which create physical and emotional suffering that is perpetuated by other health care staff who turn away ill babies. Akosua Adrienne (R # 1) shares a similar experience on the 'cyclical travel' in search for advanced newborn care:

> …when you go there [*initial referral health care facility*], they [*hospital staff*] also say they don't have a doctor so they refer you to Ridge [*Regional referral centre*] which lengthens their [*newborn's*] traveling

The common reasons for non-admittance in public health facilities is 'lack of beds'. Ghana's hospital bed capacity was as low as 9 per 10,000 population between 2005 to 2011 (WHO, 2012a). I know nurses and midwives who live with and recount the daunting images of numerous maternal and newborn deaths that have occurred in their very hands due to resource constraints in the health care settings. These experiences further endanger midwives to the experience of secondary traumatic stress as a result of the repeated exposure and involvement with those who have been or are enduring trauma due to neglectful care (Austin et al., 2013; Figley, 2002) whilst seeing and feeling the impediments against ill newborns in their very hands and face.

Working alone as a midwife in caring for ill newborns deepens one's moral sensitivity to impending deaths. Moral sensitivity, described as an "attention to the moral values embedded in a conflict-laden situation and a self-awareness of an individual's own role and responsibility in the situation" (Lützén, Dahlqvist, Eriksson & Norberg, 2006, p. 189), requires moral reasoning and a complex integration of cognitive, affective and behavioural processes. Making moral judgement in midwifery practice within resource-limited birth settings can be challenging as the midwife risks a cold front from the community. Abena Lisa explains further (R#1):

> You are in the labor room with the mother alone so when that happens, you tell the mother, "the FH is not good, you have delayed, look, your baby has passed meconium" and you tell her the implications. So when you are done with the examination and you come out, you have to explain everything to her relatives even if she came with her small daughter. You will tell them about the implications and if something should happen, it is not your fault. But if you don't discuss with them, and they lose the baby you are in trouble! [*slaps both hands against each*]

Akosua Adrienne's experiences were similar to the other midwives but she expresses the pain that comes with losing the trust and confidence of her patients. Even though they were two midwives on duty that day who tried to save the asphyxiated baby's life, they were unsuccessful. Akosua Adrienne narrates her experiences:[10]

> …the one [*baby*] who died, about a year ago… she [*pregnant woman*] told me she came purposely because of me. When she was pushing, the baby was not coming so we wanted to refer her, but she didn't want to go and finally when the baby came out, the baby was

[10] Exemplar: trust that builds itself close midwife-patient relationships

> almost dying, we sucked [*oro-nasal suctioning*]. We were two [*midwives*] by then; one was giving cardiac compression, another ambubag [*PPV*]; we tried everything possible, but the baby could not survive [*lowers tone of voice*]…*10s*…. [*I felt*] very bad [*stays still in chair, briefly loses eye contact with me*]. When we left here [*delivery room*], everybody said "today had been a bad day", and l felt I had disappointed the woman since she came because of me. The following day, I couldn't look at her face even though it was not our fault [*morose look of face*]. The liquor was meconium-stained and when we realized the condition, and we were referring, the woman said she wouldn't go! I partially I agreed, because she was almost in 2nd stage, because then the mother could deliver on the way, and you are not sure of the outcome.

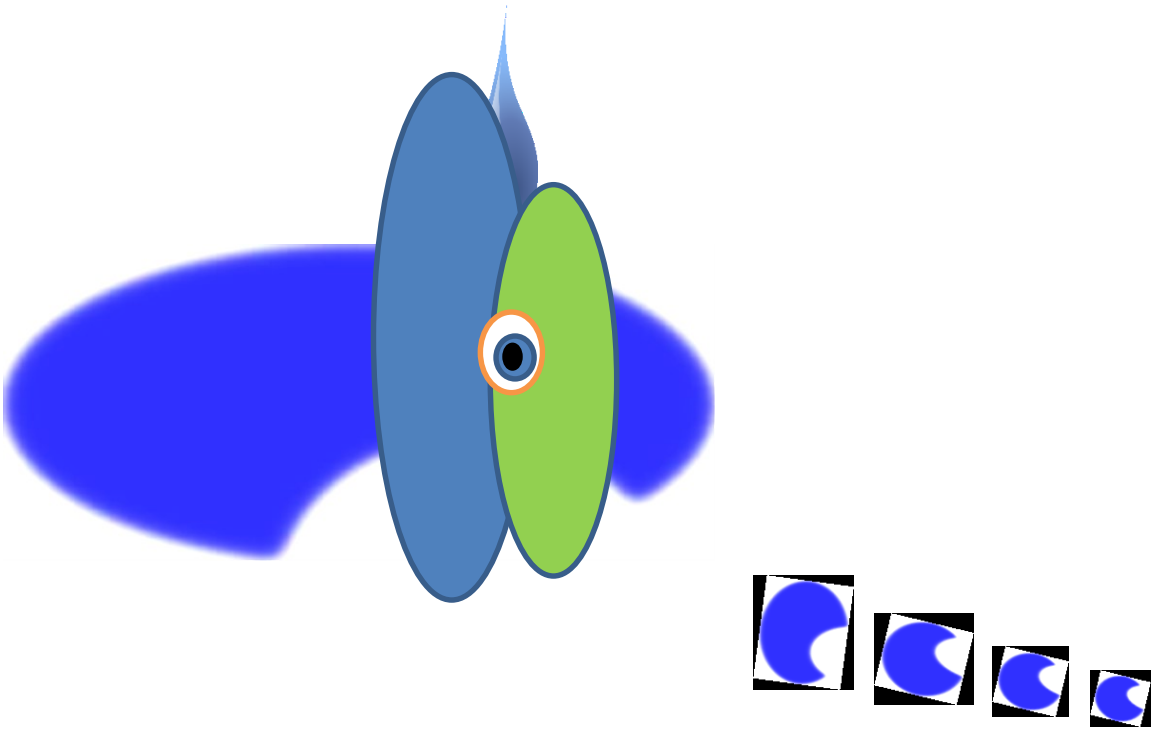
Being-with also carries economic implications for midwives since they pay for the taxi or okada fare with the hope of reimbursement from the family, but sometimes midwives never get their money back. Ama Rosina explains the circumstances related to her being-with the asphyxiated newborn (R#1):

> Our referral points are Mansa Hospital, Sika Yena, and Pansa sometimes, and at times Gyina ha Hospital. Those days when I was at the ward, we never had any ambulance service so we used taxis, sometime client's own car…The client pays *[if they don't have money on them at that time*] that is where all the mixed feelings come in, because sometimes relative will tell you [*I*] am going for money and they go but never come back sometimes you are forced to take mother and baby on your own. It's not easy…the relative who will accompany you is going to look for money and is not back, the baby's condition is deteriorating, so in trying to save the baby's life you explain to the mother

that you have to take the baby to the nearest hospital…Sometimes the mother herself and sometimes we the midwives [*pay for the taxi fare*].

In this study, the primary elements (staff shortage, lack of life-saving resources, and limited transportation) which characterize rural midwifery practice inter-relate with each other in a complex manner that produce drifting shadows. These shadows are the effects of the lapses that both midwives and the newborns bear now and in the serial passage of time which have been (re) presented in an artistic image as a dedication to honor midwives in rural practice (Fig. 5). The image depicts the hidden pain in *being-with* that lingers on in midwives' lives.

Figure 5. ***Being-with the 'Other' in the drifting shadows***



Art dedication to midwives in rural community practice

My own 'Being-with': situating myself in the study

I am acrophobic. I have lived my life in fear of heights that ranged from fear on the top floor of a 15th floor building, to fear of walking on suspension bridges. I find it hard to trust my sense of balance. Besides, I panic at the sight of a large expanse of water and I at least imagined close proximity. When I had to meet and engage with midwives in rural communities for this study, I did not know the real cost involved although I had developed mental constructions from audio-visuals and annual national/district reports. To access midwives, I had to travel between communities on okada as a pillion rider over high level bridges, thankfully not on foot; and did not need to cross rivers in a boat, canoe or pontoon. Recounting my rainy season travel experiences with midwives was often an ice-breaker as laughter ensued with each narrative. These travel encounters posited me within midwives' *lived worlds* which enabled me to ground myself in an understanding of their experiences as we engaged in conversations.

As if a requirement for strangers, I had to *be with* them to understand their experiences - I had to walk their path with braveness to a new world unknown to me – a journey to begin. '*Being-with'* midwives were fulfilling and refreshing but emotionally involving and energy-consuming. In this chapter, I have discussed the synthesized data in which the research conversations, field notes, my reflective journal, second readers' interpretation and my background understandings were integrated to provide co-constituted understandings of the profound and challenging experiences of midwives in 'being-with' asphyxiated newborns.

'Being with': Coping, healing and spirituality

Healing from compassion fatigue takes time and effort. Individuals recuperate by engaging with the arts to translate the dimensions of healing that reflect our experiences since it

makes accessible to us our very being and the core of what defines us (McAlinden, 2012; Ward & Summers, 2008). In this study, midwives drew strength from colleagues, families, and experiential learning to cope with present and future practice-related challenges. Akua Laura (R #1) shares her coping strategies:

> When we were coming into the practice, we were taught that it is not every day that it will be rosy; there are up's and down's. So you psyche yourself in what you like doing most, and you need to read about such conditions, so next time, you already know your loopholes, so you will know how to cover them, and manage them well, or you will tell your other colleagues who will by all means know how to cheer you up. We have midwives who have been in the field for a long time so we mostly confide in them and they tell you a lot that cheers you up. [*If you are alone*], you can [*also*] call your partner.

In engaging with clients, irrespective of the context, we discover that the ethical issues which arise in practice, challenge our embodied experiences in a moral enterprise that is particularly sensational, dramatic and traumatic (Austin et al., 2013). The burdens, once shared are lightened. Obiyaa Serena (R #1) explains the need for midwife colleagues to support each other and serve as a witness to clinical issues that may occur:

> It [*birth asphyxia case*] happened in the night shift and [*I*] was alone. It is always good to have a second person as witness to whatever happens.

In the health care moral enterprise, patients, families, communities and health care professionals operate within a moral space where we are challenged to see and understand each other, and the phenomenon itself in a morally engaging manner (Conroy, 2003; De Beauvoir, 1985; Gadow, 2000; Taylor-Ford, 2013; Pask, 1995). Afua Lillian (R #1) narrates a similarly-related experience to Akua Laura's:

> …If everything goes on well, you feel okay, but if it gets to a referral point you turn to have a bad day, because it affects you emotionally and physically…You have to move on at all cost…with the experience I had 5 months ago, I had to call my senior at Menekesi to tell her what happened. You have to move on at all cost.

As humans, much of our existence is not merely spent in reflexive contemplation of our *Being-in-the-world*, but in an immersed task of how to move on with our lives (Heidegger, 1927/1962) - this is Dasein's mode of average everydayness (Munday, 2009). Here, we see Heidegger's interpretation of Dasein as a relationship to being that is '*firstly and mostly' [zunächst und zumeist]* in its average *everydayness [Alltäglichkeit]*' (Heidegger, 1927/1962). Heidegger considers this an ordinary mode of Being, that although least considered, is the most important. This average everydayness is identical to an authentic mode of Being of Dasein, where Dasein chooses and wins self by comporting itself towards its Being as its own most possibility (Dreyfus, 1991; Munday, 2009).

African ontology is typically spiritualistic, and is grounded in the belief that both the spiritual and non-spiritual worlds are real. The beliefs and myths, such as return or rebirth of the dead place midwives at an advantage in consoling parents who have experienced birth-asphyxia related loss. Akosua Adrienne (R# 1) explains how she adopts spirituality as a coping mechanism to navigate birth-asphyxia related mortality, and parental distress associated with neonatal loss:

> If it is at night, you lie on your bed and pray to God, and if during the day it [*neonatal loss*] tends to affect your relationship with your clients, you get some support from your colleagues around you. We console them [*parents*], we tell them to gather courage and accept what has happened. Some also have the myth that if you cry, the next baby will go

> back [*ancestral world*], so it helps the mother accept the situation. We console ourselves. It is not easy as I earlier on said, you are caring for a client from conception to delivery and your main aim is to save life, and I feel guilty because I feel I didn't do my optimum best to save the baby.

Furthermore, Akosua Adrienne (R #1) particularly focused on one birth asphyxia-related case where prolonged second stage of labor, poor maternal effort, and fetal entrapment resulted in the loss of the baby's life:

> One person should not do delivery, I experienced that once but luckily Amina [*midwifery colleague*] came; the mother was not able to push and we lost the baby. So if you look at the condition of a client, you just go in for a 2nd opinion! You inform your colleagues of the client you have and the situation at hand. So someone can be helping with the pushing, another too with the IV line and other things.

As frontline workers in maternal and child health in Ghana, midwives are professionally mandated with a social responsibility to ensure that clients have timely access to appropriate maternal and neonatal interventions (NMC-Ghana, 2015). Meeting this social need is a burdensome cost that midwives bear in everyday practice within restricted rural communities. It may appear tautological to read about 'inhibiting habitable spaces' and 'harnessing inhibited habitats' but pause for a moment to rethink the meanings in this quagmire. In the next chapter, I discuss the tools, devices, and machinery that impact newborn health outcomes in rural midwifery practice.

CHAPTER SEVEN: EXPERIENCING EQUIPMENT AND TECHNOLOGY

...one can only deliberate about what is within one's power to do. Since it is the nature of technology to increase the range of human powers, the associated range of questions for which human beings must assume responsibility varies with the available technology and ethics, for the philosophy of technology becomes an exciting dynamic field for thought and application (Aristotle, 1969)

In this chapter, I discuss the modes of engagement with equipment and technology in rural practice. I also explore the place of technology in the human caring global discourse juxtaposed with contextual peculiarities using a philosophical lens to reveal meanings in midwives' modes of being and engagement (Dreyfus, 1991; Heidegger, 1927/1962).

Technology in clinical practice: global discourse

The rapid expansion and dominance of technology confronts us everywhere in contemporary times and challenges us to rethink our approaches to its utilization. The word *'technology'* engenders confusion although it represents an advancement in science (Barkovich et al., 2001; Edwards & Azzopardi, 2006) with a status symbol of modernity (Lutomski, Meaney, Greene, Ryan, Devane, 2015). The science associated with technology also carries an inherent aura of professionalism in the health care disciplines (Bernstein & Shelov, 2003; Kyle, 2008) such as nursing, medicine, dietetics, and physiotherapy. In health care institutions, technology becomes a focal point where professionals are brought together to develop staff efficiencies and adaptive strategies to enhance patient outcomes (Alasad, 2002; Hamer-Rohrer, Smit & Burger, 2012). The critical elements within technology are its inter-dependent systems that require human techniques in the use of specific tools to achieve desired ends (Hamer-Rohrer

et al., 2012; Heidegger, 1927/1962, 1977). As we engage with technology, we come to realize that its complex nature drives us out of our comfort zones as it poses questions that demand ethical responses to objectivity and human subjectivity (Gadow, 1989; Leonard, 1989, 1994).

The consistent integration of technology in patient health care has become a normal phenomenon more prominently visible in high-income countries (Austin et al., 2013; Ellenberg & Nelson, 2013; Reiger & Lane, 2013) than in LMICs (Haider & Bhutta, 2006; Hamer-Rohrer, Smit & Burger, 2012; UNFPA, 2011). Particularly in health care, it is not so much about the sophisticated technology that raises concerns, but it is much about the pervasive nature of technology that overtakes us in the 'human caring business'. The associated issues are tied to the ever-changing values in human relations (Austin et al., 2013; De Beauvoir, 1985; Reiger & Lane, 2013) that leaves us with unresolved ethico-moral dilemmas (Austin et al., 2013); economic cost (Eunson, 2012; Haider & Bhutta, 2006) and disembodied selves as caregivers (Reiger & Lane, 2013).

In clinical practice, health care technology is designed to enhance health care treatment, improve patient outcomes, reduce length of hospital stay, and promote patient independence. Technological advancement however is not risk-free; it confronts us with its own complexities. As our involvement with technology opens up opportunities for bodily engagement in our clinical experiences (Austin et al., 2013; De Beauvoir, 1985), we are caught up with the danger of stripping away our humanness (Bergum, 2003; Gadow, 1989). This reality is manifested as health care professionals face and work with machines that are 'hooked' to humans, particularly in critical care units where it is an everyday life experience for the direct care provider. In such circumstances, visualising is more of a possibility than engaging with the patient, as lengths of tubing and wires connected to various alarm beeping monitors and fluid dispensers fill the space

where caring is delivered. When the machine beeps, we however attend to its call with that inherent tendency to first, identify the reason for the beep by examining the digital display rather than looking at the patient. This is the reality of 'technology as object' that engenders human subjectivity issues (Alasad, 2002; Austin et al., 2013; Gadow, 1989; Heidegger, 1977). Here, technology reduces the lived experience of illness to relations with machines and magnifies the albeit objective dimensions of patient care. The battle in which technology throws health care professionals into is characterised by ambiguities in the technical dimensions of care, which typically challenge 'humanness' in caring (Austin, 2004; Gadow, 2000, 1994; Hamzat & Mordi, 2007). In nursing, the integrated humanness in caring is a fading foundational element that challenges nursing's core metaparadigms in a technologically-driven age.

Technology's relevance in increasing patient independence, validating patient data, and enhancing care provider skills to improve clinical outcomes have been widely documented (Alasad, 2002; Hamer-Rohrer et al., 2012; Lagunju & Fatunde, 2009). Examples of such technology range from sophisticated implantable cardioverter-defibrillators, automated patient respirators, cardiac and oxygen saturation monitors, and computer-controlled infusion pumps, to simple blood sugar monitors. In clinical practice, we (nurses and midwives) conduct health assessment routinely as part of daily tasks to the extent that the particular tool or equipment that we use is itself concealed from our reflection as we work to achieve clinically desired ends, that is optimal patient outcomes. With the routine use of objects-equipment, we even develop an embodied knowledge (Bergum, 2003; Cameron, 2006; Gadow, 1994; Merleau–Ponty, 1962) with the routine use of objects - equipment to the extent that we just know what to do with it, and how to maximise its functionality when we encounter difficulties (e.g. with 'non-cooperative pediatric population', or patients with extremes of body mass index).

Situating technology and equipment in this phenomenological study

Technology is inherently characterized by evolving axiological challenges (Alasad, 2002; Austin et al., 2013) in both nursing and midwifery with relation to values, ends and means (Zitzelsberger, 2004). These challenges manifest in clinical practice as conflicts and dilemma that are rooted in our values, socio-cultural precepts, knowledge, philosophical beliefs, and historical background of persons involved. That is the foundational element that typically embodies our lives. The contemporary challenges posed by technology require a sustained focus on ethico-philosophical reflection to unveil the hidden meanings (Austin et al., 2013) in the use of technology and equipment. The word 'technology' is derived from *'techne'* a Greek word meaning *'bringing-forth'* (Heidegger, 1962). Interestingly, the range of technology and equipment, and the associated questions that we assume responsibility for varies with our situated context and the technology that is available. As a lower middle income country (IMF, 2016), Ghana has seen the gradual introduction of technology into its health care system particularly in urban health facilities where life support and mobility-assistive devices are available although not very common.

Midwives' relational experiences with tools and devices in rural birthing

In rural Ghana, it is the inadequate number or lack of equipment in health care delivery and not the domination of technology that is the issue. A piece of equipment is defined by its use (working with it) since in accomplishing what it is intended to do in the context of entities, the equipment structure is revealed (Heidegger, 1927/1962). In this study's context, practicing without basic life-saving devices; such as ambubags and suction bulbs and electricity was a common phenomenon. Ultrasound scanning for pregnant women has been integrated into routine obstetric practice. Nana Gabriella (R#1) explains how supportive this technology supports safe birthing:

> Before the baby comes out with the head, because you don't know the conditions he is coming from, as you palpate, you will know the position he is in. Now scan is helping us, to show us the positions [*so we can*] prepare for the baby coming. As soon as it comes, and I see the baby, first I have to observe…whether cephalic, breech, or some other position.

In this study, the devices which midwives considered to be basically needful for saving newborn lives were ambubags (self-inflating bags or bag valve masks for positive pressure ventilation) and bulb syringes (for oro-nasal suctioning). Yaa Amanda (R # 1) explains what she does with a bulb syringe and a self-inflating bag; the basic life-saving tools available to her:

> I told myself the baby must survive, so I used the equipment I had to help the baby survive. The equipment [*I*] had were bulb syringe and ambubag.

The bulb syringe, commonly used in Ghana in birth settings for oro-nasal suctioning is unable to suction trapped fluid or mucus in the asphyxiated newborn due to its structural design. Although the tubing is soft, it is not long enough to suction the pharynx, and practically impossible to do so due to the delicate and narrow anatomical structure of the newly born. The things around us appear as 'ready-to-hand' (Heidegger, 1927/1962). Therefore, in close proximity with life-threatening conditions such as birth asphyxia, midwives explored resources and improvised with local tools in the absence of medically-approved bulb syringes to save newborn lives. In a conversation with Abena Lisa, the only midwife who works in this rural community narrates her experience with equipment and newborn life-saving interventions (R #2):

> Sometimes you have a case that at the hospital, you would have equipment to manage, but this facility…[*Pause…<3Secs*], you don't have! [*Increased tone in voice*]. Ahah! Like you have an asphyxiated eerr, emmm…baby. You have done your

> resuscitation…you have done your ambubagging…[*Pause… <3Secs*], even with the bulb syringe for the suction, it does not go as deep as a suction machine. So at the CHPS compound, we only have the bulb syringe so you can't go far [*pharyngeal suctioning*], you suck from the mouth and the nose, so you can't go deeper…you will see that the bulb syringe is not sucking everything. You may need a suction machine, but you don't have [*drops both hands on laps in desperation*]. In some places, they don't even have an ambubag or a bulb syringe. But sometimes when there is no bulb syringe, they use enema syringe to improvise. So with those basic things, every facility should have, and it should not be [*only*] one too!

Generally, nurses and midwives practicing in urban health care facilities undergo training and skill development sessions in controlled infusion pumps, cardiac and oxygen saturation point (SpO2) monitors. In rural communities however, the use of basic life-saving equipment such as a mobile oxygen tank set is out of the comfort-zone experience of some midwives. Adwoa Linda (R#1) who also has been in this district narrates her struggles in the use of life-saving equipment:

> No! [*swings head abruptly*], we don't have oxygen *[in this birth setting*]. I was telling my colleague just last month that we have to get oxygen here. But if they [*District Health Authority*] bring the oxygen here, I don't know how to use it, so I will call for them to come and teach me how to use it.

According to Heidegger, we engage with technology to bring forth what is hidden to us, and these are manifested in our modes of engagement with those objects (machines, equipment). These modes are: readiness-to-hand, present-at-hand and unreadiness-to-hand. We therefore look at things in terms of their relevance for our use and our intentionality as humans is primarily

shaped by this orientation to action. Therefore, although patients' families act as midwives' support persons in the labor and delivery room, the sight of equipment enacts very little understanding of what it is exactly used for and may appear as un-ready-to-hand:

In R#1, Afua Lillian narrates[11] the family support and expresses the inherent frustrations in labor and delivery:

> In our labor ward…most times I use the support persons, those who come with the client. I try to call on one person to come and assist me in the ward in case there is no one to help me. But they too, because they have no idea about the equipment you have to tell them what to pick, which is very stressful…. Sometimes I ask myself – "am I the only midwife"? Because my other colleagues have support from the other midwives who are experienced but am here alone and if God is not on your side and then you lose a mother or baby, are they [*community and health authorities*] going to take it likely? It's not easy… [*midwife loses voice to weeping, turns away from me for about 3 minutes, looks down…10s..*]. It's very challenging, very scary.

In rural practice, the lack of complementary devices (e.g. oxygen tank and nasal prongs; blood sugar monitor and test strips) make equipment unready-to-hand to its users. Besides, the equipment user must approach the equipment with knowledge of the equipment's functionality. Akosua Adrienne (R#1) who has been practicing midwifery in this rural birth centre for two (2) years explains how the absence/lack of nasal oxygen cannula makes the use of the oxygen tank impossible:

> …midwives are assigned to the maternity ward only. Sometimes with the use of oxygen like this, we had to call another nurse to come and teach us how to use it. We were

[11] Exemplar: Dasein reveals itself and discloses what is to be discovered

> recently supplied with one; that is the cylinder but there was no oxygen for about three (3) months before they filled it. But now we lack the neonatal nasal tube, that is what we don't have.

Improvisation projects a range of possibilities for the newborn's health outcome - be it optimal, or sub-optimal when equipment is *unready-to-hand*. The health outcome of this improvisation therefore becomes a product or consequence of the improvisation itself. Although least wanted, sub-optimal outcomes generate a sequence of events that include potential cross infection, occupational hazard, and referral due to unsuccessful attempts: Obiyaa Serena (R#1) shares her encounters that are similar to Akosua Adrienne's:

> …we have the oxygen cylinders, but we don't even have the tube. We normally use the bulb syringe for resuscitation and we use the ABC method to resuscitate. I remember [about 2 years ago], there was a situation and our bulb syringe was spoilt and we had to put handkerchief around the baby's mouth to suck it. Now, we even advise them [pregnant women] that they should buy it. They buy the normal one, they are for children called 'enema', the one for babies, locally called *'bentoa'*.

In rural spaces, the lack of basic life-saving health care resources makes both maternal and newborn health care a challenge such that families purchase life-saving devices to support safe birthing. Since time is a fundamental structure (Heidegger, 1927/1962) in saving newborns from birth-asphyxia and its negative neuro-muscular sequelae, midwives' attune to prevailing situations and maximize equipment use from local resources. In this rural milieu, midwives also demonstrate unique differentiations in identity and competencies, and a multiplicity of capabilities that extend in diverse directions. These hidden knowledge and strengths in midwives' capacities re-generate afresh when obliterated at one end in challenging situations

(Deleuze & Guattari, 1988). It is remarkable how health care crisis situations create opportunities and diversities, and a split from rigid patterns of thought (Holmes & Gastaldo, 2004). Akua Laura shares her flourishing experience with equipmentality (R # 1):

> When lights go off, I use torch or rechargeable lamps for deliveries…and if the lamps are not working, I use my phone light. When I get a case of a baby who is asphyxiated, I tell the relatives to look for a taxi. I bag [*positive pressure ventilation*] till the taxi comes and I bag in the taxi till I reach the hospital… the bulb syringe cannot go far so when the baby breaths', you still hear it, so you still have to send the baby to the hospital.

Yaa Amanda (R#) shares a similar experience:

> …we need a suction machine.… [*when you are conducting a delivery and there's no light*], we use torch, we put it in our mouths [*skillfully manipulating it in a hitch-free manner*], because if there is a relative he will see everything so the relative stands at the head side so he can't see anything. You talk a little and put it in your mouth [*demonstrating by putting hand at the corner of her mouth]* or you adjust it.

Esi Shea (R #1) also shares a similar experience with equipment that are *unready-to-hand* under the energy crisis in Ghana - the period when data collection occurred:

> You have to monitor if this rechargeable lamp is on, mosquito bites… and the fan is not on; the clients will be sweating and all that and before the person gets into labor itself 10cm, the lamp is off. So you have to be searching, using your phone torch lights, and all that to do this delivery.

In another conversation, I related with a midwife who reminded me of nurses' tasks in routine equipment check in the NICU on every shift. As part of best practice, midwives set up the delivery room to receive the newborn and conduct prior assessment of the equipment's

readiness-to-hand. As Heidegger argues, an equipmental space is a functional place that defines the way in which the particular equipmental entity is made available in the right way to accomplish a skilled activity (1927/1962). Afua Lillian (R # 1) narrates her actions to secure life-saving health care resources in an impending delivery with a suspected case of birth asphyxia:

> With the equipment for an asphyxiated baby on our trolley, we make sure the delivery sets are available and your bulb syringe if possible. Get a ventilation bag, resuscitation table to be ready for such case with your cot sheets too to provide warmth for the asphyxiated baby and more over too you need to get oxygen in your available cylinder and you should make sure it is also in good state.

Technology manifests to us as current or failed tool or resources that are concealed from our reflection when we lose sight of the direct connection of the valued means with its desired ends (Heidegger, 1962). Therefore, at its most obvious, nurses/midwives use, maintain and assess on a continuous basis the tools that enable them to meet clients' needs towards optimal health outcomes. As seen in our *life-worlds*, when the product of work is produced by any piece of equipment, Heidegger (1927/1962) argues that it has been conceived of as the *'towards-which*' of that particular equipment. It is also the kind of being that belongs to this unique equipment, so essentially, we discover tools/equipment in its usage and in encounter with those tools that enable us to accomplish desired tasks (Heidegger, 1962). Akua Laura (R #1) shares her experience in the capacity built with available tools in her space:

> It's a challenge because when the baby has mucus, I have to use a suction machine which I don't have. Also when the pulse rate has improved and the baby's respiration has not improved, I need to put the baby on oxygen, but I don't have a cylinder with oxygen in it.

> And also I know some drugs that help baby breath but I don't have such drugs here [*hydrocortisone*]. Sometimes we see them [*ambulance*] and anytime we ask, they say it is not functioning. And because of our road system, when you call them, they feel reluctant to come because they also have cases they are transferring…we don't have [*oxygen cylinder*] ...we improvise in using our tables for resuscitation and we don't have suction machine!

In Ghana, pregnant women living in urban communities are more likely to gain access to optimal maternal health services than women in rural areas (Adanu, 2010, GMICS, 2011). Such services include cartography (recordings of fetal heartbeat and uterine contractions during pregnancy) and ultra-sound scanning with visual opportunities. Adwoa Linda (R #3) narrates her efforts to access comprehensive emergency obstetric care in order to save the pregnant women and her retained second twin (R #3):

> When I delivered the first one, with the second one, I had to do the examination to see whether there was any other second twin. With the second twin…the scan also, emmm, showed one cephalic, one breech. So the one cephalic [*presentation*] is the one I delivered first. So with the second one, I saw it was breech. So when we were transporting [*on a motor bike*], on the way… ohhh!..*5s...* she said she wanted to push, I told her that she should not. But because I was having the forceps, the cord clamp and everything, I stopped when we were going, and she delivered on the way [*happy look on face, laughing*].

The mode of *being* of entities emerges when skilled everyday practical activity is accomplished. When encountered in this way, entities present themselves as phenomenologically transparent since their functioning status determines their objective importance in a particular equipmental

activity (Wheeler, 2011). The need for basic newborn life-saving health care resources is evident in midwives' narratives.

As I conclude this chapter, I reflect on the complex phenomena that relates to equipment and technology in rural Shai birth settings. My thoughts centre on the ethics of rationing health care resources to vulnerable population, and the consequences that flow from a lack of those needed resources. I am confronted with the realities that it is not only the newborns who are set on critical health trajectories, but also, midwives who face the dying newborns encounter stress in the life-saving adventure within and beyond the boundaries of rural Shai.

CHAPTER EIGHT: GAZING UPON NEWBORN BLUE BODIES

The sight of critically ill, birth asphyxiated and moribund newborns calls health care providers to implement interventions that aim at timely clinical recovery irrespective of the complexities presented. In such life-saving crisis, time is a critical determining factor that correlates with health outcomes (Bernstein & Shelov, 2003; Fraser & Cooper, 2009) in a manner that creates a pressurized clinical environment. In this section, I discuss the distinctive influences of midwives' experiential gazing that departs from the mere bio-medical gazing (Ponty, 1996) clinical practice.

What do we see?

The immediate care of a birth-asphyxiated infant is based on the baby's presenting signs typically apnoea, pallor, and/or bluish-grey skin (Brennan et al., 2013; Helmy et al., 2012). Clinically, the birth-asphyxiated preterm infant may also present with subcostal recession, intercostal retractions, and both term and preterm infants may develop abdominal distension following serial positive pressure ventilation in the resuscitation efforts. In the immediate resuscitation period, the mouth and nose are gently suctioned preferably with a suction machine and age-appropriate suction tubing. The apical or cord pulse (if still pulsating) must be constantly monitored to determine the infant's progress whilst on the resuscitaire, cot, incubator, or padded baby table. In these time-sensitive events, the health care provider's ergonomic principles may be trivialised as one engages in the life-saving adventure. Whilst the knowledge and skills in oro-pharyngeal suctioning and PPV using the bag and mask/self-inflating mask are critical for saving the newborn's life (Brennan et al., 2013; Enweronu-Laryea et al., 2009), it becomes a challenge when the resources needed to deliver this care are not available (Issah et al., 2011; McIntosh, Cookson, & Sandall, 2012).

Etymology of gaze

The word ‘gaze’ (verb) meaning to ‘stare’, and ‘look steadily, and intently’ is traced to a probable Scandinavian origin in the late 14th century whilst its noun form (gaze) meaning ‘long look’ traces back to the mid-15th century (Online Etymology Dictionary, 2015). When we look directly at something, we position our eyes on the image such that it falls on the retina — the fovea or macula — the place where visual acuity and colour vision are best (Oxford Companion to the Body, 2001). As we look around at a scene, our eyes roam smoothly making a series of step-like shifts of looks. In the line of our sight or direction, our eyes rest briefly on one object before jumping on to the next. Even when we try to fixate — to look fixedly in one direction — tiny shifts of the look still remain in our memory. Gazing goes beyond mere looking.

Gazing involves an ‘engaged’ look that captures both visual and cognitive perceptions that evoke our tactile potentials. In gazing, we look intently such that our spatial relations to the particular characteristics of the visualised (the blue-looking baby) calls us not only to see intently, but to move our hands and bodies, to act, to do something – to save a life. These active bodily movements generate perceptual information (Gibson, 1966) that influences current preparation and future actions. The images that we are involved with, register themselves in our minds such that they resurface in our cognitive processes in our everyday experience (Gibson, 1966). These images live with us even when we try to de-fixate them.

The moribund newborn: African insights

In pediatric critical care, family-centered care is a central theme that supports holistic care of the patient and the patient’s family (Fraser & Cooper, 2009). In Ghana, parents are encouraged to be involved in the care of their children during hospitalization. However, when the child’s condition is critical, family visits to the patient’s’ bedside are minimized. When the child

passes way, it becomes a challenge to announce the loss to the family. The mother is often forbidden from crying by the cot side, or incubator. It is believed that the tears signify loss in the situation, which has not occurred. Photographing is rarely done, and the family may request for their religious leader to pray and anoint the critically ill baby in the NICU or pediatric unit.

The Ghanaian's response to life and death situations reflect their ontological and epistemological conceptualization of life, influence of the Supreme Being, and nature (Gyekye, 1987; Wiredu, 1980). The ontology and epistemology of African thought, tradition and religion have a pervasive influence on health care delivery which essentially translates into responses during critical situations and medical emergencies. In newborn care, it is believed that the spirit of the client (*i.e. laboring women*) has a protective ability over the baby. This traditional element is tied to the belief that the spirit (*sunsum*), body (*honam*) and mind/soul (*okra*) are intricately knitted together in its entirety-this is the personhood of the Ghanaian.

The midwives' gaze

Gazing is engrained within the philosophy of nursing (Gadow, 2000; Holmes, 2001) and medicine (Foucault, 1988) with a focus on the ontology of both the client, and clinical practice (Gadow, 2000). Here, gazing is not something one merely does; rather, it is the relationship into which our intent look calls us to enter, and care for '*Sorge*' (Heidegger, 1927/1962). Gadow (1994) and Macmurray (1957/1995) argue that when we look at humans as if they were objects, we engage in a linear logic view of humans; and this is problematic. Foucault (1988) embraces this notion by emphasizing that this linear caste is evident in health care settings which are populous for regimes that reduce patients to objects, insignificant material and psychological subjects.

Foucault (1988) traces this notion to the health facility – a place of institutional representation where health care professionals muster their clinical or medical gaze as they engage in an analysis of the patient's body. In this analysis, the direct care provider translates the function of the body into the language which presents itself – this becomes data for establishing diagnosis (Merleau-Ponty, 2002). Although the strength of this biomedical gaze lies in the health care provider's ability to identify clinical features of a disease or condition, its inherent limitation lies in the dehumanizing medical separation of the patient's body from the patient's self as a person that is socially constituted (identity) - a Cartesian epistemology often referred to as the mind-body split (Dreyfus, 1991). The one who gazes in this manner sees human objectively and dispassionately as in observing a phenomenon.

In this study, midwives moved beyond the biomedical gaze to look intently at newborns as they struggled through deep breaths that manifest in subcostal and intercostal recessions. As midwives scanned the mental images of their bodily gaze, they shared their stories on the asphyxiated newborns their hands have touched from one experience to the other. As midwives gazed newborn blue bodies, they were called to act - to ventilate with an ambubag, suction, wrap, keep warm, and rush for optimal care. In rural health, midwives' *gazing* evoked spirituality in the belief that the 'Supreme' powers (*Tumi kesi*) and maternal (*obaatan*) spirit can cover or overshadow (*sunsum kata*) the newborn to restore life. Afua Lillian (R#1) narrates her experiences related to facing a birth asphyxiated newborn:

> …you really have to do all your best like, all you know, based on what you know. And you pray... and prayer too most come in [*nodding head in confidence*], and you tell the mother- 'Maame! [*strong voice*] bɔ mpaɛ' [Akan language meaning 'Mother, pray!)
>
> …when the babies come with difficulty in breathing, after I deliver on the abdomen or

> even after cleaning [the new mother], I make the baby still be with the mother. I push the table towards us, where the mother is lying on the couch, to even try to do the resuscitation on the abdomen. I also feel that connection should be there, the baby gets the kind of warmth [*demonstrates by wrapping arms around self*] …*10s*... when the baby is on the abdomen. I have realized that when the skin to skin contact is there, the baby recovers faster…Whether you go out or come back, the mother will really know what is going on, so for me I rather feel the baby should rather be with the mother. Sometimes on the abdomen towards the chest, you are able to resuscitate effectively.

Midwives' '*seeing*' is not reduced to looking vacantly or blankly at asphyxiated newborns, but one in which the gaze evokes feelings of pain, and sorrow in the corporeal grasp. In this contextual gaze, normality fits within standards of patient care which essentially guides midwives to initiate appropriate life-saving interventions. Heidegger's analysis of the authentic person carries a judgmental outlook which is designated as mode of being that requires action (1927/1962). Although authenticity is a mode of existence in which one demonstrates one's true self (Heidegger, 1927/1962) with a sense of originality, creation and discovery, and openness (Taylor, 1991), midwives could not remain authentic with new mothers when the baby's respiratory status was compromised. Midwives adopted an inauthentic mode of existence by hiding their own emotional responses to protect the mother's psychological well-being. Obiyaa Serena narrates how she hides her *real and true* feelings from the mother in the gaze of an asphyxiated newborn who is near-death:

> Well, it's not easy, the greatest challenge of a midwife is not having a normal live healthy baby, so when it comes to such situations, you <u>pretend</u> everything is okay [*worried look on face*], but deep within you, you know that there's something wrong

> somewhere. It's a very worrying sight, especially in situations you see that no matter what happens, this baby will go [*die*], but yet still you have to stay strong for the mother.

Care giving is costly. In delivering compassionate care, Akua Laura finds herself living in an *inauthentic* mode of existence. Dreyfus describes this mode as non-commitment to true care about self (Dreyfus, 1995). Akua Laura shares her story passionately (R #2):

> You can't panic in front of your client, but inwardly you feel this heaviness which you would have wished to release it. In some way, because you are the strength of the client [*hands in the air*], and she is putting her hope in you [*pointing at me*], you are supposed to even smile through [*but midwife presents a serious look on face*], to tell her it is ok, so [*that*] you don't get her to start bleeding.

The predominant issues we find ourselves in, shape the actions that birthing gazes. In this, we identify that Dasein's *fallen-nes* in the present world becomes evident in a preoccupation with prevailing concerns that present themselves (Heidegger, 1927/1962) to midwives. Nana Gabriella (R#1) shares the time-sensitive interventions that emanate from her corporeal grasp:

> …the colour, first I have to observe the colour and the breathing especially; and after delivery, if the baby didn't cry after 3 minutes, you have to be alert, emmm, and observe the breathing, how she breaths [*rolling hands over each other*], and with the colour and the movements of hands you can detect it from that. When the baby comes out and you have seen him with asphyxia, you can turn the baby head down [tilts down], you massage, you massage [*demonstrating a rubbing fashion in palms of hands*], the chest, the head, at the same time, you have to wait. If you are lucky the baby will just sneeze and start breathing.

As humans, our bodies enable us to experience our world, and by engaging with a mind-body unity we establish our bodies as the centre of lived meaning (Merleau-Ponty, 1962). We encounter *Others* inter-subjectively mostly as embodied agents who actively observe with a mind-body unity (Heidegger, 1927/1962). In her life-saving encounters, Ama Rosina (R#1) explains the mind-body connection that establishes itself when she gazed a blue-colored baby (birth-asphyxiated):

> When we realize the baby is turning blue on the extremities, that is when you will know the baby is getting asphyxiated. When we wrap the baby and stimulate the baby and we realize the baby is still blue, we try to suction the baby to clear the airway and stimulate afterwards by trying to touch the baby all over, like massaging [*showing by rubbing hands on her body*]. So if the baby is still not responding, we try to use the ambu -bag.

The *leib* is the 'lived-body', one that is situated in the *life-world* (*Lebenswelt*), and that enables us to engage with *Others*, and co-exist with them through empathic actions in a meaningful community. In this engagement, time is conceived in a non-linear fashion which comprises the present, the past and the future (Heidegger, 1962; Walsh, 1999). Knowing that the present influences the future, midwives hurriedly implement life-saving interventions to ensure optimal health outcomes and prevent complications such as seizures (McIntyre et al., 2013), and spastic quadriplegia (Ellenberg & Nelson, 2013). In Dasein's three-dimensional temporalities, midwives *thrownness* (already situated in the world with ties to its past) enables them to project into the future (*projection;* living into the future with predictions), within the current *fallen-ness* (i.e. living in the present world under prevailing circumstances). Adwoa Linda (R#3) reveals this reality in her verbal and bodily communication:

> The reason why I said it is not easy is that, when the baby… is not breathing right, and you have seen the color is changing, you have to do your resuscitation quickly and then you have …have to wrap the baby from the head to toe quickly, then change the wet things from the baby, [*rolling hands on her lap*], then you give the mask [*self-inflating/bag and mask*] so that the baby cries … but if you do slowly, the baby can lose his or her life; that was why I was saying it's not easy. …if you are not able to do anything like that then, then, the baby can lose his life [*gloomy look in the face*]; that was why I said it is not easy…. [*nods head*] mmm.

Gazing newborn blue bodies evokes a sense of responsibility and intuitiveness that enables midwives to initiate series of actions that are rooted in; professional ethics and the grace that comes with new life to establish maternal-newborn family union ties. Yaayaa Roselyn (R#1) explains:

> I prepare my tray…, after that when the baby comes out and I feel it is not responding, then I start. With the head tilted back [neck extension], then I suck the baby's nostrils and the mouth. I use the ambubag, ABC, then I do cardiac compression for 3 times...if she starts responding to the breaths, I keep it warm, then place it on the lateral position. If it is severe, we use hydrocortisone. As a midwife, if I resuscitate the baby and it is kicking, I feel so [*emphasis on word*] happy *[excited in her voice, raises tone of voice slightly*] for what I have done, because if I lose that baby I will not feel fine, even the mother too will not feel fine. Yes, you suck the mouth too, to get rid of mucus, so that he shouldn't inhale the mucus to have that effect in the lungs.

Meconium-stained amniotic fluid may be aspirated during labor and delivery and the infant may subsequently suffer from chemical pneumonitis as a clinical feature of meconium aspiration

syndrome (Bernstein & Shelov, 2003). Midwives therefore aim to avoid this intra-partum related complication.

What gazing birthed

As I draw on my background to establish the *fore-structure* towards an understanding of this phenomenological study, I remember a particular scene from my NICU experience. Baby Lisa (pseudonym) with a maternal history of obstetric haemorrhage was rushed into the unit by the labor ward midwife for immediate advanced care. I received Lisa, a moribund newborn and initiated positive pressure ventilation until my gloves were soaked with sweat in the air-conditioned but warm unit. As I awaited the only pediatrician who oversees the three pediatric wards or her medical resident to arrive and support the resuscitation, I was cast in absolute silence as I gazed upon Lisa who was looking pale all over and bluish-grey. With my professional arms hewed to an extent, I stood in seething intimacy gazing whilst ventilating the baby. With calcified hope in practice regulatory support for my daring move, I thought of, and took a bold risk– a risk to save a life but potentially lose my professional RN licence. I shifted my clinical boundary in fear although confident I could implement a life-saving health intervention to save Lisa in the waiting period.

Rather than merely monitoring and interpreting vital signs (including oxygen saturation, blood sugar), deep suctioning, keeping warm and performing the usual gastric lavage, my gaze dared me to move. With the reality of skilled staff shortage even in the urban health facilities, I had seen too many times a pediatrician or medical resident come to certify deaths in the NICUs-deaths that could have been prevented if only timely resuscitative measures were implemented. I had done too many last offices on dead babies and not on manikins. I questioned myself on women who this was their only child and who probably may not have been able to conceive again for diverse reasons. In Ghana where family-centred culture predominantly drives social

structures and community living, this means so much for healthy practice, social integration and feminine mental health. These experiences still live with me and shape my background.

Back to Baby Lisa. With this knowledge and experience, I accessed a peripheral vein to administer medications as per unit protocol, and obtained blood samples from the IV cannula connection end point for blood typing and complete blood count. I dispatched the blood samples to the laboratory with the aid of one student nurse and a Health Care Assistant (my only support staff on this shift). As per unit protocol, the appropriate IV fluid was set up based on the blood glucose strip test results. I documented all these procedures and reported to the pediatrician on her arrival approximately thirty minutes after Lisa's arrival. Lisa survived. Today as I write this text, I reflect on how my gaze formed a basis for this risky move which became a basis for institutional rethinking, establishing and expanding the scope of practice of senior RNs in the NICU. Many other Baby Lisas' have been saved by this gaze and one-time risky adventure that was engendered by the eloquent silence of a blue baby. Here, I discovered the stunning ability of silent yet audible voices of blue babies to provoke, to hatch, to institute life.

I write poetically and metaphorically to conclude this chapter, to open up opportunities (Ricoeur, 1986) where new understandings can be enacted. This is also the place where the researcher and reader co-enact spaces with midwives in their *lifeworlds* - mutual space where interpersonal and intersubjective experiences are co-created.

Speaking metaphorically: Living in the memoires of gaze

Everywhere I turn, your image returns to me
I cannot, but live in your memories
Your memories are but not mere shadows
Shadows that disappear
On the table where I pump the air our bodies meet
Here my bruises deepen, I see many, my scars scaffold
As I see your blue bodies, I muddle, I morose
I see your mama's cloth, her face, your body, your sheet, your table, your mask…
They return to me
How do I function? How do I care?
Care for the ones yet to come?
The ones I do not yet know but dread to receive?
Receive in the same place where I received you?
For I do not know, just like you, they might, but live only for minutes
The folks tell me you will reappear
Wherever you are gone, tell the ones yet to appear
Do not to appear too
Do not appear yet!
For this place is yet the same…

Mary Ani-Amponsah – 14th November, 2015

CHAPTER NINE: UNVEILING AN EMERGING LIGHT IN TEMPORAL DIMENSIONS

In this chapter, I discuss midwives' historicality as a determining characteristic of Dasein's *thrownness*, *fallen-nes* and *projection* in a milieu that predicates not only strength and resilience in midwifery practice, but also unveils the hidden lessons that mask itself in rural midwifery practice. In this rural milieu, midwives function in the three-dimensional structure that guides community-based care with an aim to prevent birth asphyxia, avoid complication, and establish effective intra-partum interventions to protect the fetus/infant from adverse health outcomes.

Living in birthing temporalities

Birthing is a time-sensitive natural event that often brings joy to expectant families, but complications that arise during the labor and delivery period pose serious health risks for both mother and the fetus/newborn (UNFPA, 2011; UN-IGME, 2015). Typically, in resource-limited settings where shortage of skilled staff (Floyd, 2013; Issah et al., 2011; Moyer et al., 2012; Rolfe, Leshabari, Rutta & Murray, 2008; Welaga et al., 2013) and access to both facility-based care and domiciliary midwifery services is limited, the lack of life-saving resources compounds newborn health care delivery in sequential flows. The 'absence' or 'lack' of a particular health care resource in rural communities potentially predisposes the fetus to asphyxia with its inherent poor long- term outcomes (Ellenberg & Nelson, 2013; Haider & Bhutta, 2006).

Historicality refers to a phenomenon that is understood as an *a priori* condition based on which past events have significance for us (Heidegger, 1927/1962). In Heidegger's analysis of temporality, historicality reflects *thrownness* (living with ties to the past), *projection* (future events engages in potential possibilities) and *fallen-ness* (situations that presently confronts *us*

and retains our attention). In Heidegger's account of temporality, Dasein's existence is essentially unpacked using *all three* temporal states to unveil its temporality in a *life world* (1927) in which we can potentially inhabit these temporalities (Van Manen, 2011).

In this study, the events in the birthing process are marked by variable timings that depend on the gravidity and parity of the mother (Fraser & Cooper, 2009). The mother therefore needs to gain timely access to a skilled birth attendant (Moyer et al., 2013; UN-IGME, 2015; UNFPA, 2011). In Ghana, although geographical limitations, financial inadequacies impede women's timely access to facility-based care, traditional barriers also present challenges that predict adverse birth outcomes. Late reporting to birth facilities is a cultural phenomenon that depicts women as 'strong' and 'enduring'. This issue poses as a setback to achieving perinatal health targets as newborn lives are endangered. According to Heidegger, the traditions that guide us can be likened to a fortress in which we hide for the protection it offers, but we fall prey to the very tradition we cling to; and the one who attempts to free oneself may have a deep rooted anxiety to deal with (1927). In Obaa Ryana's (R #1) narrative, she reveals how women's attitude to labor in the late trimester places the fetus at risk of birth asphyxia:

> … the post-date mothers, some of them don't come early. Even when they are thirty-six (36) weeks and you inform them that when they are about thirty-seven (37) weeks they should come to the clinic weekly; they don't come [*raises tone of voice, presents a desperate look on face*] but come in when labor sets in, which will be late by then. At post-term too, the placenta starts separating, so after delivery, then the baby goes into asphyxia. So that is what happens and mostly it happens to the post term mothers. When you see meconium stain [*in liquor*], when you see the contractions are too strong, you have to prepare for that [*counting fingers*]; prolonged labor, and a big baby [*gazes at me*].

> If the person comes with 5 cm [*dilatation*], then you have much time to prepare, but at fully-dilated, or 8 cm; you are in a rush, and you might be the only person on duty; you must prepare. It [*preparation*] will not be as the person who comes early, but we prepare to receive the asphyxiated baby.

Women who report late to birth facilities place midwives under intense pressure and risk encountering both maternal and newborn complications such as birth asphyxia that could have been avoided. As offered by Bollnow (1961) and Schalow & Denker (2010), the time frames (i.e. past, present and future) are interwoven in a manner that pervade our mood as well. As midwives practiced alone within the BEmONC framework, they struggled within the Golden minute-that is within one minute of birth (AAP, 2011) to save both mother and baby. Afua Lillian (R #1), the only midwife in this birth facility explains her *thrownness* regarding quality indicators in neonatal health and unveiled the lapses in the rural health care delivery system:

> … ever since I came here, I have never seen any maternal auditing. It's only this year,…they [*auditors*] only came when there were cases, that is, still birth, macerated baby and maternal death. That's when they came, but if you don't have cases, they don't normally come… I was here alone [*when the baby was birth asphyxiated]*, unfortunately for me, the mother had PPH too, and there was a tear, because she pushed through the cervix. I just had to cork the perineum with a pad, then I had to leave the mother and come to the baby, because already, cannula was in situ. I just had to give normal saline and shift attention to the baby. So, immediately the baby responded, I went back to the mother to care for her. I didn't alert her [*mother*] because she was already pouring [bleeding], …if she [*mother*] gets to know [*that*] this is what was wrong with the baby,

> we may lose her [*mother*]; I just let her lie down [*directs hand in the air in an up-and-down manner*] to relax.

In our temporal dimensions, we identify that moods have a social character - its public nature that makes manifest our *being-in-the-world* where our cultural co-embeddedness (Heidegger, 1927/1962) and professional ethics (Austin et al., 2013; Gadow, 1989, 1994; ICN, 2012) determine world-disclosing moods. In such encounters, midwives make relentless efforts to prevent the babies from conditions that precipitate birth asphyxia. In another research conversation, Adwoa Linda (R # 1) narrates the critical interventions she initiates based on her past experiences to prevent birth asphyxia (*projection):*

> I was transferred here [*few*] months ago. Senkye was a difficult place, there was no car, and delivery comes mostly during the night like 1am, 2am, 3am, or 12am. So if a case comes like that, the scan… they go for it three times…and because all of them [*pregnant women*] have not been coming to you, it makes it difficult. But those who come to you, you tell them that if their time is up, they should take a car to Apoto hospital. We are not far from them, but with those who do not come to you, you have to call a car to come for them, but the cars do not come on time too; but by all means, I will send the person to the hospital.

As midwives make relentless efforts in health care delivery, they focus on interventions that aim at ensuring timely and optimal access to intra- partum care irrespective of the time of day or night. Ama Rosina (R #1) shares her experience regarding surprising events that may occur following an apparently successful delivery:

> I think the last one [*case of birth asphyxia*] I had, I delivered a baby, the baby was pink, and crying so I wrapped the baby and kept the baby warm, and I was preparing the

> mother too, so I gave baby to her [*mother*]. Then all of a sudden, the Health Aide called that the baby is not moving and that the baby's colour is changing, so I had to leave the mother quickly and attend to baby. I started suctioning, and elevated the head [*gesturing with head raised*] so that the baby could breathe well. I used the ambubag and the baby started breathing gradually. I have always been thinking about it and how the sudden change occurred; because even after suctioning there was no mucus.

Thrownness is also described as a perennial condition of the mind in which its function also reveals our hidden responses (Heidegger, 1927/1962) to the circumstances we currently face (i.e. *fallen-ness*). In another research conversation, Adwoa Linda (R#2) intensifies her efforts to save a birth-asphyxiated baby as memories of a similarly- related incident surfaced in her *being:*

> I am [*the*] only one midwife in this health [*facility*]! As for that one 'deɛ' [*Akan language – expressing emphasis on something we like or dislike*], it's too much, [*long emphasis; as sounding 't-o-o much'*], so I used to call one [*CHNs, ENs, HCAs*) to help me. But because I got that asphyxiated baby last week, I was doing everything that I could do to save the baby's life.

In the dimensionality of care, midwives use language (Gadamer, 1975) in culturally-critical ways to express feelings and reveal information that depicts an authentic mode of existence - for Being its Self. The expressions in the language also reveal novelty and a relevance in the shared experiences.

Weaving time to health outcomes: A spotlight on professional development

Continued practice with minimal or without professional development inhibits the delivery of safe, competent and ethical care which potentially endangers the health (Fullerton, Johnson, Thompson & Vivio, 2011; ICN, 2011) and survival of newborns (Enweronu-Laryea, et

al., 2009; UNFPA, 2011). In view of this learning need, building midwives' capacities in ICM competencies are globally accepted as best practice to address maternal/ newborn morbidity and mortality issues (Fraser & Cooper, 2009; ICM, 2011, 2013; JHPIEGO, 2013; UNFPA, 2011). Since midwives deliver care to two lives (mother and baby) at the same time, it is particularly crucial to establish capacity building initiatives in rural communities where it is lacking (Lori et al., 2012). In order to prevent birth asphyxia, midwives who work as frontline health care providers in newborn care must keep their knowledge and skills updated according to global and local professional standards of care (ICM, 2013; NMC- Ghana, 2015). In-service training is an opportunity to upgrade the needed knowledge and skill in order to provide safe, competent and ethical care (Carlo et al., 2009; Enweronu-Laryea et al., 2009; Lee et al., 2011b). Such education may include training on WHO recommended interventions such as Helping Babies Breathe (HBB, 2015), BEmONC (WHO, 2009), and IMNCI (WHO, 2003).

Globally, about 15% of birth-related complications are related to lack of knowledge and skill amongst primary birth attendants (UNFPA, 2011). Whilst unsafe care remains a global challenge, the missed opportunities in training lend themselves as lessons to bridge gaps and prevent future occurrences. Capacity building in ICM competencies are mandatory globally for midwives (ICM, 2013), but in rural communities, newborns' and pregnant women's lives are endangered when midwives travel out of the community to engage in professional development programs that provide evidence for practice license renewal. Ama Rosina (R # 1) who needed to upgrade her knowledge and skills, went for an in-service training on newborn care two months ago at the Miranka hospital but explains the time-related challenges in professional license renewal:

> The PIN expired in May, 2014 and am still thinking of renewing it, but because of time and distance; so when I go on leave, that is when I will get the chance to renew it. For now, you go to work in the morning and you close [late], you cannot go to Council *[NMC*] at that time and the workload too, asking permission will be difficult. (Ama Rosina).

Midwives' historicality presents an effect that brings the past to life in current situation that informs future actions. Maame Brenna (R#1) who went for a one-day training in the Accra city had a staff replacement on her duty schedule, and reveals the need for midwives to be grounded in their ICM competencies in order to save newborn lives in a timely manner and prevent grievous experiences for mothers:

> If you do not have the skill, the baby can die. So you need skills to handle such a case [*birth asphyxia*]. If the baby is the only child of the mother, and the mother is not able to get pregnant again, then it is very sad.

As humans, we tend to confront every situation we find ourselves in (into which we have been thrown), but the range of possibilities which we may project, may not necessarily be actualized (Heidegger, 1927/1962). This reality is experienced when *unactualized* possibilities of *being* are experienced - when the unexpected happens (Heidegger, 1962). Typically, midwives who practice alone in rural birth settings have limited time to spare on travelling for in-person licence renewal procedures at the Accra city. Akosua Adrienne (R #1) who left her clients in the rural community, explains her dashed hopes in renewing her professional licence renewal that also carries ethical implications for safe patient care delivery:

> Mine [*PIN*] just expired in November but when I went there [NMC - Accra], I was told I was supposed to have attended 4 or 5 seminars and I have only been to 3; so I have not been able to renew it.

Adwoa Linda (R #2) who after attending in-service training in Accra subsequently met regulatory requirements, had to wait briefly for her training evidence to be assessed prior to authorization for renewal:

> Oh! It didn't take me long, about…5s… [*rolling eyes – thinking*] 15 minutes, because when I went to Nurses and Midwifery Council, they were not there, so I was waiting for them. As soon as they came…. they did it for me.

In-service educational programs are effective in improving knowledge and skills (Carlo et al., 2009; Enweronu-Laryea et al., 2009; Lee et al., 2011b). The interconnectedness between past clinical knowledge and upgraded knowledge shapes and strengthens the ability of midwives to implement health interventions that will potentially save the newborn from future ill effects of birth asphyxia. In a follow-up conversation, Adwoa Linda (R#2) tried to establish the meaning of the training she has received:

> … if you are trained and you cannot do the work very well; like how I got that asphyxiated baby getting to 2 weeks now, if you are not able to use your skills, the baby will lose the life. So whatever you are taught at the life-saving skills workshop, you have to use those skills, you have to remember to use those skills.

The confidence with which health professionals practice is rooted in the current knowledge, skills and competencies they possess in their area of work. In addition, being trained to proficiency in the skills needed to manage normal (uncomplicated) pregnancies, childbirth and intra-partum related complications (ICM, 2013; UNFPA, 2011) is critical for the midwife who

practices alone and is *thrown* into the realities of rural communities. Since competency programs offer learning opportunities for practicing midwives to update their knowledge and skills in clinical practice (Ameh et al., 2012; Carlo et al., 2009; Enweronu-Laryea et al., 2009), these opportunities need to be made accessible to midwives in remote communities. Midwives' experiences establish that our existence is not merely spent in reflexive contemplation of our *Being-in-the-world* (Heidegger, 1927), but also on the things that happen within the three-dimensional temporality structure that unveils meanings within our *life worlds.*

Unearthing 'everydayness' in midwives' temporal dimensions

The literal meaning of 'every day' (two words) is by far different from the word 'everyday' (one word) in a Heideggerian sense. Philosophically, the word 'everyday' does not mean the sum or total number of "days" ascribed to Dasein in its period of existence. The word 'everydayness' or 'ordinariness' (*Alltäglichkeit*) 'is that mode of existing which Dasein observes everyday', and that which presents itself as '*firstly and mostly'* (*Zunächst und Zumeist,)* that is clearly different from its usual way of existing (Heidegger, 1927/1962). According to Heidegger, the word '*everydayness'* examines 'a definite how' (*Wie*) of existence of Dasein's way of living; i.e. 'the How in which Dasein "lives from day to day" both with self and/or being-with-one-another' (Heidegger, 1962). In this *everydayness*, Dasein contents itself with the repetitive whilst acknowledging the diversities in whatever the day brings, even when it feels burdensome. Esi Shea (R #2) narrates how she depends on CHNs, ENs, and HCAs to support her through the challenging time-sensitive moments in birthing:

> … if everything [*health care resources*] is available, you put in less effort…but if the things are not available, it takes time, you turn out to use more energy in order to make this baby [*who is asphyxiated*] survive! Yeah [*speaking leisurely but with tone of voice]*,

> so at the end of it all, in finishing, and you are really exhausted. Whatever you miss can kill either mother or baby, so time is very, very important and efficient to me during this case. My group [*CHNs, ENs and HCAs*] will tell you [*looks serious and fixes gaze at me*] 'eeiii, eeiii' [*an emphatic way of expressing self in Akan tradition*] when it comes to this labor cases 'diɛ, I just don't know anyone, yes I don't know anyone [*swings head from side to side*], because within that time, the mother can go off [*unconscious*], the baby too can just die.

In phenomenological view, midwives' narratives that related to temporality also revealed an authentic or inauthentic mode of existence that distinctively showed itself to others in its resoluteness to reflect the effects and continuity of time (Heidegger, 1962). Whilst local health care workers can be engaged as a community-based approach to scale up child care intervention packages (Lassi & Bhutta, 2015), timely focus need to be prioritised to prevent negative birth outcomes. Adwoa Linda (R#2 expresses immediacy in her calls for help when she delivers a birth-asphyxiated baby:

> … I call them [*CHNs, ENs, HCAs*], because I'm alone in the health center- the <u>only</u> [emphasis] one midwife in the health center! As for that one '<u>deɛ'</u> (*Akan language used to express emphasis*) it's too much! So I used to call one to help me.

Timely access to skilled care in the intrapartum period is universally recognised as a major long-term priority for improving the care of newborns, and plans for advancing health system capabilities remain paramount for providing this care at both global and national levels (Black et al., 2010; Lawn et al., 2011; Liu et al., 2015). Whilst temporality is also the ontological meaning of Dasein's *being* as care, Sorge (show concern for) is expressed by midwives (Heidegger, 1962

Dreyfus, 1991). In a follow-up conversation, Afua Lillian (R# 2) expresses the serial events that follow each other once a patient sought her services at the birth facility where she lives:

> … when the client comes, whether I am cooking, sleeping, or anything; I really have to go and attend to my client. So at the labor ward side too, you really have to think fast when you are at the labor side. Secondly too, you also have to know that since you are alone, you really… you have to do things in a way that three people will do. Like, what three people will do, that's what you have to do there; you being a midwife, your assistant [*counting right fingers*] or any other helper!

In this study, 'working alone' is a common concept that threaded through midwives' experiences. Knowing that time-sensitive moments in neonatal resuscitation is required, particularly for cardiac compression, midwives anticipate their need for help in order to deliver safe, competent and timely life-saving care to the moribund birth asphyxiated infant. Heidegger describes this care notion as 'anticipatory resoluteness', which reveals our authentic mode of care, a mode of being of Dasein. Yaayaa Roselyn (R #1) explains care approach she adopts in her *fallen-nes* at the resuscitation table:

> …have to get somebody who should be pressing on the sternum for you. You will be pumping [*self-inflating bag*] 1, 2, 3, and then the 2nd midwife will do the cardiac compression for you. Even <u>*koraa*</u> [*Akan language meaning 'in any case'*], if you see that the baby is asphyxiated, you have to call for help.

The intertwined nature of maternal and newborn health leaves health providers with options that are best delivered together with a focus on immediacy in order to prevent asphyxia related effects, and achieve optimal birth outcomes. Whilst in-service educational programs are capacity building approaches that strengthen health care systems, they are not delivered in an optimal way

to midwives in rural community practice. As temporal beings in a world where our past shapes our future and positions us in the present to recount our experiences in an inseparable manner, it is expedient to rethink the effect of time on midwifery practice and newborn health. In the next chapter, I provide a summary of this study and conclude with implications for practice, policy, research and education.

Transitive poem: *My Path…*

Within the body temple dome

two hearts lie within one home

one's head lies in one's heart as a doe

a hearty place where one offers another a bed

a bed that will soon be bare in time

bare to the home but filled in my space, filled in my time

In my space the body window opens, the tiny head appears

I see, I look, I move, I shout! I tear, eyes tear, I receive...

I move, I move out; I run! I seek life!

I journey along a path,

a long lonely path,

is this my path?

A dim, long and lonely path,

who comes to me in

my path?

Mary Ani-Amponsah – 10th October, 2015

CHAPTER TEN: IMPLICATIONS FOR PRACTICE, POLICY, AND RESEARCH, AND STUDY LIMITATIONS

Possibly, the most fundamental knowledge required in the exercise of that sort of testimony is one's certainty that while change is difficult, it is possible. That is what makes us refuse any fatalist position that may lend a determining factor, before which nothing can be done.

(Paulo Freire, 2004, p.33)

Partially drawing the curtains

With the strength, desire, zeal I began this research, I now come to a partial closure that is likened to climbing a papaya tree to pluck a ripe juicy fruit by hand in a temperate climate. The sweat, and intricate balancing on the fragile tree would only be worthwhile when the fruit in hand descends with the harvester intact. This analogy communicates the linkage between purpose, passion, process and product. I reminiscence on this trajectory. At first, very little appeared to make sense but reiteratively engaging with my questioning, the existing literature, research data, my doctoral supervisors, colleagues, and other research experts, I come to a place of accountability for the pieces that fit together into the puzzle to illuminate understandings of midwives' experiences of facing newborns with birth asphyxia.

In this chapter, I discuss the policy implications of the study findings, recommendations for education, research and practice, after which the summary and limitations of the study follow. I provide a conclusion of this study with an emphasis on the need to strengthen community-based care in rural communities using feasible, sustainable and integrated approaches that promote midwifery practice and optimal newborn health care. Based on the research findings, an artistic image (Appendix T) was developed to reflect a summary of the re(presented) data. Again a knowledge translation plan (KT Plan) has been designed (Appendix

U) with a focus on how the research data will be disseminated and the evidence translated to establish the social significance of research (Polit & Beck, 2012; Purkis & Bjornsdottir, 2006; Streubert-Speziale & Carpenter, 2011).

Policy implications

The challenges that are inherently embedded in culturally-engrained and poverty-stricken areas in rural and remote communities are maximized by predominant factors that need to be addressed to activate thriving and sustainable communities. Since health care is foundational to neonatal well-being, it is imperative that existing health care policies be reviewed and new policies formulated to support both local and national health goals. Although health policies are action-oriented directives that aim at promoting the health of community members (Mason, Talbott & Leavitt, 1993), they are only as effective when supported at all operational levels, particularly in areas where the vulnerable are placed at risk.

Health policy on pregnancy, labor and delivery services

The pro-poor nation-wide measure to extend health care coverage to all pregnant women and newborns in Ghana was established in 2003 as the National Health Insurance Act 650 in 2003 to replace the previous 'Cash and Carry' health care system (Agyepong & Adjei, 2008; NHIA, 2013). This exemption policy effects free maternal and newborn health care service across the country (NHIA, 2013). However, health care delivery to this exempted group has not been without challenges. With the inception of this free health care, access to midwifery services has increased across the country (GDHS, 2014; GHS, 2013; NHIA, 2013), but in this study, pregnant women of low socio-economic status could still not afford to access facility-based health care. Pregnant women are required to purchase items which include but are not limited to sanitary pads, mackintosh, chlorine, wrap sheets, baby diapers and toiletries, and antiseptic

lotion. In some of the study settings, pregnant women were also required to purchase a bulb syringe (locally called - '*bentoa*') for suctioning the baby's mouth and nose. Since financial insecurity was one of the issues that prevented women from accessing facility-based care, it is important for the government to support the full implementation of this fee-exemption policy by ensuring that the needed labor and delivery packages and life-saving kits are made available to women and newborns. The economic burden this maternity item list creates could potentially be one of the reasons why pregnant women of low socio-economic status in rural communities do not access facility-based care at the onset of labor but seek TBA services.

In the plethora of existing literature, low skilled birth attendance rates have been touted as a major factor which accounts for the high maternal and neonatal mortality rates. However, what remains unanswered is that, institutional deliveries although globally recommended (Byaruhanga et al., 2011; UNFPA, 2011; UN-IGME, 2015), do not necessarily guarantee optimal health outcomes (Gul, Khalil, Yousafzai, & Shoukat, 2014). In this study, the realities are seen as midwives struggle to mediate critical situations such as neonatal resuscitation without access to basic life-saving health care resources (e.g. deep suctioning devices and oxygen for birth-asphyxiated babies). As a pro-active measure, the Ministry of Health [MOH] needs to increase funding and sustain collaborative efforts with the GHS to optimize health care resource availability, staffing ratios, and emergency maternal/newborn transportation to referral facilities. Improved transportation will potentially enhance neonatal admittance and avoid unnecessary travel delays to the city or district referral health facility. Whilst indictors are set, it is important that interventions be monitored and timely evaluation conducted to track progress and success (Donabedian, 1988, 1997; Save the Children, 2014; UN- IGME, 2015). For instance, perinatal

outcome audit (Kerber et al., 2015) needs to be integrated at the rural health care level with supportive policies that ensure its smooth implementation.

Whilst stakeholder involvement hold promise for community-based health care in resource-limited settings (Edmond et al., 2008; Lassi & Bhutta, 2015; WHO, 2010, 2014), this opportunity has not been explored to the fullest. At the rural level, Chiefs, Community Elders, taxi drivers, okada riders, and gas station owners need to be acknowledged as stakeholders who form a safety net for pregnant women and their newborns particularly during emergencies. For instance, due to the lack of ambulance services, gas station owners can be authorised by the MOH to issue prepaid vouchers to registered okada riders and taxi drivers to facilitate transportation during referrals and emergency situations. As health care facilities partner with these local stakeholders, it is expedient that health policies be reviewed to support reimbursement and/or acts of volunteerism. To strengthen health care systems, the MOH, GHS and local health care providers need to partner with community leaders and adopt an all-inclusive approach to address equity issues, and initiate innovative, outcome-focused, and goal-oriented sustainable neonatal health care interventions. It is important that local governance (WHO, 2014, WHO & UNICEF, 2013) support health care partnerships through integrated efforts at the community level (Lassi & Bhutta, 2015; Engmann et al., 2016) to ensure that all partners deliver on the established commitments t (Lawn et al., 2011; WHO, 2014).

Furthermore, since shortage of skilled staff limits midwives' ability to accompany both pregnant women and ill newborns to referral health care facilities, it is important that at least, a member of the health care team in the designated facility be assigned as resident transport personnel to accompany patients and alternate duty shifts with other trained personnel. Dispatching an ill infant in a taxi or okada to a referral centre without any health care provider is

a moral and ethical issue that calls for a rethinking of the health inequities and its associated complex issues that have been least attended to in rural settings. At the institutional level, policies need to be enacted to ensure that ill newborns, and pregnant women who have been classified as high risk be accompanied by at least one health personnel (e.g. CHN, EN, HCA) when a midwife is unable to, on account of skilled staff shortage or pertinent health-related issues. To support full implementation of this policy, the transport nurse must be trained in the use of a resuscitation travel kit.

Beliefs and traditions that influence health care decision making and local healing practices can pose a threat to maternal and newborn health (GMICS, 2011, Gyekye, 2003; Gyimah, 2006) and increase risk that causes birth asphyxia. Therefore, maternal health literacy efforts that are rooted in the culture of the people need to be strengthened at the rural level with the support of the Chief, Queen mother, women's groups, opinion leaders, local media and health policies. These integrated efforts can focus on translating the health information leaflets (primarily English Language) into the local dialect. Another important issue is that, as midwives travel to the district and city areas for professional development programs, staffing gaps are created in obstetric care at the rural level. Therefore, rather than dispatching midwives to the city or district for training, on-site or mobile van in-service training personnel need to be assigned to facilities to engage midwives in professional development. In order to assure women of midwifery services, the policy on rural professional development thus needs to be reviewed.

Midwives who accept postings to rural communities encounter challenges with staff replacement. Furthermore, to support the policy on rural postings, timely access to salaries must be assured and stipends included as a motivation to attract and retain midwives at the rural level. Since relief personnel are a rare health care resource in midwifery in Ghana, it is critical that the

Ministry of Health scale up midwifery training through local and international collaborative efforts in order to increase the number and cadre of midwives particularly to rural communities where neonatal deaths are concentrated. Since neonatal health targets have been set within the WHO 'Every Newborn Action Plan' (WHO, 2014) to achieve the new SDG 3.2 target (UN, 2015b), it is imperative to attune to the realities of newborn health care in rural communities where majority of the neonatal deaths continue to occur (GDHS, 2014; GMICS, 2011; GSS, 2012).

Practice implications

Research evidence establishes the decreasing statistical trend of the midwife-patient ratio in Ghana (WHO, 2012, 2015) which reflects as increased workload on midwives in both urban (Floyd et al., 2013; Gans-Lartey et al., 2013) and rural communities. The lack of infrastructural facilities (Lori et al, 2012) and staff support also negatively influence midwives' intention to stay at their rural post. Therefore, midwives who accept postings to rural communities need to be supported (JHPIEGO, 2013) in professional development, vacation, and on-site or near-facility housing to promote their health under the stressful rural conditions. Since midwives are scarce and primarily work alone with limited support in rural settings, at least one pediatric nurse, and a CHN, EN, or HCA who works in the Out-Patient departments and Medical-Surgical units can be allocated to the labor ward as permanent staff to support midwives in neonatal health care delivery.

In this research, a major practical gap that impeded safe and competent care is the lack of rural mentoring for midwives who primarily work alone. Midwives in rural community practice feel isolated, emotionally drowned and psychologically unstable as they practised under stressful

conditions in resource-limited settings. As is done in countries such as Australia, the Midwifery Council has established a nationwide pool of experienced mentors who are matched to rural midwives (Cummins, Denney-Wilson, & Homer, 2016). This rural mentor becomes a '*buddy*' to support the midwife mentee or new graduate midwife with confidentiality assured (Cummins et al., 2016). This model can be evaluated and adopted by NMC-Ghana to make the package a contextually relevant resource that promotes midwives' physical and emotional well-being, and maternal/neonatal health.

Midwives have the potential to lead changes at rural, district and national levels of health care (ICM, 2013) through collaborative efforts with TBAs. Rather than seeing the TBA as a threat to midwifery service and women/newborn's health in rural areas, the Ghana Health Service needs to increase sensitization and collaborative efforts between midwives and TBAs, as well as community health workers (Agrawal et al., 2012) with the purpose of improving maternal and neonatal well being. Monthly midwife-TBA meetings with joint training on safe birthing and resuscitation can emerge as a solution to address existing issues. As a preventive approach to birth asphyxia, male involvement need to be increased in reproductive health matters, and in the prenatal period as women are encouraged and educated on healthy nutrition, birth preparedness and complication readiness. Midwives need to collaborate with significant others such as mothers, aunties and grandmothers to form a social support network for new mothers (particularly teen mothers) whose babies have experienced birth asphyxia. The methods of health education in routine teaching or pregnancy schools can also be diversified to include role plays, video shows, documentary, and group discussions with adult literacy skills to encourage active participation by the women/participants.

Post asphyxia care

Beyond NICU admission, the affected babies are usually discharged home but follow up at the rehabilitation centre to minimise the effects of the neuromuscular deficits. Since the NHIS does not cover neonatal transportation and home care service, from my clinical experience, this health care service becomes physically, emotionally and economically draining to parents and family members. Since the social welfare department in health care facilities do not support affected families, it is expedient that as a representative on the Ministry of Health Board, the NMC of Ghana advocate for governmental support for affected families in the area of home care, family relief duties, and medication supervision to support parents in their return to work/employment to support the rest of the family. This is a very important issue to attend to because, traditionally, families with birth-asphyxiated children who exhibit minor or gross mental and/or physical challenges are stigmatized in the social arena.

Implications for research

Health care research is a vital component in interventions that aim at reducing birth-asphyxia-related morbidity and mortality, and optimizing health care outcomes (Bhutta et al., 2013; Lawn et al., 2009; Welaga et al., 2013). To reduce perinatal mortality, research needs to focus on the gaps in data that obscure contextual realities and subsequently impede the success of neonatal health care interventions and programs. Based on this study's findings, it is recommended that future research explore midwives' socio-economic well-being in rural communities. In addition, the views of taxi drivers, okada riders, TBAs, pregnant women and their partners/spouses, and in-laws on birthing need to be explored to gain further in-depth understandings of birthing in rural areas. Capacity building and mentoring opportunities also need to focus resources on training and supporting novice researchers in generating qualitative

data – an approach that has been least maximised in our quantitatively structured world (Mayan, 2009).

Embracing health care sustainability: women's approach

The health of women and their newborns are of primary concern to the global community (Lassi & Bhutta, 2015; Lawn et al., 2011; UN, 2015a; WHO & UNICEF, 2012) but the processes that are required to activate health plans into action can take longer than expected due to limited health care resources. Since mothers are the ones who are most affected by the loss of their newborns, it is important that women be actively engaged in initiating ideas regarding potential solutions to birth asphyxia. Based on my research field experience and local knowledge of the geographical terrain, a local community project on animal husbandry could potentially provide dual benefits: improve maternal/newborn transportation, ensure financial and food nutrition security for maternal and neonatal well-being. With the support of the local Chief who allocates the land, the local women can engage in sustainable initiatives on animal husbandry (e.g. harnessed mules/donkeys) to facilitate transportation where okada or taxi drivers cannot be reached.

A carriage can be designed with a sun and rain shelter that is hooked to the harnessed mules or donkeys for safe seating. These domestic animals are commonly used for tasks such as transportation, wood and heavy load carriage in other African countries. The harnessed animals can also plough the local rice farms for an agreed fee and the money saved in the women's locally-generated fund to support maternal and newborn care in rural communities. These animals are cost-effective, sustainable, locally-adaptable, environmentally friendly and can be managed by women with the support of community health volunteers and Queen mother or the

Chief's wife. Again, local hens, cockerel, rabbits, and goats can be reared in addition to fishery to increase women's financial security and support healthy maternal nutrition.

Summary of this study

This phenomenological inquiry began with a research proposal that underwent scrutiny by my doctoral supervisors, ethical review boards, and committees. The study was undertaken with an aim to unveil the meanings and articulate the experiences of midwives facing newborns with asphyxia neonatorium in rural practice. In chapter One, I discussed the background of this study which was followed by Chapter Two where I explored and engaged in a discursive analysis of the global and Sub-Saharan literature with a focus on Ghana where this study was conducted. I began Chapter Three with discussions on the research methodology – Heideggerian Phenomenology and African Philosophy that aligns with the study's research question, and subsequently guided data generation, synthesis and management.

Thirteen midwives (N=13) who voluntarily participated in the study were purposively sampled from rural communities within the Shai-Osudoku district. The six themes which emerged from the synthesized data were presented in chapters 4, 5, 6, 7, 8, and 9 as follows 'navigating power boundaries'; 'relational stirrings in spatial bearings'; 'the cost of being-with'; 'experiencing equipment and technology'; 'gazing newborn blue bodies'; and 'unveiling an emerging light in temporal dimensions' respectively. The synthesized data which have been articulated in Chapters Four to Nine illuminate understandings and unveil the meanings embedded in the midwives' experiences as they faced newborns with birth asphyxia in the rural milieu.

Limitations of this study

In this study, my primary encounters with the local community for research ethics and institutional approvals were a challenge since the systematic processes and procedures with all the institutions involved lasted much longer than I anticipated. As a graduate student, the 11-month delay negatively affected my doctoral study timelines, as I could not progress with data collection. Once all the study approvals were issued, I was able to access midwives in rural and remote communities but with difficulties that were related to their limited time availability related to direct care giving. I re-scheduled research conversations on several occasions on site, or by telephone (where possible) since midwives were faced with busy work schedules. Furthermore, the marshy terrain of the study settings generally caused transportation barriers which limited my time and proximity to the midwives since data collection occurred during parts of Ghana's rainy seasons (April to June). All these limitations had financial implications on my proposed budget as I engaged in frequent telephone calls and in-person follow-ups to track my ethics and institutional approvals, and reschedule research conversations.

As a novice researcher, I found interpretive inquiry mind-engaging but time consuming and exhausting in the interpretation process. Synthesizing the evidence from narratives of thirteen midwives (N=13), two second readers, my research journal, field notes, and research logs under my supervisors' guidance was deeply challenging. I tried data management software options to make the data synthesis easier, but this became complicated since its functions could not differentiate between participants' words and researcher's words. I navigated this by processing the narrative information in Microsoft Word and migrating to Microsoft Excel to interpret, code, and categorise the research data.

In this qualitative research, the emerging themes and its unique patterns which focus on midwives' experiences are particularly relevant for improving community-based practice and newborn health in rural communities within Ghana. Although the research methodological processes which have been thoroughly described serve as research trail for potential transferability of this research and its recommendations to rural contexts with similar demographic characteristics, local and systemic limitations, the study findings cannot be generalized to midwives in that context. This reality is based in the fact that, the subjective nature of human experiences occurs in unique contexts with inherent multiple realities that both shape and cause our experiences to evolve over time (De Beauvoir, 1985; Denzin & Lincoln, 2003; Gadow, 2000; Koch, 1996). With this understanding, qualitative researchers do not aim to generalize study findings (Lincoln & Guba, 1985; Polit & Beck, 2012).

In addition, since only midwives' experiences of facing birth-asphyxiated newborns in rural birth settings were explored, the data generated provided views from a sampled population of skilled birth attendants in the rural south of Ghana. The views of pregnant women and their partners, families, TBAs, okada riders, taxi drivers, chief, policy makers, and stakeholders were not represented in this study although their perspectives would potentially be relevant for generating evidence to understand and address the complex problems of newborn health. Particularly in knitted rural milieux where the cultural bond of relationality drives community well-being, it is important to garner views and ideas from diverse populations who live or share the experience of birth asphyxia. Further research is therefore needed to include multi-leveled perspectives on the prevention of birth asphyxia and neonatal well-being.

Conclusion

In this qualitative inquiry, interpretive phenomenology was adopted as the research methodology to understand, unveil the meanings and articulate the experiences of midwives who

are faced with newborns affected by birth asphyxia. Thirteen (13) midwives who were purposively sampled from the Shai-Osudoku district in the rural south of Ghana voluntarily participated in this study. Primary research data that were generated from the midwives' narratives were interpreted and synthesized with secondary sources of data to provide a rich and in-depth account of midwives' experiences as they faced newborns with birth asphyxia. Based on this study's findings, recommendations have been made and policy implications have been discussed. It is critical that integrated efforts be made to strengthen community-based care in rural communities using feasible, culturally-engrained and sustainable approaches that promote midwifery practice and optimal newborn health care. In order to gain further understanding to address the multiple layers of complexities that surround newborn care in rural communities, it is expedient that future research explore the experiences of pregnant women and spouses/partners, TBAs, stakeholders, and community leaders in birthing, newborn health and post-asphyxia life within rural communities.

I conclude with a poem that provides some insights into my experiences as a doctoral student.

A concluding poem: If only you could just remind me…

Sat for the past six hours

Writing about writing

Writing about findings

Writing about intertwinings, hours of writing,

Remind me, motioning sphincters that move me,

Remind me: empty gaster, pyloric sphincter, vesical sphincter,

Remind me: excited synapses, achy spine, achy gluteus, achy sacrum, achy sartorius,

Remind me to nibble, to wiggle, to walk, to talk, to sleep, to soar

If only you could just remind me…

Dedicated to all PhD students – a mental health support on 'writing'

Inspired by my Supervisory Committee - 12th March, 2016.

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APPENDICES

Appendix A: Ethical Approval: University of Alberta

Notification of Approval

Date:	September 24, 2014
Study ID:	Pro00044075
Principal Investigator:	Mary Ani-Amponsah
Study Supervisor:	Magdalena Richter
Study Title:	Experiences of Midwives Who Are Faced With Newborns Affected By Birth Asphyxia in Rural Birth Settings, Southern Ghana
Approval Expiry Date:	September-23-15

Approved Consent Form:	Approval Date 24/09/2014 24/09/2014	Approved Document Research Information Sheet Informed Consent Form

Thank you for submitting the above study to the Research Ethics Board 1. Your application has been reviewed and approved on behalf of the committee.

A renewal report must be submitted next year prior to the expiry of this approval if your study still requires ethics approval. If you do not renew on or before the renewal expiry date, you will have to re-submit an ethics application.

Approval by the Research Ethics Board does not encompass authorization to access the staff, students, facilities or resources of local institutions for the purposes of the research.

Sincerely,

William Dunn, PhD
Chair, Research Ethics Board 1

Note: This correspondence includes an electronic signature (validation and approval via an online system).

Appendix B – Introductory Letter: School of Nursing to NMIMR, Ghana

SCHOOL OF NURSING
COLLEGE OF HEALTH SCIENCES
UNIVERSITY OF GHANA
LEGON

Telephone: 0302-513255 (Dean)
Ext. 6206
0302-513250 } Secretary
028 9531213 }
Fax: 513255
E-mail: nursing@ug.edu.gh

P. O. Box LG 43
LEGON, GHANA

Our Ref: SON/C/4
Your Ref:

June 12, 2014

The Administrator
Institutional Review Board (IRB)
NMIMR
University of Ghana
Legon

Dear Sir/Madam,

LETTER OF INTRODUCTION – MRS. MARY ANI-AMPONSAH

This is to introduce to you Mrs. Mary Ani-Amponsah, an Assistant Lecturer with the Department of Maternal and Child Health of the School of Nursing, University of Ghana.

Mrs. Ani-Amponsah is a PhD candidate with the Faculty of Nursing at the University of Alberta, Edmonton, Canada. She has completed the course work and not collecting data for her thesis. Her topic is **"Experiences of Midwives Who Are Faced With Newborns Affected By Birth Asphyxia in Rural Birth Settings, Southern Ghana".**

We should be very grateful if she could be given an Ethical Approval for the collection of data for her research.

Yours faithfully,

Theodore Ahuno
Snr. Asst. Registrar
For: Ag. Dean

Appendix C - Ethical Approval: NMIMR, Ghana

NOGUCHI MEMORIAL INSTITUTE FOR MEDICAL RESEARCH
Established 1979
A Constituent of the College of Health Sciences
University of Ghana

INSTITUTIONAL REVIEW BOARD

Phone: +233-302-916438 (Direct)
+233-289-522574
Fax: +233-302-502182/513202
E-mail: nirb@noguchi.ug.edu.gh
Telex No: 2556 UGL GH

Post Office Box LG 581
Legon, Accra
Ghana

My Ref. No: DF.22
Your Ref. No:

3rd September, 2014

ETHICAL CLEARANCE

FEDERALWIDE ASSURANCE FWA 00001824 **IRB 00001276**

NMIMR-IRB CPN 108/13-14 **IORG 0000908**

On 3rd September 2014, the Noguchi Memorial Institute for Medical Research (NMIMR) Institutional Review Board (IRB) at a full board meeting reviewed and approved your revised protocol titled:

TITLE OF PROTOCOL : **Experiences of midwives who are faced with newborns affected by birth asphyxia in rural birth settings, Southern Ghana**

PRINCIPAL INVESTIGATOR : **Mary Ani-Amponsah, PhD Cand.**

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

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

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

This certificate is valid till 2nd September, 2015. You are to submit annual reports for continuing review.

Signature of Chair: .....
Mrs. Chris Dadzie
(NMIMR – IRB, Chair)

cc: Professor Kwadwo Koram
Director, Noguchi Memorial Institute
for Medical Research, University of Ghana, Legon

Appendix D – Ethical Approval: Dodowa Health Research Centre (DHRC)

In case of reply the number and date of this letter should be quoted.

My Ref. : DHRC/IRB/14//11

Your Ref. No.

Dodowa Health Research Centre
Ghana Health Service
P. O. Box DD1
Dodowa

Tel: +233-50-1336188
Email:IRBdodwa@gmail.com

5th Nov, 2014

Mary Ani-Amponsah
Maternal and Child Health Department
School of Nursing
College of Health Science
University of Ghana
Legon

RE: REQUEST FOR ETHICAL APPROVAL FOR AMENDMENT FOR STUDY PROTOCOL TITLED: EXPERIENCES OF MIDWIVES WHO ARE FACED WITH NEWBORNS AFFECTED BY BIRTH ASPHYXIA IN RURAL BIRTH SETTINGS, SOUTHERN GHANA. STUDY NO. DHRC/210814

Reference is made to your letter dated 31ST Oct, 2014 on the above-mentioned subject.

Upon addressing the comments raised after the initial review and subsequent reviews thereafter, the IRB has approved your proposal.

The approval requires that you submit a periodic report on the progress of the project during the implementation period and a final full report to the Institutional Review Board (IRB) on completion of the study. The IRB may observe or cause to be observed procedures and records of the study during and after implementation. Please note that any modification of the project must be submitted to the IRB for review and approval before its implementation.

You are also required to report all serious adverse events related to this study to the IRB within seven days verbally and fourteen days in writing. You are also to inform the IRB and your Institution before any publication of the research findings.

Please quote the protocol identification number in all future correspondence in relation to this protocol.

REV FRANCIS AGYEMANG
VICE IRB CHAIRPERSON
DHRC

Cc: The Director,
Dodowa Health Research Centre,
Ghana Health Service, Dodowa

Appendix E – Introductory letter: School of Nursing, Ghana to Regional Health

SCHOOL OF NURSING
COLLEGE OF HEALTH SCIENCES
UNIVERSITY OF GHANA
LEGON

Telephone: 0302-513255 (Dean)
Ext. 6206
0302-513250 } Secretary
028 9531213
Fax: 513255
E-mail: nursing@ug.edu.gh

P. O. Box LG 43
LEGON, GHANA

Our Ref: SON/DA/7

Your Ref:

ACCRA REGION
RECEIVED
Date 17/03/15
Reg. Dir. of Health Service

February 10, 2015

The Regional Director of Health
Regional Health Directorate
Ghana Health Service
Greater Accra Region

Dear Sir/Madam,

LETTER OF INTRODUCTION

This letter is to introduce to you Mrs. Mary Ani-Amponsah who is an Assistant Lecturer of the School and a PhD candidate at the Faculty of Nursing, University of Alberta, Edmonton, Canada.

She is undertaking a thesis with the topic: **"Experiences of Midwives who are faced with Newborns Affected by Birth Asphyxia in Rural Birth Settings, Southern Ghana".** She requires approval to enable her conduct research on the above topic in the Shai-Osudoku District.

We should therefore be appreciative if you could grant her the needed approval to enable her collect data for the thesis.

Please do not hesitate to contact me on **0277415635** should you need further information.

Yours faithfully,

Theodore Ahuno
Senior Assistant Registrar
For: Ag. Dean

Appendix F – Ethical Approval: Regional Health Directorate

GHANA HEALTH SERVICE
REGIONAL HEALTH DIRECTORATE
GREATER ACCRA
P. O. BOX 134
ACCRA

Tel: +233-0302-234225/226203

E-mail:lavanotoo@yahoo.com
linda.vanotoo@ghsmail.org

25th March 2015

THE DISTRICT DIRECTOR OF HEALTH SERVICES
SHAI OSUDOKU DISTRICT HEALTH DIRECTORATE
DODOWA

RE: LETTER OF INTRODUCTION
MRS. MARY ANI-AMPONSAH

Approval has been given by the Regional Health Directorate to enable the above-named who is an Assistant Lecturer at the School of Nursing, College of Health Sciences, University of Ghana, Legon and a PhD candidate at the Faculty of Nursing, University of Alberta, Edmonton, Canada to collect data for her thesis with the topic: "***Experiences of Midwives who are faced with Newborns Affected by Birth Asphyxia in Rural Birth Settings, Southern Ghana".***

She will interview/administer questionnaire to some Midwives in the facilities within your district as per the attached.

Kindly accord her with the needed support to enable her to achieve her project goals successfully.

Thank you.

DR. LINDA A. VANOTOO
REGIONAL DIRECTOR OF HEALTH SERVICES
GREATER ACCRA

cc: The Medical Superintendent
Dodowa District Hospital
Dodowa

Appendix G – Introductory Letter: Shai-Osudoku District Health Services

Shai-Osudoku District Health Admin
Ghana Health Service
P. O. Box DD1
Dodowa.
Ghana.

Tel: 0299375043
0243636913
E-mail:DangmeWestdha@yahoo.com

17th November, 2014

HEADS OF FACILITIES
SHAI-OSUDOKU DISTRICT

Dear Sir/Madam,

RE: LETTER OF INTRODUCTION

This is to inform you that **approval** has been given to the Mrs. Mary Ani-Amponsah an Assistant Lecturer of the School of Nursing, Legon and a candidate at the Faculty of Nursing, University of Alberta, Edmonton, Canada.

She is undertaking a thesis with the topic: **"Experiences of Midwives who are faced with Newborns Affected by Birth Asphyxia in Rural Birth Settings, Southern Ghana".**

She will be visiting your facilities to collect data and interview the Midwives for her thesis.

I would be very grateful if you accord her the necessary assistance.

Thank you.

Yours faithfully,

DR. AFUA A. ASANTE
DISTRICT DIRECTOR OF HEALTH SERVICES
SHAI-OSUDOKU

Appendix H – Research Information Sheet

UNIVERSITY OF ALBERTA

Title of Research: Experiences of Midwives Who Are Faced With Newborns Affected By Birth Asphyxia in Rural Birth Settings, Southern Ghana

Part A: Researcher's Information:

Name of Researcher:
Mary Ani-Amponsah (RN, PhD Nursing Student, MPhil Nurs, Bach. Nurs/Psych).
4-171 Edmonton Clinic Health Academy (ECHA), 11405 87 Avenue, University of Alberta, Edmonton Alberta, Canada, T6G 1C9. Canada.
Email: mnkansah@ualberta.ca, Phone: 011-233244.368205(Ghana), 001-587.926.0409(Canada).

Names of Research Supervisors:
Dr. Sherrill Conroy (Associate Professor),
Faculty of Nursing Level 3, ECHA, 11405 87 Avenue, University of Alberta, Edmonton-Alberta, T6G 1C9.Canada. Office: 5-293, ECHA.
Email: sherrill.conroy@ualberta.ca, Phone: 001-780.492.9043, Fax: 001-780.492.2551.

Dr. Solina Richter (Associate Professor),
Faculty of Nursing, Level 3, ECHA, 11405 87 Avenue, University of Alberta, Edmonton Alberta. Canada. T6G 1C9. Office: 5-269, ECHA.
Email: solina.richter@ualberta.ca. Phone: 001-780.492.7953; Fax: 001-780.492.2551.

I am asking you to participate in a study with the above title. The purpose of the study is to understand, unveil the meanings and articulate the experiences of midwives who are faced with newborns affected by birth asphyxia in rural birth settings within Ghana. As I explore midwives' experiences, it is expected that new knowledge will be developed to support midwifery practice towards optimal newborn health outcomes in rural Ghana.

Study Procedures: You will be asked to share your experiences in a conversation related to your experiences in the care of newborns affected by birth asphyxia.

Confidentiality: The topic of this discussion will remain related to your field of practice as a midwife. An appropriate time will be arranged for this conversation at your convenience, outside the birth setting in a quiet and neutral place to ensure confidentiality. Our conversation will be recorded on an audio tape and the information will later be played and typed out with strict confidentiality. Each conversation will last approximately 1 to 3 hours. All conversations will occur at least twice and at most thrice when I need further clarification on our previous conversations. Conversations will take place in a private room within a Guest House setting arranged by the researcher. The signed consent forms, typed out copies (verbal transcripts) and tape recordings of our conversations will be kept securely in a locked cabinet. The signed consent form will also be kept securely locked in the same file compartment to which only 1 and my research supervisors will have access. You can have access to our recorded conversations upon request. At the end of the study, the typed out copies and the audio-tape recordings will be

kept for at least five years according to University of Alberta policy. The verbal transcripts will be reviewed only by me and my research supervisors. The results of this study will be published and presented at clinical meetings/conferences, but your name and any information that may identify you will not be included.

Study Participation: You do not have to be in this study if you do not wish to be. You may refuse to answer any question. You may leave the study at any time by informing the researcher. All information will be kept confidential except when professional legislation or the law requires disclosure of information. You may stop the audio recording to share something off record at any time during our conversations. With your written consent and anonymity guaranteed, everything you say in the data will be used for synthesis. The information you provide may also be utilized for a secondary data analysis in another research project following the submission of a new research proposal to an ethics review board. There is no limitation of data withdrawal. Participants can withdraw their data until 15th January, 2015, when the researcher starts writing up her thesis results.

Benefits: You will not directly benefit from participating in this study; however, your participation will help improve midwifery practice towards optimal newborn health outcomes in Ghana.

Compensation: You will be given a compensation kit (snack pack, antiseptic soap, hand towel, pen and writing pad) in recognition of your time and efforts inputted in this study.

Risks: I do not expect that you will be harmed by being in the study, however if during the conversation about your experiences, an aspect upsets you, I will assist you to obtain the support you need.

Contact Information: If you have any questions or concerns, you can call me on my cell phone number 0244-368205 at any time or send me an email on this address: mnkansah@ualberta.ca

Additional Contact: If you have concerns, you can also contact Ms. Patricia Avadu or Dr. Patience Aniteye (Faculty Members), School of Nursing, College of Health Sciences, University of Ghana, Legon- Accra. Telephone Number - 0302-513250. (These two people are not part of this study, but you can contact them if you have concerns regarding this research).

If you have concerns about this study, you may also contact the University of Alberta Research Ethics Office, at 001- 780-492-2615. This office has no direct involvement with this project.

Study Findings: If you would want a summary of the study results, please provide either your postal or e-mail address in the space provided below, or contact me on my cell phone number.

Participant's E-mail address …….

Participant's Telephone Number ……..……..,….

Participant's Postal Address ……..……

Appendix I: Written Informed Consent Form

Title of Research: Experiences of Midwives Who Are Faced With Newborns Affected By Birth Asphyxia in Rural Birth Settings, Southern Ghana

Part A: Researcher's Information

Name of Researcher:
Mary Ani-Amponsah (RN, Ph.D Nursing Student, MPhil Nurs, Bach. Nurs/Psych).
4-171 Edmonton Clinic Health Academy (ECHA),
11405 87 Avenue, University of Alberta, Edmonton Alberta, Canada, T6G 1C9. Canada.
Email: mnkansah@ualberta.ca
Phone: 011233244.368205 (Ghana), 001-587.926.0409 (Canada).

Names of Research Supervisors:
Dr. Sherrill Conroy (Associate Professor),
Faculty of Nursing Level 3, ECHA,
11405 87 Avenue, University of Alberta, Edmonton- Alberta, T6G 1C9.Canada.
Office: 5-293, ECHA.
Email: sherrill.conroy@ualberta.ca
Phone: 001-780.492.9043, Fax: 001-780.492.2551.

Dr. Solina Richter (Associate Professor).
Faculty of Nursing, Level 3, ECHA,
11405 87 Avenue, University of Alberta, Edmonton Alberta. Canada. T6G 1C9.
Office: 5-269, ECHA.
Email: solina.richter@ualberta.ca
Phone: 001-780.492.7953, Fax: 001-780.492.2551.

Part B: Consent of Participant

Directions: Please tick (√) your response

Num	Question	Yes	No
1.	Do you understand that you have been asked to participate in a research study?		
2.	Have you read and received a copy of the attached research information sheet?		
3.	Has the research information been explained to you by the researcher?		
4.	Do you understand the benefits and risks involved in taking part in this research study?		
5.	Have you had any opportunity to ask and discuss questions/concerns of interest to you on the study?		
6.	Has the issue of confidentiality and anonymity been explained to you?		
7.	Do you understand who will have access to your information?		
8.	Do you understand that you are free to refuse, to participate, or to withdraw from the study at any time? You do not have to give a reason and it will not affect you.		
9.	With anonymity guaranteed, are you comfortable with me using everything you say in the data synthesis?		
10.	Do you authorize that the information you provide be utilized for a secondary data analysis in another research project following the submission of a new research proposal to an ethics review board?		

Part C: Signatures

(Volunteer Agreement)

This study was explained to me by:.....

(Full Name of Researcher)

Name of Participant.....

I agree to voluntarily participate in this study

Signature of Participant:.....

Participant's Code/Pseudonym:.....

Date:.....

Witness (if available)

Code/Pseudonym:.....

I believe that the person signing this form understands what is involved in the study and voluntarily agrees to participate. A copy of this consent form has also been given to the participant.

Signature of Researcher.....

Date:.....

Participant's Code/Pseudonym:..... Conversation Number: 1 2 3
(Please Circle)

Appendix J: Confirmation letter on access to Psychologist service

DEPARTMENT OF PHARMACY PRACTICE AND CLINICAL PHARMACY
UNIVERSITY OF GHANA SCHOOL OF PHARMACY
COLLEGE OF HEALTH SCIENCES

Phone: +233-302-978009
Fax: +233-302-677942
E-mail:ugsop@chs.ug.edu.gh

P.O. Box LG 43
Legon
GHANA

30th October, 2014.

The Administrator
Dodowa Health Research Centre
Ghana Health Service
P.O BOX DD1
Dodowa

Dear Sir/Madam,

CONFIRMATION OF CLINICAL PSYCHOLOGICAL SERVICE FOR RESEARCH PARTICIPANTS.

STUDY TITLE: Experiences of Midwives Who Are Faced with Newborns Affected by Birth Asphyxia in Rural Birth Settings, Southern Ghana

RE: PhD Candidate

This is to confirm that I am well informed of the above named study proposed by Mary Ani-Amponsah, the Principal Investigator of this Thesis Research.

In this research, study participants who require clinical support would be duly given the needed service. As ethically required, utmost privacy and confidentiality will be maintained in this service provision.

If you require any further clarification, please contact me on the address provided above.

Thank you.

Sincerely,

.....

Irene M. A. Kretchy (Assistant lecturer/ Clinical Psychologist

Appendix K: Confidentiality Agreement Form (Transcriptionist A)

UNIVERSITY OF ALBERTA

University of Ghana

Confidentiality Agreement Form (Transcriptionist)

Title of Research: Experiences of Midwives Who Are Faced With Newborns Affected By Birth Asphyxia in Rural Birth Settings, Southern Ghana.

Name of Researcher:
Mary Ani-Amponsah (RN, PhD Nursing Candidate, MPhil Nurs, Bach. Nurs/Psych).
4-171 Edmonton Clinic Health Academy (ECHA), 11405 87 Avenue, University of Alberta, Edmonton Alberta, Canada, T6G 1C9. Canada.
Email: mnkansah@ualberta.ca, Phone: 011-233244.368205 (Ghana), 001-587.926.0409 (Canada).

Names of Research Supervisors:
Dr. Sherrill Conroy (Associate Professor),
Faculty of Nursing Level 3, ECHA, 11405 87 Avenue, University of Alberta, Edmonton- Alberta, T6G 1C9.Canada. Office: 5-293, ECHA.
Email: sherrill.conroy@ualberta.ca, Phone: 001-780.492.9043, Fax: 001-780.492.2551.

Dr. Solina Magdalena Richter (Associate Professor).
Faculty of Nursing, Level 3, ECHA, 11405 87 Avenue, University of Alberta, Edmonton Alberta. Canada. T6G 1C9. Office: 5-269, ECHA.
Email: solina.richter@ualberta.ca. Phone: 001-780.492.7953, Fax: 001-780.492.2551.

Transcriptionist:

I Koji Owusu-Ansah (print name) agree that any data (verbal and/or written) obtained for or from the study "Experiences of Midwives Who Are Faced With Newborns Affected By Birth Asphyxia in Rural Birth Settings, Southern Ghana" will be kept in strict confidence. I will not communicate any information or any identifying participant information to anyone outside of the study team; that is Mary Ani-Amponsah, Prof. Sherrill Conroy and Prof. Solina Magdalena Richter.

Koji Owusu-Ansah	Koji Ansah	5th December, 2014
(Full Name)	(Transcriptionist Signature)	(Date)

Please retain a copy of this form for your records

Researcher:

Mary Ani-Amponsah		5th December, 2014
(Full Name)	(Signature)	(Date)

Appendix L: Confidentiality Agreement Form (Transcriptionist B)

UNIVERSITY OF ALBERTA

University of Ghana

Confidentiality Agreement Form (Transcriptionist)

Title of Research: Experiences of Midwives Who Are Faced With Newborns Affected By Birth Asphyxia in Rural Birth Settings, Southern Ghana.

Name of Researcher:
Mary Ani-Amponsah (RN, PhD Nursing Candidate, MPhil Nurs, Bach. Nurs/Psych).
4-171 Edmonton Clinic Health Academy (ECHA), 11405 87 Avenue, University of Alberta, Edmonton Alberta, Canada, T6G 1C9. Canada.
Email: mnkansah@ualberta.ca, Phone: 011-233244.368205 (Ghana), 001-587.926.0409 (Canada).

Names of Research Supervisors:
Dr. Sherrill Conroy (Associate Professor),
Faculty of Nursing Level 3, ECHA, 11405 87 Avenue, University of Alberta, Edmonton- Alberta, T6G 1C9.Canada. Office: 5-293, ECHA.
Email: sherrill.conroy@ualberta.ca, Phone: 001-780.492.9043, Fax: 001-780.492.2551.

Dr. Solina Magdalena Richter (Associate Professor).
Faculty of Nursing, Level 3, ECHA, 11405 87 Avenue, University of Alberta, Edmonton Alberta. Canada. T6G 1C9. Office: 5-269, ECHA.
Email: solina.richter@ualberta.ca. Phone: 001-780.492.7953, Fax: 001-780.492.2551.

Transcriptionist:

I TITO ABBAN QUARSHIE (print name) agree that any data (verbal and/or written) obtained for or from the study "Experiences of Midwives Who Are Faced With Newborns Affected By Birth Asphyxia in Rural Birth Settings, Southern Ghana" will be kept in strict confidence. I will not communicate any information or any identifying participant information to anyone outside of the study team; that is Mary Ani-Amponsah, Prof. Sherrill Conroy and Prof. Solina Magdalena Richter.

TITO ABBAN QUARSHIE		5th December, 2014
(Full Name)	(Transcriptionist Signature)	(Date)

Please retain a copy of this form for your records

Researcher:

Mary Ani-Amponsah		5th December, 2014
(Full Name)	(Signature)	(Date)

Appendix M: Confidentiality Agreement Form (Second Reader A)

UNIVERSITY OF ALBERTA

University of Ghana

Appendix L: Confidentiality Agreement Form (Second Reader)

Title of Research: Experiences of midwives who are faced with newborns affected by birth asphyxia in rural birth settings, southern Ghana.

Name of Researcher:
Mary Ani-Amponsah (RN, PhD Nursing Candidate, MPhil Nurs, Bach. Nurs/Psych).
4-171 Edmonton Clinic Health Academy (ECHA), 11405 87 Avenue, University of Alberta, Edmonton Alberta, Canada, T6G 1C9, Canada.
Email: mkansah@ualberta.ca, Phone: 011-233244.368.205 (Ghana), 001-587.926.0409 (Canada).

Names of Research Supervisors:
Dr. Solina Magdalena Richter (Associate Professor).
Faculty of Nursing, Level 3, ECHA, 11405 87 Avenue, University of Alberta, Edmonton Alberta, Canada, T6G 1C9. Office: 5-269, ECHA.
Email: solina.richter@ualberta.ca. Phone: 001-780.492.7953, Fax: 001-780.492.2551.

Dr. Sherrill Correy (Associate Professor).
Faculty of Nursing Level 3, ECHA, 11405 87 Avenue, University of Alberta, Edmonton-Alberta, T6G 1C9.Canada. Office: 5-293, ECHA.
Email: sherrill.correy@ualberta.ca, Phone: 001-780.492.9043, Fax: 001-780.492.2551.

Second Reader:

I MARY ABOAGYE (full name), the second reader for this research, agree to:

1. hold in confidence all the research information shared with me by not sharing the information (transcripts, audio tapes, flash drive/ memory device, digital images, etc.) or discussing it with any individual or group of people other than the *Researcher(s)* named above.
2. preserve all the research information (transcripts, audio tapes, flash drive/ memory device, digital images, etc.) handed to me securely at all times.

3. return to the *Researcher(s)* named above all research information (transcripts, audio tapes, flash drive/ memory device, digital images, etc.) given me when I have completed with the research duties.

4. delete, erase or destroy all research information saved in any form or format (transcripts, audio tapes, flash drive/ memory device, digital images, etc.) on this research project after confirming with the *Researcher(s)* named above.

MARY ABOAGYE		05/01/16
(Full Name)	(Signature)	(Date)

Please sign above, then retain a copy of this 2-paged form for your records. Researcher also retains a signed copy.

Researcher

Researcher:

Mary Ani-Amponsah		27th November, 2015
(Full Name)	(Signature)	(Date)

Appendix N: Confidentiality Agreement Form (Second Reader B)

UNIVERSITY OF ALBERTA

University of Ghana

UNIVERSITY OF ALBERTA

University of Ghana

Appendix L: Confidentiality Agreement Form (Second Reader)

Title of Research: Experiences of midwives who are faced with newborns affected by birth asphyxia in rural birth settings, southern Ghana.

Name of Researcher:
Mary Ani-Amponsah (RN, PhD Nursing Candidate, MPhil Nurs, Bach. Nurs/Psych).
4-171 Edmonton Clinic Health Academy (ECHA), 11405 87 Avenue, University of Alberta, Edmonton Alberta, Canada, T6G 1C9. Canada.
Email: mnkansah@ualberta.ca, Phone: 011-233244.368.205 (Ghana), 001-587.926.0409 (Canada).

Names of Research Supervisors:
Dr. Solina Magdalena Richter (Associate Professor).
Faculty of Nursing, Level 3, ECHA, 11405 87 Avenue, University of Alberta, Edmonton Alberta. Canada. T6G 1C9. Office: 5-269, ECHA.
Email: solina.richter@ualberta.ca. Phone: 001-780.492.7953, Fax: 001-780.492.2551.

Dr. Sherrill Conroy (Associate Professor),
Faculty of Nursing Level 3, ECHA, 11405 87 Avenue, University of Alberta, Edmonton-Alberta, T6G 1C9.Canada. Office: 5-293, ECHA.
Email: sherrill.conroy@ualberta.ca, Phone: 001-780.492.9043, Fax: 001-780.492.2551.

Second Reader:

I SMO DEBORA BOATENG (full name), the second reader for this research,agree to:

1. hold in confidence all the research information shared with me by not sharing the information (transcripts, audio tapes, flash drive/ memory device, digital images, etc.) or discussing it with any individual or group of people other than the *Researcher(s)* named above.

2. preserve all the research information (transcripts, audio tapes, flash drive/ memory device, digital images, etc.) handed to me securely at all times.

3. return to the *Researcher(s)* named above all research information (transcripts, audio tapes, flash drive/ memory device, digital images, etc.) given me when I have completed with the research duties.

4. delete, erase or destroy all research information saved in any form or format (transcripts, audio tapes, flash drive/ memory device, digital images, etc.) on this research project after confirming with the *Researcher(s)* named above.

SNO Deborah Boateng _____ 2014/16
(Full Name) (Signature) (Date)

Please sign above, then retain a copy of this2-paged form for your records. Researcher also retains a signedcopy.

Researcher

Researcher:

Mary Ani-Amponsah _____ 27th November, 2015 (Full Name)
(Signature) (Date)

Appendix O: Ethical Approval: University of Alberta (a)

Notification of Approval (Renewal)

Date:	September 3, 2015
Amendment ID:	Pro00044075_REN1
Principal Investigator:	Mary Ani-Amponsah
Study ID:	Pro00044075
Study Title:	Experiences of Midwives Who Are Faced With Newborns Affected By Birth Asphyxia In Rural Birth Settings, Southern Ghana
Supervisor:	Magdalena Richter

Approved Consent Form:	Approval Date	Approved Document
	9/24/2014	Informed Consent Form
	9/24/2014	Research Information Sheet

Approval Expiry Date:	Friday, September 2, 2016

Thank you for submitting this renewal application. Your application has been reviewed and approved.

This re-approval is valid for one year. If your study continues past the expiration date as noted above, you will be required to complete another renewal request. Beginning at 30 days prior to the expiration date, you will receive notices that the study is about to expire. If you do not renew on or before the renewal expiry date, you will have to re-submit an ethics application.

Sincerely,

Anne Malena, PhD
Chair, Research Ethics Board 1

Note: This correspondence includes an electronic signature (validation and approval via an online system).

Appendix P - Ethical Approval: NMIMR, Ghana (b)

NOGUCHI MEMORIAL INSTITUTE FOR MEDICAL RESEARCH
Established 1979
A Constituent of the College of Health Sciences
University of Ghana

INSTITUTIONAL REVIEW BOARD

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Post Office Box LG 581
Legon, Accra
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My Ref. No: DF.22
Your Ref. No:

4th November, 2015

ETHICAL CLEARANCE

FEDERALWIDE ASSURANCE FWA 00001824 **IRB 00001276**

NMIMR-IRB CPN 108/13-14 ***revd. 2014*** **IORG 0000908**

On 4th November 2015, the Noguchi Memorial Institute for Medical Research (NMIMR) Institutional Review Board (IRB) at a full board meeting conducted continuing review and renewed your protocol titled:

TITLE OF PROTOCOL : **Experiences of midwives who are faced with newborns affected by birth asphyxia in rural birth settings, Southern Ghana**

PRINCIPAL INVESTIGATOR : **Mary Ani-Amponsah, PhD Cand.**

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

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

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

This certificate is valid till 3rd November, 2016. You are to submit annual reports for continuing review.

Signature of Chair: .....
Mrs. Chris Dadzie
(NMIMR – IRB, Chair)

cc: Professor Kwadwo Koram
Director, Noguchi Memorial Institute
for Medical Research, University of Ghana, Legon

Appendix Q: Glossary of Heideggerian Terms in Interpretive Phenomenology

Terminology	Meaning
Anxiety	Is the recognition of certain kind of nothingness which involves groundlessness in our existence. Anxiety is basically anxiety over nothing-precisely no object, besides our very Being-in-the world itself (Moran, 2000). Anxiety demonstrates its Being-there in its Being-out-for its most unique can be, and being free to choose itself and take hold of its very self (Schalow and Denker, 2010).
Authentic	Involves our genuineness, and living up to what one believes. Authentic moments are those periods when we are most at home with ourselves and are one with ourselves (Moran, 2000)
Authenticity	Living up to what one believes in even if it is at odds with what is perceived socially acceptable
Background	The 'place' where our mindless coping skills, practices and discriminations into which we are socialized are situated. These practices can at best function if they remain in our Background and once our Background practices contain knowledge, they must be based on implicit beliefs (Dreyfus, 1995).
Being *(Sein)*	Human Being: refers to our intelligibility and self –interpreting abilities (Dreyfus, 1995). Being allows entities to be whilst it withdraws itself and in truth remains concealed. The history of Being is its condition of human history (Schalow and Denker, 2010).
Being-in-the-world	Is a unitary phenomenon that consists of the worldhood of the world; the 'who' that is in the world and the Being-in. Being is not static, but is a temporary, dynamic and historical happening. The basic constitution of Being-there is Being-in-the world. Seeking what Being means is the central problem of ontology. Being-there as existence portrays itself as already standing out in a world (Schalow and Denker, 2010).
Care *(Sorge)*	Is in being-there's relation to its world, being engaged with the Other, showing a concern for, and in relation with others
Co-constitution	Persons form an integral part of a communal world, linked to one another and not as separate entities. Essentially, persons and the world come together to co-constitute meanings and understandings in the world in which they live
Epistemology	Knowing that something is true; a typically constructed way of knowing

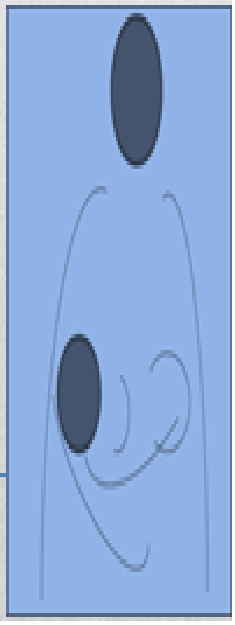
Fore-conception *(Vorgriff)*	Something we already have grasped in advance that enables us to conceptualize that which we fore-sight and fore-having of. Our everyday interpretation is rooted in our fore-conception, fore-having and fore-sight (Schalow and Denker, 2010).
Fore-having *(Vorhabe)*	Something we have gathered in advance that provides a preliminary basis upon which we are able to determine our fore-sight. (Schalow and Denker, 2010).
Fore-sight*(Vorsicht)*	Something we see in advance in a definite way for interpretation (Schalow and Denker, 2010).
Fore-structure	Our fore-conception, fore-having and fore-sight form a fore-structure which involves temporality, and enables us to have an explicit understanding of our Background.
Genuineness	Being authentic, not feigning
Hermeneutic circle	Circular nature of interpretation that is shared between persons as they interact
Hermeneutic spiral	Spiraling form of interpretation in which people build on each other other's understandings over time
Historicity	Our past influences our Background which subsequently affects our present and future. Our past, present and future are integrated and inseparable
Inauthentic	A habitual way of being non-genuine
Lived experience	An experience in which we are totally engaged with our whole Being
Ontology	'Knowing how'; understanding of ways of Being, an embodied knowing
Space *(Raum)*	Space is constitutive for the world and the spatiality of being-there is the condition of the possibility of space (Schalow and Denker, 2010)
Temporality	Our past and future aspirations influence our present situation and choices
Undifferentiated	A Mode in which one is lost in a world in which one is lost in a world where one passively assumes a stance, picked up from the collective and public way of doing things, that is reflective of not taking charge or oneself, basically flows with the people. People exist in this mode most of the time and many of our life activities occur whilst in this mode of existence

Appendix R: Research Poster

Research Poster

An Opportunity For Midwives To Participate In Newborn Health Care Research

Research Title: Experiences of Midwives Who Are Faced With Newborns Affected By Birth Asphyxia in Rural Birth Settings, Ghana

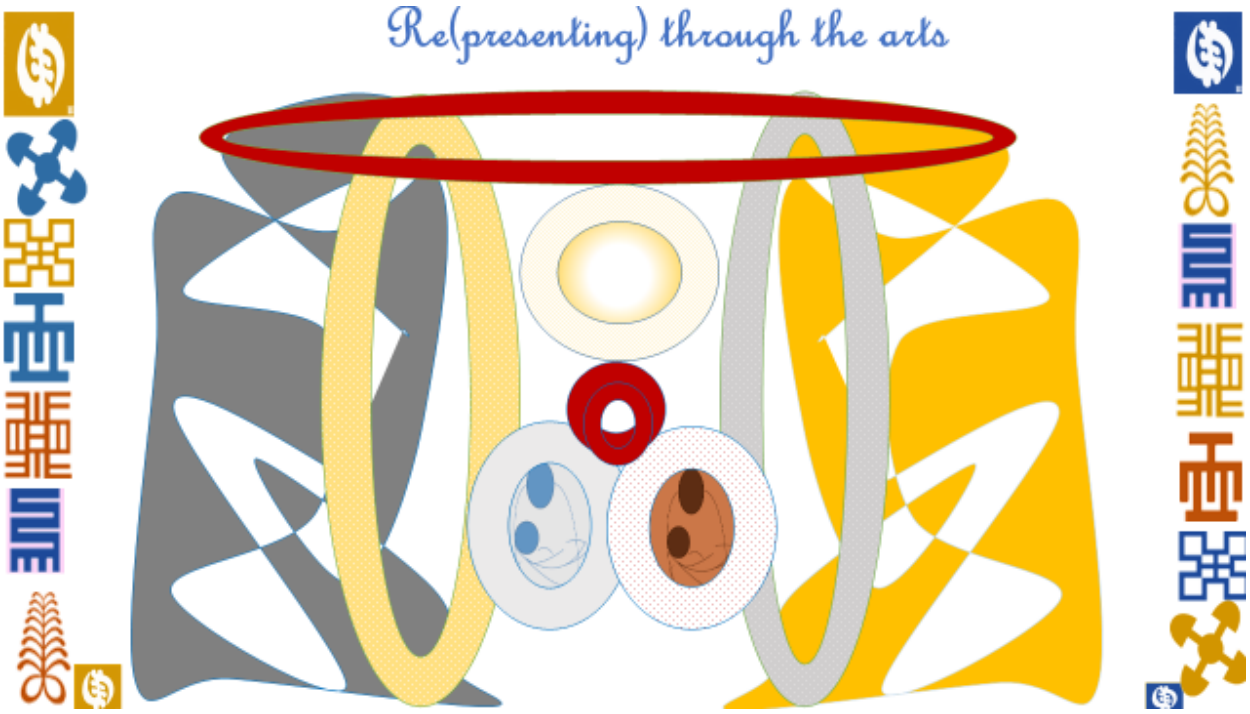


Please contact Mary Ani-Amponsah (RN, PhD Nursing Student) on:
Cell Phone Number - 0244-368206 or E-mail- mmkansah@ualberta to make enquiries or to participate in this study.

Appendix S: Sample Interpretation Worksheet

Sample interpretation worksheet without precis column (between narratives)	
Narrative (Session 1)	**Interpretation**
CODE A2 (#1) Lines: 210-212: You have to manage and do everything [*moving hands in circling motion in desperation*]. You can call a relative and show her how to bag the baby, it might not be the best but better than none and then you attend to the rest. - **Code A3: (#1)** Line: 95- When lights go off, I use torch or rechargeable lamps for deliveries.	Dasein gains itself in trying to understand circumspectively objects of concern which are ready-at-hand, and remains open to spatial relationships in which Dasein is disclosed to itself Equipment: unreadiness to hand – Encounters are fundamentally subject-object in structure.

Appendix T: Digital image: (re) presentation of study findings



Legend: Adinkra symbols

Symbol	Akan interpretation	Symbolic meaning
	Aya	Resilience, endurance, resourcefulness
	Hwemudua	Examination, evaluation
	Gye Nyame	Except God, God is supreme
	Nkyin kyim	initiative, versatile, dynamic,
	Nsaa	Authentic, genuine
	Akoma nkabom	Linked hearts, togetherness
	Nea onnim no sua a, ohu	He who does not know, can gain knowledge through learning

Appendix U: Knowledge Translation [KT] Plan

Knowledge Translation Plan (with a potential to initiate a 'Program of Research' post PhD		
Idea	**Process**	**Product /timelines**
Develop a one hour 30 minutes (1 hr 30 minutes) documentary film (Based on participants' stories with local actors in a similar rural context). P**rimarily a volunteer activity**	**Develop a proposal** based on participants' stories in the context of SDG 3.2 and ENAP. (*With prior discussions and permission from midwives, seek approval from Ghana ethics boards, and Shai-District Health authority).* **Potential actors:** Cast crew: 2 midwives, 2 pseudo-pregnant women; 1 CHN, I EN, I RN, I Chief, 2 community Elders, 2 relatives/friends, 2 community volunteers, 1 taxi driver, I okada rider, 1 trotro driver, I researcher (narrator). **Estimated ticket cost for entry: (Ghana Cedis)** • 5.00 for midwifery students • 7.00 for nursing students • 8.00 for RMs, RNs and other cadre of practicing nurses • 10.00 for stakeholders • Free for nursing/midwifery retirees, and midwives in rural practice • 5.00 for the general public • 10.00 for media personnel All funds/donations will be used as seed money to establish a Foundation to support rural newborn health	**1-31st August, 2016** **Film making, editing and copyright; 1st Sept – 31st October, 2016.** **Consult:** • Ghana National Arts Theatre • Event Manager • Ghana Arts Ensemble (University of Ghana) 15- minute performance to unveil the cultural heritage in newborn care; cultural display in traditional dancing and drumming. Arrange for venue, publicise event, dispatch invitation letters and track feedback, advance ticket sales**,** **Midwifery in the Theatre** (Title of documentary). Showcase at the City Theatre Accra twice a week in December, 2016 10am – 12.30 pm; 1pm – 3.30 pm (Tuesdays and Thursdays)

	Invitees: Midwives, nurses, stakeholders (Minister of Health, Nurses and Midwives' Council of Ghana, GCNM, GRMA, GRNA, Minister of Women, Gender, Children and Social Protection, Religious groups, Women Groups). • 30-minute video-recorded discussions to follow after documentary showcase (collect research data for syntheses and publication) • Form a research team with two midwives (urban and rural-based), a Pediatric Nurse, Sociologist, and Statistician	
Business Model		
Idea	**Process**	**Product/timeline**
1.Locally-made bulb syringe with aspirator Features: flexible nozzle and longer tip that can extend to the pharyngeal area of the neonate for gentle manual suctioning	Negotiate and establish patency with potential companies (i.e. Duraplast Ltd; Ghana Rubber Products Ltd; and Scanbech Gh. Ltd.) Use seed money from documentary and donations	January – April, 2017 **Product name***: Marybell Syringe*
Grant Application		
University of Ghana Faculty Research fund Grand Challenges Bill & Melinda Gates Foundation	Seek mentorship/coaching from my Research Supervisors	**January – June, 2017** • Increase family and stakeholder involvement in community-based newborn health care • Scale up in-service training for midwives • Expand the distribution of bulb syringes and self-inflating bags