

**ASSESSMENT OF MIDWIVES ON ACTIVE MANAGEMENT OF THIRD  
STAGE OF LABOUR IN OSOGBO, NIGERIA .**

**OKE, REBECCA OLUWASEUN**

**10509738**

**THIS DISSERTATION IS SUBMITTED TO THE UNIVERSITY OF  
GHANA, LEGON IN PARTIAL FULFILMENT OF THE REQUIREMENT  
FOR THE AWARD OF MSC NURSING DEGREE**



**JUNE, 2015**

**DECLARATION**

I declare that this dissertation is the result of my own research work, except where references have been properly acknowledged. Additionally, this dissertation has not been submitted in candidature for any other degree.

.....  
Oke, Rebecca Oluwaseun  
Date

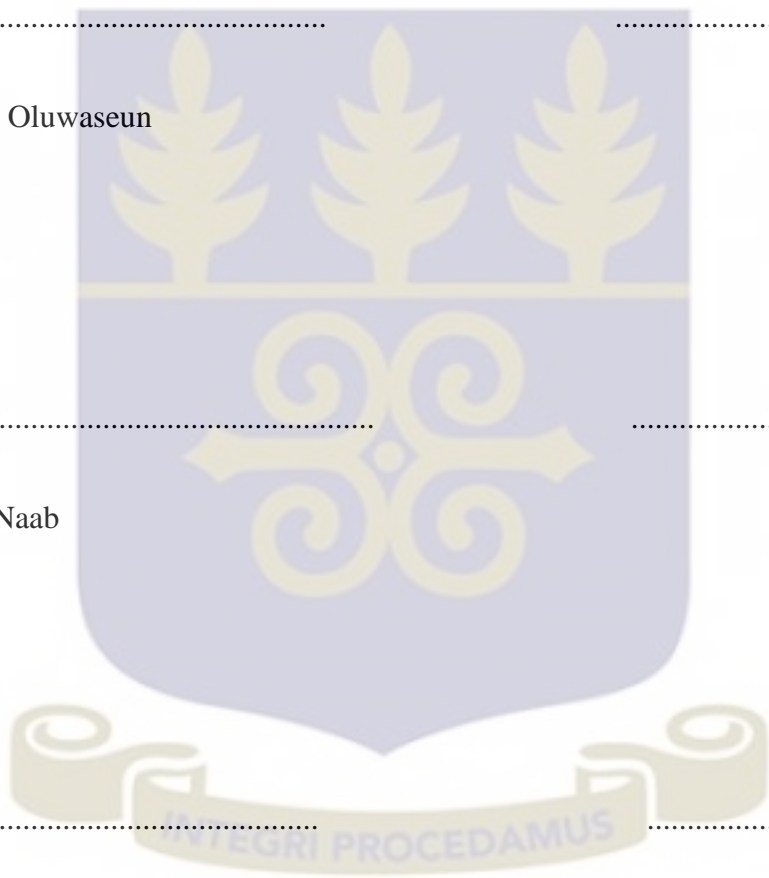
Candidate

.....  
Dr. Florence Naab  
Date

Supervisor

.....  
Prof. Ernestina Donkor  
Date

Co-supervisor



## **DEDICATION**

This research work is dedicated to my husband, Dr. Oke, Olufemi and our two children Prisca and Paul.



## **ACKNOWLEDGEMENT**

I am greatly indebted to my supervisors Dr. Florence Naab and Prof. Ernestina Donkor for the invaluable advice, suggestions, guidance, assistance and support given to me throughout the stages of this dissertation.

Similarly, I appreciate the cooperation of the midwives at the LAUTECH Teaching Hospital and State Specialist Hospital, Osogbo who participated in the study. This research would not have been possible without you. I am pleased with Dr. Oke, Olufemi who assisted me in the data collection for this research.

Also, I sincerely want to appreciate the Dean, lecturers and other non academic staff of the School of Nursing, University of Ghana, Legon, for their hospitality, enormous support and encouragement throughout the programme.

I cannot but appreciate my dear parents Mr. & Mrs. R.O. Oyeniya for their support physically, spiritually, financially and morally. I wish to thank my siblings Mr. Oyeniya Olufemi and Mr. & Mrs. Adeyanju for their support and prayers. All my friends and course mates in the MSc. and Mphil Nursing for their kindness and cordial relationship throughout my studies in Ghana.

Furthermore, I would like to thank my husband Dr. Oke, Olufemi and my children Prisca and Paul for their cooperation and endurance while I was away for this programme.

Finally, I return all glory, honor, power and strength to the Lord- God- Almighty the Beginning and the End.

**TABLE OF CONTENT**

<b>Content</b>	<b>Page</b>
DECLARATION .....	i
DEDICATION .....	ii
ACKNOWLEDGEMENT .....	iii
TABLE OF CONTENTS .....	iv
LIST OF TABLES .....	viii
LIST OF ABBREVIATIONS .....	ix
ABSTRACT .....	x
CHAPTER ONE .....	1
1.0 INTRODUCTION .....	1
1.1 Background to the study .....	1
1.2 statement of the problem .....	3
1.3 Purpose of the Study .....	5
1.4 Objectives of the Study .....	5
1.5 Research Questions .....	6
1.6 Significance of the study .....	6
1.7 Operational Definition of Terms .....	6
CHAPTER TWO .....	8
LITERATURE REVIEW .....	8
2.1 Overview of third stage of labour .....	8
2.2 Knowledge of midwives on active management of third stage of labour .....	11
2.3 Review of the components of AMTSL .....	12

2.4 Relationship between socio-demographic variables of midwives and knowledge and practice of active management of third stage of labour .....	14
2.5 Practices of active management of third stage of labour among midwives .....	16
2.6 Barriers to the practice of AMTSL among midwives .....	20
2.7 Summary .....	21
CHAPTER THREE.....	22
3.0 METHODOLOGY.....	22
3.1 Research Design .....	22
3.2 Research Setting .....	23
3.3 Study Population .....	23
3.4 Sample and Sampling technique .....	24
3.5 Instrument for data collection.....	26
3.6 Validity and reliability of instrument .....	27
3.7 Procedure for data collection.....	27
3.8 Method of data Analysis.....	28
3.9 Ethical consideration .....	28
CHAPTER FOUR.....	30
4.0 FINDINGS .....	30
4.1 Demographic Characteristics.....	30
4.2 Knowledge of Midwives on Active Management of Third Stage of Labour.....	31
4.3 Relationship between midwives socio-demographic characteristics and knowledge of Active Management of Third Stage labour .....	33
4.4 Practices of AMTSL among Midwives .....	35
4.5 Relationship between midwives demographic characteristics and practice of Active Management of Third Stage labour .....	36
4.6 Barriers to the Practice of AMTSL .....	38

4.7 Relationship between Knowledge and Practice of Active Management of Third Stage of Labour .....	39
CHAPTER FIVE.....	41
DISCUSSION OF FINDINGS .....	41
5.0 Introduction .....	41
5.1 Demographic Characteristics.....	41
5.2 Knowledge of midwives on the active management of third stage of labour. ....	41
5.3 Relationship between midwives socio-demographic characteristics and knowledge of Active Management of Third Stage labour.....	43
5.4 Practices of midwives on active management of third stage of labour. ....	43
5.5 Relationship between practices of active management of third stage of labour and socio-demographic characteristics of midwives.....	44
5.6 Barriers to the practice of active management of third stage of labour among midwives .....	45
5.7 Relationship between knowledge and practice of active management of third stage of labour among midwives .....	46
CHAPTER SIX .....	49
SUMMARY, IMPLICATIONS, CONCLUSION, AND RECOMMENDATIONS.....	49
6.0 Summary .....	49
6.2 Implications .....	50
6.2.1 For Nursing Practice.....	50
6.2.2 For Nursing Education .....	50
6.2.3 For Nursing Administration .....	51
6.2.4 For Nursing Research.....	51
6.3 Limitations of the Study .....	52
6.4 Conclusion.....	52

6.5 Recommendations .....	52
6.5.1 To Ministry of Health.....	53
6.5.2 To Hospital’s Management Board .....	53
6.5.3 To Nurse Managers .....	53
6.5.3 To Midwives and Midwifery Educators.....	54
6.5.4 To Nurse Researchers.....	54
REFERENCES.....	55
APPENDICES .....	63
Appenddix A: Consent Form .....	63
Appendix B: Questionnaire .....	67
Appendix C: SPSS Output Of The Result.....	72
Appendix D: Ethical Clearance .....	87
Appendix E: Introductory Letter Lautech Teaching Hospital, Osogbo .....	88
Appendix F: State Specialist Hospital, Asubiaro, Osogbo.....	89



**LIST OF TABLES**

Table 4. 1: Demographic Characteristics of Midwives.....	31
Table 4. 2: Knowledge of AMTSL .....	32
Table 4. 3: Relationship between Knowledge of active management of third stage labour and Socio-demographic characteristics of the midwives .....	34
Table 4. 4: Cross-Tabulation of Type of Hospital and Knowledge of Active Management of Third Stage Labour.....	35
Table 4. 5: Practices of AMTSL among Midwives .....	36
Table 4. 6: Relationship between Practices of active management of third stage of labour and Socio-demographic characteristics of midwives .....	38
Table 4. 7: Cross-Tabulation of Type of Hospital and Practice of Active Management of Third Stage of Labour.....	38
Table 4. 8: Barriers to the Practice of AMTSL.....	39
Table 4. 9: Relationship between Knowledge of midwives and their practice of active management of third stage of labour .....	40



**LIST OF ABBREVIATIONS**

AMTSL	Active Management of Third Stage of Labour
CCT	Controlled Cord Traction
FIGO	Federation of International Gynaecologists and Obstetrician
ICM	International Confederation of Midwives
MPS	Making Pregnancy Safe
POPHI	Prevention of Postpartum Haemorrhage Initiative
PPH	Postpartum Haemorrhage
SBA	Skilled Birth Attendants
UM	Uterine Massage
WHO	World Health Organization



**ABSTRACT**

Active management of third stage of labour is one of the important strategies for reducing postpartum haemorrhage which is the leading cause of maternal mortality and morbidity worldwide. In Nigeria, the maternal mortality ratio is as high as 1,500 per 100,000 live births making 10% of the world's maternal death annually and ranks second globally in the number of maternal death. The aim of this study was to assess midwives on active management of third stage of labour in Osogbo, Nigeria. A quantitative approach of cross-sectional survey was used to obtain information relevant to the research questions. Three hundred (300) midwives who fulfilled the inclusion criteria were selected using purposive non probability sampling technique. Structured questionnaires were administered to the midwives who fulfilled the inclusion criteria after filling out the consent form. The completed 300 questionnaires were retrieved (response rate was 100%) and analyzed using SPSS version 20. Findings suggest that female, midwives who are Christians, working at the tertiary healthcare facility and have been practicing between 1 to 5 years were more likely to have more knowledge and practice of AMTSL. However, there was no barrier identified in this study by the midwives for not practicing AMTSL but that does not mean there are no barriers. Hence, it is important that healthcare agencies should be organizing seminars and workshops on AMTSL frequently to get the midwives who have been practicing for over 16 years updated on the new guidelines on AMTSL and should ensure proper supervision and monitoring to enhance adherence to standard on AMTSL.

## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background to the study

Postpartum hemorrhage (PPH) is the leading cause of maternal death worldwide, with an estimated mortality rate of 140 000 per year accounting for approximately one maternal death every 4 minutes (Leduc, Andre & Lalonde, 2009). The prevalence of PPH has been estimated to be 5.77% of all delivery and responsible for 27% of all maternal deaths worldwide (Lubaki, Ngolo & Maniati, 2010). Severe bleeding in the postpartum period is the single most important cause of maternal deaths worldwide and more than half of all maternal deaths occur within 24 hours of delivery, most commonly from excessive blood loss (AbouZahr, 2003).

Post-partum haemorrhage (PPH) is the single largest cause of maternal death particularly in developing countries (Lubaki and colleagues, 2010). In Africa the situation is worse as 33.9 % of maternal deaths are due to PPH (Zubor and colleagues, 2014). Audu, Takai & Bukar (2010) reported that Nigeria with a maternal mortality ratio of 1,500 per 100,000 live births and some 55,000 maternal deaths annually, presently is 2% of the world's population, but accounts for 10% of the world's maternal deaths and ranks second globally in the number of maternal deaths. Gilda, Henshaw, Susheela (2007) reported that a clinical guideline for the prevention of post-partum hemorrhage widely recommend provision of a package of interventions known collectively as Active Management of the Third Stage of Labor (AMTSL). Sheldon , Durocher, Winikoff, Blum & Trussell (2013) discovered that PPH has been shown to be effectively prevented by the use of active management of the third stage of labour (AMTSL). WHO Making Pregnancy Safe Technical Update (2006) also revealed that AMTSL is intended to reduce post-partum blood loss through expediting placental delivery and preventing uterine atony . Active

management of the third stage of labor (AMTSL) is a feasible and inexpensive intervention that can help to save millions of women's lives especially in a poor resource setting.

Active management of the third stage of labor (AMTSL) is a combination of actions performed during the third stage of labor to prevent PPH, the components of AMTSL are administration of a uterotonic drug within one minute after the baby is born, controlled cord traction (CCT) and uterine massage immediately after delivery of the placenta (WHO MPS Technical update, 2006). Based on an extensive review of the literature, the joint statements by the ICM/FIGO recommends that active management of third-stage of labor be offered to all women, because the presence of risk factors cannot be used to predict postpartum hemorrhage, Active management has been proved to reduce the incidence of postpartum hemorrhage, the quantity of blood loss, and the use of blood transfusions (Sheldon, Durocher, Winikoff, Blum & Trussell, 2013.). The Prevention of Postpartum Hemorrhage Initiative (2013) reported that Postpartum hemorrhage (PPH) is commonly defined as blood loss >500ml in the first 24 hours after delivery and severe PPH is loss of 1000mL or more. The use of active management of the third stage of labor (AMTSL), has been associated with nearly 60% reduction in PPH occurrence and that universal use of AMTSL will prevent 27% of deaths from PPH (POPPHI, 2013). A retrospective study from Ghana compared active versus expectant management in a rural setting at Holy Family Hospital in Berekum, the findings show that PPH occurred less often in the actively managed group compared with the expectant management group (Miller, Lester & Hensleigh, 2004). Miller and her colleague (2004) found that despite the fact that several studies have shown that AMTSL, is an effective evidence-based intervention for the prevention of uterine atony and PPH, the knowledge, correct and timely practice in most developing countries including Nigeria are still very low. A study

done in Ghana elucidated some factors as being responsible for low utilization of AMTSL during delivery including inconsistent guidelines on AMTSL, lack of adequate staff and inability of the old midwives to adapt to the new guidelines (Hammah & Donkor, 2013). In a qualitative study conducted in Accra metropolies, It was discovered that some of the difficulties in implementing AMTSL are insufficiency in staff coverage leading to task shifting and the frequent change in the definition of AMTSL since its introduction in 2003 (Schack, Elyas, Brew & Pettersson, 2014). Lack of training was seen as a barrier to the implementation of AMTSL (POPPHI, 2007). This study is proposing to assess the knowledge and challenges of midwives about their practice of AMTSL.

### **1.2 statement of the problem**

In 2010 approximately 14 million women suffered from postpartum hemorrhage worldwide resulting into 287 000 women dying while pregnant or giving birth (WHO, 2004). Carroli, Cuesta, Abalos, Gulmezoglu (2008) reported that postpartum haemorrhage (PPH) is the leading cause of maternal mortality worldwide with a prevalence rate of approximately 6%. Africa has the highest prevalence rate of about 10.5% . In Africa and Asia, where most maternal deaths occur, PPH accounts for more than 30% of all maternal deaths. PPH is the leading cause of maternal death in low-income countries and is the primary cause of approximately one-quarter of global maternal deaths (Fawole, Awolude, Adeniji & Onafowokan, 2013). The most common cause of PPH is uterine atony, a condition in which the uterus failed to contract after delivery of the fetus and/or placenta (Carroli, Cuesta, Abalos & Gulmezoglu, 2008). Among PPH survivors, an estimated 12% will suffer from the consequences of severe anemia (AbouZahr, 2003). Annually, an estimated 52,900 Nigerian women die from pregnancy related complications (Ogunjimi, Ibe, Ikorok, 2012). A woman's chance of dying from pregnancy and childbirth in Nigeria is 1 in 13, compared with 1 in 35 in Ghana and 1 in 2800 in develop countries (Ogunjimi,

Ibe & Ikorok, 2012). Various studies had consistently demonstrated poor knowledge, practice and various challenges serving as a barrier for the effective use of AMTSL by the skilled birth attendants which is a proven effective strategy to prevent PPH the main cause of maternal death (Naamala,2007, Mfinanga, Kimaro, Ngadaya, Massawe & Mtandu, 2009). In a study carried out in Tanzania,on the knowledge of AMTSL only 9% made correct statements regarding all three components as in the definition of AMTSL,these included uterotonic drug administration within 1 minute following the delivery of the fetus, Controlled Cord Traction and uterine massage every 15minutes up to two hours after delivery (Tanzania survey, 2006). In general, 91% of health care providers made no correct statements regarding the definition of AMTSL with 36% and 46% of the healthcare providers mentioning one and two components of AMTSL, respectively (Naamala, 2007). Also, study carried out in Uganda shows that the practices of the midwives were very poor as evidenced by only 26% using only one component of AMTSL during delivery of their clients . About 26% of the delivery was without the use of controlled cord traction while 8% never used any uterotonics to conduct third stage of labour all these demonstrated very poor practices of midwives as regards AMTSL (Naamala, 2007). About 31% of all delivery had oxytocin given with no restrictions on timing, mode of administration or dose and no correct practice was seen with respect to timing in AMTSL according to ICM/FIGO definition (Ngadaya, Massawe, Mtandu, Shayo & Kahwa, 2009). In a study carried out in Uganda, the use of AMTSL according to the ICM/FIGO definition was observed in 5.4% of deliveries, if the definition of AMTSL is relaxed to allow for administration of the uterotonic drug within three minutes of delivery of the fetus, the proportion receiving AMTSL increases to 7.3% (Uganda survey, 2007). In this same study only one third (33.3%) of the health facilities visited had the national clinical guidelines with 35% of the facilities having no stock of oxytocin which is the drug

of choice in the ICM/FIGO guideline (Uganda survey, 2007). Despite the fact that the key components of AMTSL which are prophylactic administration of oxytocin 10 IU within 1 minute following the birth of the baby, delivery of placenta with controlled cord traction (CCT), uterine massage after delivery of the placenta every 15 minutes for two hours were not difficult to carry out, the practice is not satisfactory. With various conchrane review of evidences from AMTSL studies, it was concluded that AMTSL should be provided for all women delivering in all health facility and anticipating vaginal birth of a single infant because of its ability to prevent postpartumhemorrhage (Implementation guidelines for Uganda, 2011). All these evidences show that there is still poor knowledge, practices and challenges towards the use of this AMTSL.

### **1.3 Purpose of the Study**

The purpose of this study is to examine the use of active management of third stage of labour among midwives in Osogbo, Osun state, Nigeria.

### **1.4 Objectives of the Study**

The specific objectives of the study were to;

1. Assess the knowledge of midwives on the active management of third stage of labour.
2. Assess the practice of midwives on active management of third stage of labour
3. Determine barriers towards the practice of active management of labour among midwives
4. Examine the relationship between the knowledge and practice of active management of third stage

### **1.5 Research Questions**

1. What is the level of knowledge of active management of third stage of labour among midwives in Osogbo?
2. How is the practice of active management of third stage of labour among midwives in Osogbo?
3. What are the barriers to the practice of active management of third stage of labour among midwives in Osogbo?
4. What is the relationship between the knowledge and practice of active management of third stage of labour among midwives in Osogbo?

### **1.6 Significance of the study**

Findings from this study may assist health professionals that are directly involved with pregnant women and those in labour in gaining more information about active management of third stage of labour and contribute towards the development of in-service training programs for midwives. Promoting the awareness and practice of active management of third stage of labour is of crucial importance for the prevention of postpartum hemorrhage. The findings may also contribute to the body of knowledge in midwifery and inform further research.

### **1.7 Operational Definition of Terms**

**Assessment:** is a way of evaluating or appraising the action of an individual

**Midwives:** are professionals that have been formally trained, registered and licenced to carry out delivery by the Nursing and Midwifery Council of Nigeria (N&MCN).

**Active Management of Third Stage of Labour(AMTSL):** involves prophylactic use of oxytocics, early clamping of the cord and controlled cord traction after the delivery of the baby.

**Postpartum haemorrhage:** excessive bleeding immediately or few days after birth

**Maternal morbidity:** illness due to pregnancy or childbirth

**Maternal mortality:** death resulting from pregnancy or childbirth

**Knowledge:** understanding of a subject

**Practice:** to carry out or perform an act

**Barriers:** an obstacle that prevent action

**Foetus:** unborn child



## CHAPTER TWO

### LITERATURE REVIEW

In this chapter, literature relevant to the problem was reviewed to investigate the state of knowledge about the research area. The literature review focused on empirical studies. Previous findings on the subject were examined critically, analyzed, summarized, and gaps identified based on the study design, sample size, generalization and context of the study. The reviewed empirical studies were arranged organised based on the study objectives into knowledge, practice and barriers to the practice of active management of third stage of labour among midwives.

Most of the information was accessed via internet search. Online library catalogue and databases such as Google scholar, Biomed central, Pubmed, Willey-online library, AJOL, EBSCOHOST were explored. To get articles relevant to the research topic, the Boolean method using combination of words were used (e.g. active management of third stage of labour, midwives, postpartum haemorrhage, prevention, knowledge, practice sometimes linked by “AND”, “OR”).

The articles were scanned and evaluated before selection for the review. The criteria used for selection includes publication status, evidence, reference and whether it was reviewed.

#### **2.1 Overview of third stage of labour**

The third stage of labour refers to the period between birth of the baby and complete expulsion of the placenta. Some degree of blood loss occurs after the birth of the baby due to separation of the placenta. This period is a risky period because the uterus may not contract well after birth and heavy blood loss can endanger the life of the mother

(Gulmezoglu et al, 2009). The third stage of labour is a powerful and mysterious time, more important and complex than what is acknowledged and known (Burkley, 2009). The third stage of labour is the period of time following the birth of the baby when the placenta separates and is expelled from the uterus. There are two options in its management that can be provided. The first is a physiological management of the third stage (also called expectant management). The second is an active management of third stage of labour (Dixon, Fletcher, Tracy, Gulland, Pairman & Hendry, 2009). Active management of the third stage of labor (AMTSL) is a feasible and inexpensive intervention that can help to save millions of women's lives especially in a poor resource setting. Active management of the third stage of labor (AMTSL) is a combination of actions performed during the third stage of labor to prevent postpartum haemorrhage (PPH).

In a joint statement in 2003, the International Federation of Obstetrics and Gynecology (FIGO) and the International Confederation of Midwives (ICM) introduced Active Management of Third Stage of Labor (AMTSL). The original guidelines included administration of uterotonic agents and cord clamping within one minute of delivery of the baby; active separation of the placenta by controlled cord traction (CCT) following signs of placenta separation; and uterine massage (UM) immediately after delivery of the placenta and subsequently every fifteen minutes for two hours (ICM/FIGO, 2003). The global consensus regarding the benefits of AMTSL was strongly supported by clinical trials conducted on PPH prevention (Prendiville, Elbourne and McDonald 2000; Begley et al., 2010) and it was consequently included in the WHO manual *Managing Complications in Pregnancy and Childbirth* (WHO, 2007). The guidelines were modified in 2006 to include the recommendation of delayed cord clamping (one to three minutes after birth), as this allows a prolonged flow of blood in the cord and thus may improve iron status in the infant. However, oxytocin was pointed out as the drug of choice in preference to other

injectable uterotonics and misoprostol (WHO, 2007). In 2012, the WHO released new guidelines where the emphasis on CCT was revisited (WHO, 2012). The new recommendations, based on a study by Gulmezoglu and colleagues, argued that omission of CCT has little effect on the risk for severe haemorrhage (Gulmezoglu et al., 2012). It is therefore considered optional in settings where skilled birth attendants are available but contraindicated in settings where other health workers assist in childbirths. Furthermore, early cord clamping (less than one minute after birth) has since 2012 been generally contraindicated with respect to the benefits that delayed cord clamping may have on the infant's iron status. Also in 2012, continuous uterine massage was discommended as a component of AMTSL in women who have received prophylactic oxytocin for the following reasons; it may cause maternal discomfort, it requires the presence of a dedicated health professional, and may not lead to a reduction of blood loss. In a recent study by Sheldon and colleagues, the use of uterine massage is not associated with a reduction of PPH incidence but may in fact lead to an increased risk of severe bleeding (Sheldon, Durocher, Winikoff, Blum & Trussel, 2013). However, surveillance of uterine tonus through abdominal palpation is recommended in all women for early identification of postpartum uterine atony. WHO (2012) reported that Active management does not rely on the woman's body to produce oxytocin to contract her uterus causing the placenta to separate from the uterine wall and for her to birth the placenta.

Instead, a prophylactic uterotonic drug (exogenous oxytocin) is given to the woman to induce contractility of her uterus, and to make the placenta separate from the uterine wall quicker. In summary, the use of uterotonics is considered as the main intervention throughout the active management of third stage of labor. Prophylactic uterotonic drug is a key component in the reduction of PPH (WHO, 2012).

## **2.2 Knowledge of midwives on active management of third stage of labour**

Active management of the third stage of labour (AMTSL) reduces postpartum haemorrhage (Jangsten et al, 2010). Smit and colleagues (2012) conducted a study on Survey of prophylactic use of uterotonics in the third stage of labour in the Netherlands with the objective of investigating current knowledge and practice regarding AMTSL in midwifery practices and obstetric departments in the Netherlands. It was found out that 87.5% (n=528) agreed that administering prophylactic uterotonics was a component AMTSL; 96.1% of midwives and 98.8% of obstetricians. Cord clamping was found as a component of AMTSL by 87.4% of midwives and by 88.1% of obstetricians. Uterine massage was only seen as a component of AMTSL by 10% of the midwives and 20.2% of the obstetricians. It was concluded that prophylactic administration of uterotonics directly after childbirth is perceived as the essential part of AMTSL.

Similarly in London, 50% of the respondents associated uterotonics administration, early cord clamping (i.e. within 1minute of birth) and controlled cord traction as part of the elements of third stage of labour. It was concluded that despite the recommendation of delayed cord clamping in the local guideline, early cord clamping is still routine practice among maternity staff practising active management with less than 10% of the respondents accepting delayed cord clamping as part of the AMSTL (Downey and Bewley, 2010).

In Iran, a survey discovered that the rate of active management of the third stage of labour was 57%, although answers to individual components of management indicated a higher rate for active interventions than expectant management (Afshari et al, 2012).

In addition, a study conducted in Zambia shows that a vast majority of the midwives were aware that AMTSL was associated with the administration of an uterotonic, and a more than half of the respondents were aware of CCT as a strategy for promoting delivery of the

placenta. Only a few respondents cited early cord clamping and cutting (no longer recommended) as a component of the AMTSL protocol (Vivio et al., 2010).

Furthermore, 94% of the responding centres indicated oxytocin administration, 71% applies early cord clamping and 65% apply controlled cord traction. The authors then concluded that there was high rate of active management in Iran with variations in its different components which is in line with other findings (Afshari et al, 2012).

In a study conducted in five selected countries Benin, Ecuador, Jamaica, Nicaragua and Rwanda, it was evident that skilled birth attendants (i.e. midwives, nurses and doctors) have high knowledge of AMTSL in Nicaragua but in other countries AMTSL was not routine at the time of the study. This may explain why many providers could not identify its components (IM oxytocin immediately after delivery of the foetus, controlled cord traction, uterine massage) and did not know that it should be practiced universally (Harvey et al., 2007).

In Nigeria, the knowledge of AMTSL can be described as familiar yet poorly understood intervention among a large proportion of maternity care providers. Fewer than three out of ten providers could differentiate the three components of AMTSL. This was further buttressed by the misconstruction of the interventions for the management of third stage complications as components of AMTSL (Oladapo et al, 2009). Active management should be the routine management of choice for women expecting to deliver a baby by vaginal delivery in a maternity hospital (Soltani, 2008).

## **2.3 Review of the components of AMTSL**

### **Prophylactic uterotonic**

WHO (2012) recommended that all women giving birth should be given oxytocin during the third stage of labour and this remain the main intervention in the third stage of

labour. Among the 12 countries of the European Union, a study conducted on the variations in policies for management of the third stage of labour revealed that prophylactic use of uterotonics was a policy about 72 to 100% of units in most participating countries apart from Austria and Denmark where 55 and 57% of units respectively reported a policy of using them. The policies for the timing of prophylactic administration of uterotonics diverged considerably. In 68% of units in the UK and Ireland, it was a policy to administer them immediately after the delivery of the anterior shoulder, while between 62 and 87% in Denmark, Finland, the Netherlands, Norway and Switzerland seem to favour administering uterotonics immediately after birth. Between 69 and 77% units in Italy, Portugal and Spain had policies of administering them after the delivery of the placenta. In Belgium, France and Hungary, policies differed both between and within units (Winter et al, 2007). It should be noted that the administration of oxytocin during the third stage is one of the accepted components of active management of third stage of labour, and the administration is best done after delivery of the placenta to reduce any potential risk to the baby from excessive transfer of placental blood to the baby during delayed cord clamping (Figueras and colleague, 2008; Qureshi and Luban, 2011).

### **Controlled cord traction**

In performing Controlled Cord Traction (CCT) placental separation is not waited and once the uterus contracts the CCT is initiated. The third stage is usually completed in less than 10 minutes when CCT is used (Althabe, Berge, Buekens, Sosa & Belizan, 2006). There is concern by clinicians, based on teachings from their pre-service education that traction on the cord prior to placental separation may lead to maternal complications such as separation of the cord from the placenta and uterine inversion. There is not a large body of direct evidence for or against effects of controlled cord traction in isolation (Althabe, Berge, Buekens, Sosa & Belizan, 2006). However, since controlled cord traction is one of

the components that require training in manual skill for it to be performed appropriately. If it is possible to dispense controlled cord traction without losing efficacy it would have major implications for effective management of the third stage of labour at peripheral levels of health care (Gulmezoglu and colleagues, 2009). WHO (2012) recommended the use of CCT to be optional in situations where the skilled birth attendants are available and contraindicated where they are not available.

### **Uterine massage**

After expelling the placenta, performing uterine massage is one of the practices recommended by the ICM, FIGO and WHO, in the active management of third stage of labour, which consists of massaging the fundus to the uterus until it is firmly contracted. To ensure that the uterus does not relax after the massage, uterine palpation should be performed every 15 minutes, and the massage should be repeated if necessary for 2 hours (FIGO/ICM 2004), of AMTSL. A systematic review to evaluate the effects of sustained uterine massage from the time of birth of the baby currently contains very little evidence to guide practice (Hofmeyr, Abdel-Aleem & Abdel- Aleem, 2008).

In the prevention of postpartum haemorrhage, it was reported that massaging of the uterus at regular intervals after placental delivery to keep the uterus well-contracted and firm (at least every 15 minutes for the first two hours after birth), is very effective (Fawcus, 2007)

## **2.4 Relationship between socio-demographic variables of midwives and knowledge and practice of active management of third stage of labour**

The socio-demographic characteristics in this context refer to characteristics of midwives such as age, religion, gender, years of experience, type of healthcare facility

where the midwives work etc. These variables may influence the level of knowledge and practice of active management of third stage of labour among midwives.

For instance, hierarchical nature of midwifery profession (years of experience) has been associated with a reduction in practice (probably as a result of lack of knowledge) of the older midwives delegating bulk of the duties to the younger midwives, the reason is not farfetched because the profession is female dominated with the female hierarchy exercising control over other women within a male-based power structure (Begley, 2002). Similarly, Novice midwives regarded hierarchical structures as a barrier to dissemination of knowledge in midwifery (e.g. AMTSL) to senior midwives, who sometimes had not acquired the recent knowledge during their training. As described by the younger midwives, this resulted in adherence to inaccurate practice (Schack, Elyas, Brew & Petterson, 2014).

Nigeria is nearly equally divided between christianity and Islam. The majority of Nigerian muslims are sunni and are concentrated in the northern area of the country, while Christians dominate the Middle Belt and southwestern Nigeria. Christians form a slight majority of the nation, comprising 50.8% of the population, while Muslims make up 47.9% (Global Christianity Report, 2015; Future of the World Muslim Population, 2011). Thus, majority of the practicing nurses and midwives in the southwestern Nigeria are Christians.

In Ontario, midwifery was practiced by women inside the order of Catholic Church in the late middle ages. Those willing to live by restrictive rules of the church, most commonly girls offered at an early age could enter into the profession (Piper, 2010).

Dean (2011) conducted a survey for the Nursing and Midwifery Council on ethnicity and religion of midwives in five regions in the United Kingdom (England, N. Ireland, Scotland, Wales and Non UK) the information revealed that 915 of the registrants

were women and 75% were Christians while 33% were born in the 1960s more than any other decades.

The type of hospital (whether tertiary, secondary or primary healthcare facility) where midwives practice have been found to have influence on their knowledge and practice of AMTSL. In a study by Prendiville, Harding, Elbourne & McDonald (2001), it was evident that a university based referral obstetric centre in Dublin (tertiary healthcare facility) consistently used all the three components of AMTSL in their practice.

Similarly in Tanzania, majority of the midwives are familiar with the three components of AMTSL by ICM/FIGO (2003). However, only 10% of the participating midwives have satisfactory knowledge and skills of AMTSL. The result showed that midwives who learnt AMTSL in midwifery/nursing school then got on job training were more competent on AMTSL than those who got from training school alone. Also, all municipal hospitals (tertiary healthcare facilities) have AMTSL protocol, with enough supply of uterotonics in the previous two consecutive months stored under appropriate temperature but shortage of midwives is major barrier to their effective practice of AMTSL (Ramadhani, 2011).

### **2.5 Practices of active management of third stage of labour among midwives**

The practice of AMTSL among skilled birth attendants is a relevant concern in midwifery practice. Midwives and medical officers in Cambodia reported learning about AMTSL in school and in workshops but had difficulty practicing AMTSL (Dawson et al, 2012) which creates a gap between theory and practice.

A similar study conducted by Bimbashi, Ndoni, Dokle & Duley (2008) suggested that 78% (n=156) of obstetricians reported using AMTSL. About 56% gave the uterotonic after cord clamping; intravenous oxytocin was almost always the drug used; and 71% clamped the cord within one minute. For physiological care: 42% clamped the cord within

20 seconds, and 96% within one minute. 93% would randomise women to a trial of early versus late cord clamping.

In another study on an integrative review of studies on the AMTSL and PPH indexed in databases of health between the years 2006-2012. The analysis included 13 articles and the results of this review of management practices supported active management of third stage of labour to prevent postpartum haemorrhage, with five main intervention: administration of oxytocin, delayed clamping of umbilical cord, draining of placental blood, controlled cord traction and uterine massage. It was also observed that the active management of other interventions used in the studies reviewed (controlled cord traction and uterine massage) may have a more significant role in reducing the duration of the third stage of labour than oxytocin administration (DeCastro Parreira & Gomes, 2013)

The authors concluded that most obstetricians always use active management for the third stage of labour. For timing and choice of the uterotonic drug, reported practice was similar to actual practice. Although some obstetricians reported they waited longer than one minute before clamping the cord, this was not observed in practice. Controlled cord traction was used for half the births.

In Nigeria, a study conducted by Oladapo, et al, (2009) reported that there was a high rate of compliance with most of the individual components of AMTSL although the practice of AMTSL varied widely with the definition applied. Thus, there is substantial definition-dependent variation in the providers' adherence to recommended AMTSL practices. The clinical implications of the current practice in this population suggest the need for randomized comparison of various AMTSL packages to determine their comparative effectiveness in the prevention of PPH.

Similarly, a study conducted in the North Central Region of Vietnam on reducing postpartum haemorrhage and assessing the effectiveness of active management of third

stage of labour revealed that AMTSL can successfully reduce the rate of PPH, shorten the duration of the third stage and reduce the need for extral treatment (Tsu, Mai, Nguyen & Luu, 2006).

WHO MPS Technical update (2006) recommended that AMTSL should be practiced by all skilled attendants at every birth to prevent postpartum haemorrhage. In a study by POPPHI (2007) on active management of third stage of labour in Uganda, It was evident that there were some practices that do not conform to the ICM/FIGO definition of AMTSL. These include the delayed administration of oxytocin following the delivery of the foetus, incorrect dose, lack of controlled cord traction, lack of uterine massage immediately following delivery of the placenta and no use of uterotonic in third and fourth stage of labour. This suggests that about one in twenty deliveries benefit from correct AMTSL practices. The use of AMTSL varies by region, the type of health facilities and location of the facility (WHO MPS Technical update, 2006). Of concern is 10.8% of the deliveries did not receiving any uterotonic drug at all. Over all the observations showed women who received AMTSL experienced a shorter duration of third stage of labour than those who did not receive AMTSL.

In the same vein, other practices that do not conform with the use active of management of third stage of labour is the use of a part of the components which include giving of oxytocin prophylactically immediately after the second stage of labour and not incorporating other components like controlled cord traction (CCT) and early clamping and cutting of the cord (Gulmezoglu et al, 2009)

In a study on active management of third stage of labour with and without controlled cord traction (CCT), it was evident that there were practices like delivering the placenta without using CCT which is an important component of AMTSL.(Artymuk, Surina & Marochko, 2013).

However, a study conducted in seven developing countries Benin, El Salvador, Ethiopia, Honduras, Indonesia, Nicaragua and United Republic of Tanzania. It was evident that the use of AMTSL appears to vary greatly between the countries studied, although clear patterns emerged; which are prophylactic uses of uterotonic drug especially oxytocin, during the third stage and fourth stage of labour is nearly universal. Incorrect active management of the third stage of labour is due to multiple deficiencies in practice. Active management appears not to be selectively practiced for women considered at high risk but may be used to a greater extent in national hospitals than in lower level facilities (Staton and colleague, 2009).

In addition, studies have shown that many maternity units in most countries do not use the full package of active management but do use some of its components. Most have policies about cutting and clamping the cord, either immediately after the birth or as soon as the cord stops pulsating, but differences in policies about controlled cord traction are much wider. Policies of using uterotonics are very widespread, and differences again relate to the timing of administration together with the pharmacological agent used (Winter et al, 2007).

In another study carried out in Tanzania, the authors discovered that correct practice of AMTSL according to the ICM/FIGO definition was observed in 7% of 251 deliveries. When the definition of AMTSL was relaxed to allow administration of the uterotonic drug within three minutes of fetus delivery, the proportion of AMTSL use increased to 17%. The study also observed potentially-harmful practices in approximately 1/3 of deliveries. Only 9% out of 106 health care providers made correct statements regarding the all three components of AMTSL. The national formulary recommends ergometrine (0.5 mg/IM) or oxytocin (5 IU/IM) on delivery of the anterior shoulder or immediately after the baby is

delivered. Most of facilities had satisfactory stores of drugs and supplies. Uterotonic drugs were stored at room temperature in 28% of the facilities (Mfinanga et al., 2009).

## **2.6 Barriers to the practice of AMTSL among midwives**

Unfortunately, the relative contribution of the components of AMTSL to the overall reduction in blood loss is not clearly known. Understanding the contribution of the components of AMTSL to the overall effect in reducing the incidence of haemorrhage could have major programmatic significance since some components require training while others require an efficient drug procurement and utilization system (Soltani, 2008). At the same time the probability of interaction between AMTSL components should be kept in mind.

Factors such as unavailability of uterotonics and lack of curricula support for teaching AMTSL in higher institutions have been reported in Uganda as barriers impeding the practice of AMTSL (POPPHI, 2007).

It is interesting to note that although midwives were more familiar than the physicians with the society of Obstetricians and Gynaecologists of Canada guidelines recommending active management of third stage of labour, most of them rejected it, believing that the guideline did not take into account women's preferences in the management of this phase of labour. Infact, the use of uterotonics as a component seems to be the only one with little controversy, thus making it a reason for not fully practicing the intervention (Tan, Klein, Saxell, Shirkoohy & Asrat, 2008)

In Ghana, shortage and inadequate training of staff, improper storage of oxytocic drugs, lack of knowledge and skill on AMTSL, and decisions to adhere to other methods of managing the third stage of labour were reported as barriers to the practice of AMTSL (Hammah & Donkor, 2013). In another study in Ghana, insufficient staff coverage leading

to delegating certain steps of AMTSL to other health care staff, i.e. task shifting and lack of consistency in the definition of AMTSL were some of the barriers reported. (Mannheimer et al, 2014).

In a study in Tanzania, it was discovered that the most significant factor contributing to the low rate of AMTSL use was provision of the uterotonic drug after delivery of the placenta (Mfinanga et al., 2009). Also, lack of on job training and shortage of staff and supplies were reported as major barriers that most midwives encountered for not practicing AMTSL in Tanzania (Ramadhani & Fatina, 2011).

## **2.7 Summary**

The literature review shows that extensive studies have been done on active management of third stage of labour worldwide, including Africa and Nigeria in particular.

Nevertheless, available literature suggests that few studies have been done on the assessment of midwives on AMTSL in Nigeria and none in Osogbo. The available literature suggests that there is a wide gap between the knowledge and practice of AMTSL among midwives all over the world including Nigeria.

Despite the benefit of AMTSL in the prevention of post partum haemorrhage, poor knowledge, inadequate staff, unavailability of uterotonics and lack of curricula support for teaching AMTSL among others have been identified as some of the barriers to its practice. Since, very few studies have been done in Nigeria and none in Osogbo on the assessment of knowledge and practice of midwives on AMTSL, there is the need to carry out the assessment of midwives on AMTSL in Osogbo.

## **CHAPTER THREE**

### **METHODOLOGY**

The review of the literature influenced the choice of methodology for this research. From literature it was observed that many researcher used quantitative approach in determining the knowledge and practice of midwives on active management of third stage of labour. Other researcher used a qualitative approach to explore the barriers facing midwives in their practice of AMTSL. In this study, the quantitative approach is used to assess the knowledge, practice and barriers facing midwives in the practice of AMTSL. The chapter describe the research design, research settings, population of the study, inclusion and exclusion criteria, sample and sampling technique, type of instrument for data collection, validity and reliability, procedure for data collection, ethical consideration, and method of data analysis.

#### **3.1 Research Design**

Research design is the totality of the overall plan for testing hypothesis or obtaining answers to research questions. Research design guides the researcher in planning and implementing a research study in order to achieve the intended research goals. Generally, there are two main research design paradigms quantitative and qualitative. A quantitative research design is the blueprint of the procedures which are adopted by the researcher for testing the relationship between two variables (Khan, 2012) and guards against alternative interpretation of results (Punch, 2005).

In this study a quantitative descriptive cross sectional design was employed to assess the level of knowledge and practice of active management of third stage of labour among midwives in Osogbo. It involves a cross section of midwives at the time of the study and assessing their knowledge and practice of active management of third stage of labour. A

cross sectional design involves observation of a sample or cross section, of a population or phenomenon at a point in time. It is called a “snapshot” design (Babbie, 2005). A cross sectional design enables the processing of quantitative data and the researcher strives for the breadth rather than depth towards making valid general observation (Babbie, 2005). Descriptive cross sectional study was considered the most appropriate design for this study in the collection of data to answer the research questions.

### **3.2 Research Setting**

The study shall be carried out in Osogbo which is the capital of Osun State. Osun State is a State in South Western, Nigeria. It lies on coordinates  $7^{\circ} 46'$  North and  $4^{\circ} 34'$  East with an area of 47kmsq. The City has a population of about 156,694 people based on 2006 Census which is the last Census carried out in Nigeria as today. Osogbo lies within the railway line from Lagos South Western Nigeria to Kano North Western Nigeria. Osogbo is the trade center for a farm produce where yams, cassava, grains and Tobacco are grown. Most of the population are members of the Yoruba ethnic group with other ethnic group like Igbo, Hausa and Ibibira residing together with the major ethnic group. Health Institutions in the state include a tertiary institution which is Ladoke Akintola University Teaching Hospital, a secondary health care facility which is General Hospital Asubiaro, numerous primary health care facilities and private hospitals. This study shall be conducted in Ladoke Akintola University Teaching Hospital and General Hospital Asubiaro all within the Osogbo metropolis.

### **3.3 Study Population**

The study population or target population is the total group of subjects the researcher is interested in and to whom the result could reasonably be generalised (Leedy & Ormrod, 2005).

The target population of the study was midwives working in the tertiary, secondary and primary health facilities in Osogbo. Midwives are professional health care practitioners who have been trained, registered and licenced to conduct delivery of a baby by the nursing and midwifery council of Nigeria. According to statistical record of the two institutions, the population of nurses is over five hundred ( three hundred from the tertiary hospital while two hundred from the secondary) and about four hundred are registered midwives from the two health care facilities but not all are working at the maternity unit of the hospitals.

#### **Inclusion Criteria**

Midwives working at the maternity unit of the hospitals who are directly involved in taking deliveries.

#### **Exclusion Criteria**

Midwives that are not working at the maternity units of the hospitals and are not involved in the taking of deliveries.

### **3.4 Sample and Sampling technique**

A sample is the representative sub-group of the population that meets researcher's criteria (Leedy & Ormrod, 2005), while sampling is the process of selecting part of a group or entire population with the aim of collecting information, which is used to determine features of the entire population to be studied (Khan, 2012). The part of population selected refers to a sample and the sample should be representative of the entire population. Population size refers to total number of people in the population, while the number included in the sample is the sample size (Khan, 2012). There is no defined sample size for a study but if possible, the sample size is required to be large because as

the sample size increases, there is an error decrease and the power of statistical test in the data analysis also increases (Opoku, 2012).

**Sample size Determination.** The minimum sample size for the study was calculated using Leslie Fischer's formula which is  $n = \frac{z^2 pq}{d^2}$  Where;

n = sample size (?)

z = constant (1.96)

p= the prevalence from an earlier study; using the prevalence of practice of 26% of one of the component of AMTSL among midwives<sup>25</sup>

d = degree of accuracy desired (0.05)

Therefore:  $n = \frac{(1.96)^2 \times 0.26 \times 0.74}{0.05 \times 0.05}$

$n = \frac{3.8416 \times 0.26 \times 0.74}{0.05 \times 0.05}$

$n = \frac{0.73912384}{0.0025}$

n= 295.5

n= 296 in approximation.

However, 300 samples were used for the study.

### **Sampling Technique**

A non-probability purposive sampling technique was used to select participants in this study. Purposive sampling starts with a purpose in mind and the sample is thus selected to include people of interest and exclude those who do not suit the purpose. This

is the most important type of non probability sampling. Researchers rely on their experience, ingenuity and/or previous research findings, to deliberately obtain units of analysis in such a manner that the sample may be regarded as being representative of the relevant population (Welman, Kruger & Mitchell, 2005). The rationale for selecting this sampling technique for this study was based on the fact that all midwives working at the maternity units are aware of AMTSL. The general rule for data collection is that participants have to be able to offer their views and opinions in a way that would help to uncover the nature and essence of the phenomenon being investigated (Osborne, 1990).

### **3.5 Instrument for data collection**

A research requires the collection of data using appropriate instrument. It is important to use already existing validated instrument when available because their validity has been established. But in a situation where such instruments are not readily available to the researcher, it is imperative for the researcher to design appropriate instrument with considerable degree of construct and content validity and reliability (Punch, 2005).

The instrument used for data collection in this study was a structured questionnaire developed for this study after extensive review of literature. Questionnaire was used to collect data from the respondents because it is the appropriate instrument in this study. Questionnaires allow the respondents to self-complete and give a self-report at a free will (Ofori & Dampson, 2011). The questionnaire consisted of thirty seven (37) items with closed ended questions which enabled the researcher to answer the research questions. The questionnaire was divided into four sections: Socio-demographic characteristics, knowledge of AMTSL, practice of AMTSL and barriers to the use of AMTSL among midwives in Osogbo (see Appendix B).

### **3.6 Validity and reliability of instrument**

Validity and reliability is the criterion by which a quantitative instrument is adequately evaluated. Reliability is the degree of consistency or dependency with which an instrument measures the attribute it is designed to measure (Leedy & Ornrod, 2005) while validity is the degree to which an instrument actually represent what it was designed to represent (Brewrton & Millward, 2001). The questionnaire was reviewed by the supervisors, colleagues and psychologist to check for the face and content validity. The supervisors ensured that the questionnaire was able to answer the research questions in order to meet the objectives of the study.

The questionnaire was piloted among 10 midwives of Osogbo which have similar characteristics with the study population and setting. However, the data collected during the pretest were not included in the actual study.

In the present study, the Cronbach's alpha for knowledge was 0.71, practice was 0.74 and barriers was 0.87.

### **3.7 Procedure for data collection**

The data gathering procedure describes the method of gathering the study information (Leedy & Oimrod, 2005). Ethical approval was sought from the institutional review board of Nogushi Memorial Institute for Medical research, University of Ghana. An introductory letter was obtained from the School of Nursing, University of Ghana to the directors of nursing services in the health care institutions. Permission was given by the directors of the institutions for data collection. The study participants were purposefully recruited. The research purpose was briefly explained to the participants and those who agreed to participate were given consent form to sign. The questionnaire was given to the participant to fill and the researcher waited to collect the completed

questionnaire. The questionnaire was separated from the consent form right from the point of collection .

### **3.8 Method of data Analysis**

The data collected shall be analysed using Statistical Package for Social Sciences (SPSS version 20.0). The software (SPSS) is a powerful statistical package which can run all the traditional statistical technique such as descriptive and inferential statistics (Polar Engineering Consulting Limited, 2007). Two statistical tests were used in this study. Spearman's rho correlation was used to establish the relationship between knowledge of midwives and their demographic variables such as age, gender, religion and years of service whereas; the relationship between the type of hospital and knowledge was tested using chi square.

### **3.9 Ethical consideration**

Ethical approval was sought from Noguchi Memorial Institute for Medical Research (NMIMR), University of Ghana.

The purpose of the study was explained to each participant and only those who voluntarily agreed to participate were given the consent form for further explanation. The consent form was self explanatory, so there was no need to explain again to the participants. The participants were informed that participation is voluntary and they have the right to withdraw from the study at any time.

The privacy of each participant was assured by ensuring that their names were not included in te questionnaire (anonymity). Participants were assured that where their names and signatures appeared on the consent forms were separated from the questionnaire and were kept under lock and key.

To ensure confidentiality, all questionnaires were collected immediately from the research assistant and put in a locked cabinet. Data obtained from the questionnaire were stored using password protected files on the computer. Also, no identifiable information was linked with the data collected or when the findings are to be published. The questionnaire will be destroyed 5 years after completion of the study.



## CHAPTER FOUR

### FINDINGS

This chapter presents the findings on assessment of active management of third stage of labour among midwives in Osogbo, Nigeria. The findings were organized based on the objectives of the study starting with the demographic characteristics of the midwives.

#### 4.1 Demographic Characteristics

The demographic characteristics of the midwives are presented in table 4.1. Age distribution of the midwives ranged from 22years to 55years with an average age of 34years (SD=8.78years). The majority (97%) were female midwives with only 3% being male. Approximately 78% of the midwives were Christians while 22% were Muslims. Only one midwife was a traditional believer. Majority (59.3%) of the midwives were from tertiary healthcare facility. The number of years of practising has revealed that majority of the midwives (54%) have practiced between 1 to 5 years, while 47 (15.7%) have practiced for over 16 years. The remaining 36 (12%) have experience of between 11 to 15 years in midwifery. Details of the demographic characteristics of the midwives are shown in table 4.1 below.

**Table 4. 1: Demographic Characteristics of the Midwives**

<b>Variables</b>	<b>Frequency</b>	<b>Percent (%)</b>
<b>Age (in years)</b>	(Mean=34.50)	(SD=8.78)
<b>Gender</b>		
Male	9	3.0
Female	<b>290</b>	<b>97.0</b>
Total	299	100.0
<b>Religion</b>		
Christianity	<b>232</b>	<b>77.6</b>
Islam	66	22.1
Traditional	1	.3
Total	299	100.0
<b>Hospital type</b>		
Tertiary	<b>178</b>	<b>59.3</b>
Secondary	110	36.7
Primary	12	4.0
Total	300	100.0
<b>Years of practice (Years)</b>		
1-5	<b>163</b>	<b>54.5</b>
6-10	47	15.7
11-15	36	12.0
16+	47	15.7
Total	299	100.0

#### **4.2 Knowledge of Midwives on Active Management of Third Stage of Labour**

Majority of the midwives had knowledge on active management of the third stage of labour. Only 20 (6.7 %) indicated they are not aware of AMTSL. According to ICM/FIGO guidelines, there are three (3) main components. Results show that about 64% of the respondents know the correct number of components. The remaining 35% got the number of components wrong.

The results revealed that ‘Early cord clamping’ (83%) and ‘Uterine massage after delivery of the placenta every minute for two hours’ (38%) which are not included in the ICM/FIGO guidelines of AMTSL have been noted by the midwives as included. Only a few of the midwives indicated that ‘Blood Transfusion’ (15.8%), ‘Uterine artery Ligation’ (24%), and ‘Uterine massage after delivery of the placenta every 30 minutes for four hours’ (26.7%) are included in the ICM/FIGO guidelines of AMTSL, even though they

are not included in the guidelines. Thus, on the average, it could be concluded that except for few components, most of the midwives are aware of the components of AMTSL. Details of the midwives knowledge on AMTSL are presented in Table 4.2 below.

**Table 4. 2: Knowledge of AMTSL**

Knowledge Questions	Yes	No
	Freq. (%)	Freq. (%)
Are you aware of AMTSL as obstetric intervention to prevent postpartum haemorrhage?	278 (93.3)	20 (6.7)
<b>Are the following components included in the ICM/FIGO guidelines of AMTSL?</b>		
Prophylactic administration of oxytocin 10 IU within 1 minute following the birth of the baby.	257 (86.8)	39 (13.2)
Prophylactic administration of oxytocin 10 IU within 3 minute following the birth of the baby.	114 (40.9)	165 (59.1)
Prophylactic administration of oxytocin 10 IU within 5 minute following the birth of the baby.	95 (36.4)	166 (63.9)
Early cord clamping	238 (82.9)	49 (17.1)
Delivery of placenta with controlled cord traction (CCT)	277 (93.9)	18 (6.0)
Blood Transfusion	45 (15.8)	240 (84.2)
Uterine artery Ligation	63 (24.0)	200 (76.0)
Uterine massage after delivery of the placenta every minutes for two hours	107 (38.1)	174 (61.9)
Uterine massage after delivery of the placenta every 30 minutes for two hours.	115 (40.9)	166 (59.1)
Uterine massage after delivery of the placenta every 30 minutes for four hours.	72 (26.7)	198 (73.3)

### **4.3 Relationship between midwives socio-demographic characteristics and knowledge of Active Management of Third Stage labour**

In order to examine the relationship between socio-demographic characteristics of the midwives and their knowledge on AMTSL, two statistical tests were used. Spearman's rho correlation was used to establish the relationship between knowledge of midwives and their demographic variables such as age, gender, religion and years of service whereas; the relationship between the type of hospital and knowledge was tested using chi square. The results revealed that there was a moderate positive correlation between the age of the midwives and their length of service. Thus, the older the midwives, the more years spent in service delivery. The results also suggested that there was a significant negative correlation between age of midwives and their knowledge of active management of third stage labour [ $r_{s(298)} = -.15, p < .01$ ]. Thus, increased age of the midwives was associated with decrease knowledge of AMTSL.

The results on religion and length of service of the midwives suggest a weak positive relationship between the two variables. This relationship suggest that christian midwives are more likely to stay longer in service than their muslim counterparts. Furthermore, there was a significant negative correlation between religion of the midwives and their knowledge on active management of third stage of labour [ $r_{s(298)} = -.17, p < .01$ ]; where Muslim midwives were less likely to have knowledge of active management of third stage labour as compared to Christian midwives. There was however no significant relationship between gender and knowledge of active management of third stage labour [ $r_{s(298)} = -.02, p > .05$ ]; hence knowledge of active management of third stage labour is not significantly associated with whether the midwife is a man or a woman. Also, length of service of

midwives did not significantly relate with knowledge of active management of third stage labour [ $r_{s(298)} = -.11$   $p > .05$ ].

The result of the relationship between type of hospital and knowledge was presented Table 4.4 below. The chi square result in Table 4.4 show that there is a significant association between the type of healthcare facility and knowledge of AMTSL [ $\chi^2 (2) = 13.62$ ,  $p = .001$ ]. This implies that level of knowledge of AMTSL varies as a result of the type of healthcare facility where the midwife works. Out of the 156 midwives that had the knowledge, majority of them (96, 61%) are from tertiary healthcare facility, followed by those from the secondary healthcare facility (54, 35%) and only 6 of them (6, 4%) were from primary healthcare facility. It is clear that midwives from the tertiary healthcare facility have more knowledge of AMTSL than those from the secondary and those from the primary healthcare facility.

**Table 4. 3: Relationship between Knowledge of active management of third stage labour and Socio-demographic characteristics of the midwives**

Variables	Age	Gender	Religion	Length of service	Knowledge
<b>Age</b>	-	-.021	.036	.596**	-.151**
<b>Gender</b>		-	-.002	.030	-.022
<b>Religion</b>			-	.181**	-.165**
<b>Length of service</b>				-	-.107
<b>Knowledge</b>					-

Note: \*\*. Correlation is significant at the 0.01 level (2-tailed).

Age (numeric), gender (0=male, 1= female), religion (0=Muslim, 1= Christian), Length of service (0= below 10 years, 1= above 10years), knowledge of active management of third stage labour (numeric).

**Table 4. 4: Cross-Tabulation of Type of Hospital and Knowledge of Active Management of Third Stage Labour**

Variables	Yes		No		Df	$\chi^2$	Sig
	Freq.	%	Freq.	%			
<b>Hospital type</b>							
Tertiary	96	61.0	69	55.0			
Secondary	54	35.0	51	40.0			
Primary	6	4.0	6	5.0	2	13.62	.001
Total	156	100.0	126	100.0			

#### 4.4 Practices of AMTSL among Midwives

Details on the practice of AMTSL among midwives are presented in Table 4.5.

The results show the midwives practice of AMTSL guidelines on the administration of oxytocin, controlled cord traction and uterine massage after delivery of the placenta. On the timing of Oxytocin administration the ICM/FIGO guidelines recommend the administration of oxytocin within one minutes after delivery of the baby. In this study, the results suggested that the majority of midwives (76%) administer oxytocin within 1 minute after delivery of the baby.

On the choice of route of administration of oxytocin, the majority of the midwives (83%) administer oxytocin intramuscularly.

The second component of AMTSL is controlled cord traction. However, only 18% of the midwives practiced controlled cord traction.

The third component of AMTSL is uterine massage after delivery of the placenta every 15minutes for 2hours. In this study, approximately 42% of the midwives massage the uterus every 30 minutes for 2hours, while 32% of the midwives massage the uterus every 15minutes for 2hours. Only 24% massage the uterus every 30minutes for 4hours.

**Table 4. 5: Practices of AMTSL among Midwives**

<b>About timing and route of Oxytocin administration</b>	<b>Yes</b>	<b>No</b>
	<b>Freq. (%)</b>	<b>Freq. (%)</b>
During delivery of the foetus	80 (28.3)	203 (71.7)
Within one minutes after delivery of foetus	225 (76.0)	71 (24.0)
Within three minutes after delivery of foetus	107 (37.7)	177 (62.3)
Within five minutes after delivery of foetus	98 (35.4)	179 (64.6)
Should be given I.V push	30 (10.3)	260 (89.7)
Should be given I.V drip	165 (57.7)	121 (42.3)
Should be given I.M	246 (83.4)	49 (16.6)
Should be given Orally	10 (3.5)	273 (96.5)
<b>About controlled cord traction</b>		
Controlled cord traction is not necessary all the time	53 (18.1)	240 (81.9)
<b>About Uterine massage after delivery of placenta</b>		
Uterine massage is carried out every 15minutes for 2hours	91 (32.4)	190 (67.6)
Uterine massage is carried out every 30 minutes for 2hours	117 (41.8)	163 (58.2)
Uterine massage is carried out every 30 minutes for 4hour	66 (24.1)	208 (75.9)

#### **4.5 Relationship between midwives demographic characteristics and practice of Active Management of Third Stage labour**

The relationship between the practice of AMTSL and the demographic characteristics of the midwives was also examined. The result of Spearman's correlation coefficient is presented below in Table 4.6.

The only demographic characteristic that is related to practice of active management of third stage labour was religion; which showed that Muslims midwives were less likely to practice active management of third stage labour than Christian

midwives [ $r_{s(298)} = -.18, p < .01$ ]. Thus, there was a significant correlation between religion and practice of active management of third stage labour. However, gender [ $r_{s(298)} = .03, p > .05$ ] and length of service of midwives [ $r_{s(298)} = .01, p > .05$ ] did not have any significant relationships with the practice of active management of third stage labour among the midwives. Thus, practice of active management of third stage labour was not associated with the gender and length of service of the midwives.

Similarly, the results on the relationship between the type of hospital and practice of AMTSL among midwives is presented in Table 4.7 below. The Chi square results on the association between type of hospital and practice of AMTSL guidelines revealed a significant association [ $\chi^2_{(2)} = 15.81, p = .000$ ]. This implies that practice of AMTSL varies in respect to the type of hospital. Out of the 116 midwives who practice, majority of them (63%) are from tertiary hospital, followed by secondary hospital (33.6%) and only 4 of them (3%) are from primary hospitals. The midwives who do not practice AMTSL guidelines showed the same trend with majority in the tertiary (57%) followed by secondary (38%) and the least being primary (5%). However, more of the midwives in secondary hospitals (38%) do not practice the guidelines as compared to those who practice the guidelines (34%).

**Table 4. 6: Relationship between Practice of active management of third stage of labour and Socio-demographic characteristics of midwives**

Variables	Age	Gender	Religion	Length of service	Practices
<b>Gender</b>		-	-.002	.030	.027
<b>Religion</b>			-	.181**	-.177**
<b>Length of service</b>				-	.011
<b>Knowledge</b>					-

Note: \*\*. Correlation is significant at the 0.01 level (2-tailed).

Gender (0=male, 1= female), religion (0=Muslim, 1= Christian), Length of service (0= below 10 years, 1= above 10years), Practice of active management of third stage labour (numeric).

**Table 4. 7: Cross-Tabulation of Type of Hospital and Practice of Active Management of Third Stage of Labour**

Variables	Yes		No		Df	$\chi^2$	Sig
	Freq.	%	Freq.	%			
<b>Hospital type</b>							
Tertiary	73	63.0	97	57.1			
Secondary	39	33.6	65	38.2			
Primary	4	3.4	8	4.7	2	15.81	.000
Total	116	100.0	170	100.0			

#### 4.6 Barriers to the Practice of AMTSL

Over 66% of the midwives noted that they do not remember all the components because the guidelines are not available in the health facility. On the contrary, about 73% of them noted that they use the ICM/FIGO guideline in their centre. This may mean that though the midwives use the guidelines in their practice, they do not have a copy of the guidelines in the health facility. The results from Table 4.8 show that only some of the midwives (13.4%) reported not always having oxytocin in their facility while (109, 36.6%) reported that shortage of staff was responsible for their none practice of AMTSL. However, approximately 40% of the midwives agreed that they not been trained on

ICM/FIGO guidelines for AMTSL, only 5.7% of the midwives said they don't use oxytocin in their facility and 78 (26.8%) agreed that they don't use ICM/FIGO guidelines in their health facility. Thus, these findings suggest that there was no barrier identified by the midwives for not practicing AMTSL.

**Table 4. 8: Barriers to the Practice of AMTSL**

Reason for not practicing AMTSL	Yes	No
	Freq. (%)	Freq. (%)
1. I don't remember all the components because there is no guidelines to refer to in my facility	101 (33.9)	197 (66.1)
2. Oxytocin is not always available in my centre	40 (13.4)	258 (86.6)
3. We are short staffed in my centre	109 (36.6)	189 (63.4)
4. I have not been trained on ICM/FIGO guidelines in my practice	118 (40.1)	176 (59.9)
5. We don't use oxytocin in my centre	17 (5.7)	281 (94.3)
6. We don't use ICM/FIGO guideline in my centre	78 (26.8)	213 (73.2)

#### **4.7 Relationship between Knowledge and Practice of Active Management of Third**

##### **Stage of Labour**

To examine the relationship between knowledge and practice of AMTSL, a non-parametric correlation co-efficient known as Spearman rho was conducted. The results establish a positive significant relationship between knowledge and practices of AMTSL [ $r_{s(298)} = .48, p=.000$ ]. This implies that higher knowledge of AMTSL guidelines tends to increase the likelihood of actual practice of AMTSL guidelines among the midwives sampled.

**Table 4. 9: Relationship between Knowledge of midwives and their practice of active management of third stage of labour**

			Knowledge	Practice
Spearman's rho	Knowledge	Correlation Coefficient	1.000	.478**
		Sig. (2-tailed)	.	.000
		N	300	300
	Practice	Correlation Coefficient	.478**	1.000
		Sig. (2-tailed)	.000	.
		N	300	300

\*\* Correlation is significant at the 0.01 level (2-tailed).

In summary, the findings of this study suggest that midwives who are Christians by religion, work in tertiary healthcare facility were more likely to have more knowledge of AMTSL than other midwives. However, gender and length of practice as a midwife had no significant influence on their knowledge of AMTSL.

Furthermore, it was revealed that Christian midwives and those midwives working in the tertiary healthcare facility are more likely to practice AMTSL than their Muslim counterparts. Also, the findings revealed that the higher the knowledge of the midwives on AMTSL the more the likelihood of practicing AMTSL.

The findings have shown that, the midwives are challenged to some extent because of not remembering all the components due to lack of guidelines in the healthcare facility, shortage of staff and not being trained on ICM/FIGO guidelines of AMTSL to enable them practice. However, from the findings of this study, there were no major barriers identified by the midwives for not practicing AMTSL.

## CHAPTER FIVE

### DISCUSSION OF FINDINGS

#### 5.0 Introduction

This chapter presents the discussion of findings of the study. The discussion covers the demographic characteristics, knowledge, practices and barriers to the practice of AMTSL among midwives. The chapter also provides a discussion on relationships between the socio-demographic characteristics and knowledge and practice of AMTSL among midwives. The findings were discussed in relation to the relevant empirical literature reviewed.

#### 5.1 Demographic Characteristics

Findings suggest that majority of the midwives were Christians, the majority were female midwives who have been practicing midwifery between 1 to 5 years and work in tertiary healthcare facilities. Most of these findings were consistent with the general characteristics of midwives as found by Begley (2002), Piper (2010) and Dean (2011) with the exception of type of hospital and length of practice. Midwives working in tertiary healthcare facility are expected to be more than midwives in the secondary and primary healthcare facilities because in Nigeria, tertiary healthcare facility is the highest level of referral where standards are expected to be met and therefore require more midwives (specialists) than other levels of healthcare. This finding was in contrast with previous findings in Tanzania (Ramadhani, 2011) where shortage of midwives was associated with lack of practice of AMTSL in tertiary healthcare facilities.

#### 5.2 Knowledge of midwives on the active management of third stage of labour.

Findings of this study revealed that majority of the midwives were aware of AMTSL as an obstetric intervention in the prevention of PPH and that it is made up of three (3) components. This resonates with previous studies (Vivio et al., 2010; Afshari et

al., 2012; Harvey et al, 2007) which report that a more than half of the respondents were aware of AMTSL. In this study, the midwives still believe that early cord clamping, prophylactic administration of oxytocin and uterine massage are part of the components of AMTSL. Although the respondents were aware of the AMTSL but the concept of its components was poorly understood. The midwives were not familiar with the new update on the components as released in the WHO recommendation on the AMTSL in 2012. In the new recommendation, early cord clamping is seen as contraindicated in the AMTSL but cord clamping and cutting should be delayed at least for about 1 to 3 minutes to help maintain the iron content of the infant's haemoglobin. Also, uterine massage immediately after delivery and every 15 minutes for 2 hours after delivery is also included but prophylactic administration of the uterotonic drug especially oxytocin after the delivery of the baby is the most important of all the components. These findings support previous report in Nigeria (Oladapo et al., 2009).

This study reported the knowledge of the midwives on each of the components of AMTSL, it was discovered that majority of the midwives believed that prophylactic administration of oxytocin within 1 minute after the delivery of the baby is one of the components. This is in line with the findings from previous studies (Smit et al., 2012; Harvey, et al., 2007). In this present study, controlled cord traction has also been acknowledged by the midwives as a component of AMTSL which is supported by previous findings (Downey & Bewley, 2010; Althabe et al., 2006). Majority of the midwives agreed that uterine massage every 15 minutes after the delivery of the placenta for two hours is also a component of AMTSL as reported in previous studies (ICM/FIGO, 2003; Fawcus, 2007).

### **5.3 Relationship between midwives socio-demographic characteristics and knowledge of Active Management of Third Stage labour**

This study found a relationship between the age of the midwives and their knowledge about AMTSL. It was evident that there was a statistically significant negative correlation between the age and knowledge of the midwives on AMTSL. Religion was found to have a negative correlation with knowledge of AMTSL among the midwives in this study, where Muslim midwives were less likely to have the knowledge of AMTSL than the Christian midwives. This finding supports that of Piper (2010) where it was established that midwifery practice started in the catholic church. Also, south western Nigeria where the study was carried out is a Christian dominated region in Nigeria, and may also be another reason why the majority of the midwives were Christians. This finding is consistent with previous findings (Global Christianity Report, 2015; Future of the World Muslim Population, 2011). The findings of this study showed that there was a significant relationship between knowledge and type of hospital. Midwives working in the tertiary healthcare facility were more likely to have more knowledge on AMTSL as compared to those from secondary and primary healthcare facilities, as earlier reports suggested (Prendiville, Harding, Elbourne & McDonald, 2001; Ramadhani, 2011).

### **5.4 Practices of midwives on active management of third stage of labour.**

In this study it was evident that majority of the midwives practiced AMTSL. Findings from the study observed that to some extent the practice of AMTSL was in line with standards. The administration of oxytocin is carried out by majority of the midwives within 1 minute of delivery of the baby through intramuscular injection, which was also reported by previous research in Nigeria (Oladapo et al., 2014) where it was observed that

midwives practice AMTSL with slight variation in the definition of each of its components.

Similarly, findings from this study also discovered that the midwives do not practice controlled cord traction all the time to deliver the placenta with the believe that it should not be practiced all the times, as similarly reported by previous research (WHO, 2012; Gulmezoglu et al., 2012; DeCastro-Perreira & Gomes, 2013) that CCT should not be practiced at all times especially in settings where there are no skilled birth attendants involved in the delivery of babies.

These findings also revealed that majority of the midwives practiced uterine massage after delivery of the placenta every 30 minutes for 2hours. This practice is in contrast with standards released by ICM/FIGO (2004). The ICM/FIGO guidelines recommend that uterine massage should be carried out every 15 minutes for 2 hours following the delivery of the placenta.

### **5.5 Relationship between practices of active management of third stage of labour and socio-demographic characteristics of midwives**

This study established no significant association between the gender and years of practice of the midwives and their practice of active management of third stage of labour. This implies that gender of the midwives and number of years of practice do not affect their practice of AMTSL. Religion and type of hospital are associated with the practice of AMTSL among midwives. This resonates with previous reports (Piper, 2010; Dean, 2011) about the origin of midwifery practice by women inside the order of Catholic church in the late middle ages. Those willing to live by restrictive rules of the church, most commonly girls offered at an early age could enter into the profession. It was established in this study that midwives working in the tertiary healthcare facility practiced AMTSL than those from

other levels of the healthcare system, which supports previous research in Dublin (Prendiville, Harding, Elbourne & McDonald, 2001; Ramadhani, 2011) that a university based referral centre in Dublin (tertiary healthcare facility) consistently used all the three components of AMTSL in their practice.

### **5.6 Barriers to the practice of active management of third stage of labour among midwives**

In this study, there was no particular major barrier to the practice of active management of third stage of labour identified by the midwives. However, some of the following have been found to be a contributor to the inability of the midwives to practice AMTSL effectively, *'I don't remember all the components because there is no guidelines to refer to in my facility'*, *'Oxytocin is not always available in my centre'*, *'we are short staffed in my centre'*, *'I have not been trained on ICM/FIGO guidelines in my practice'*, *'we don't use ICM/FIGO guideline in my centre'*. Majority of the midwives agreed with these items, suggesting that these may be relevant impediments to their practice of AMTSL.

Furthermore, this study have found that some midwives are unable to remember all the components of AMTSL as one of the reasons for not practicing the intervention. This is supported by previous findings in Nigeria, that fewer than three out of ten midwives can differentiate the different components of AMTSL (Oladapo et al., 2009).

It was found that some of the midwives identified the unavailability of oxytocin at all times as another barrier to the practice of AMTSL in their facilities. As important as the administration of oxytocin is in the practice of AMTSL, it is quite unfortunate that such drugs are not always available in all healthcare facilities. As also lamented in previous reports (Mfinanga et al., 2009; Ramadhani & Fatina, 2011).

The midwives have also identified staff shortage as a possible barrier to their practice of AMTSL. Although, majority of the midwives did not see the shortage of staff as a barrier, a sizeable number did. Therefore, it should be a concern to the state government through the state hospital's management board. If midwives are out there unemployed or under employed and shortage of staff will still be a hindrance to the practice of AMTSL among midwives, then there is need to increase the employment of midwives in healthcare facilities in Osogbo, Nigeria. This barrier is not only affecting midwives in Osogbo, Nigeria but has also been seen as a barrier in other countries such as Ghana (Mannheimer et al, 2014) and Tanzania (Mfinanga et al., 2009; Ramadhani & Fatina, 2011).

Findings of this study regarding barriers to practice of AMTSL among midwives agree with previous reports in Ghana (Hammah & Donkor, 2013) and Tanzania (Ramadhani & Fatina, 2011). In this study, some of the midwives attributed their inability of practicing AMTSL to their not being familiar with the ICM/FIGO standards on AMTSL. This barrier is critical because not being aware of the guidelines seems to suggest that the midwives lack knowledge on the current guidelines on active management of the third stage of labour. The midwives consequently lack of knowledge may be interpreted as a challenge to practice.

### **5.7 Relationship between knowledge and practice of active management of third stage of labour among midwives**

As reported in previous studies that most of the midwives have the knowledge of active management of third stage of labour but there is no corresponding practice of the intervention (Dawson et al, 2012; Oladapo et al., 2009), this study found a significant positive correlation between knowledge and practice of AMTSL which was in contrast with previous findings. The finding suggests that knowledge of midwives on AMTSL will

influence their practice because understanding the definition of AMTSL and its components as recommended by the WHO and ICM/FIGO may increase the likelihood of actual practice of AMTSL.

In this study it was evident that a significant relationship exists between knowledge and practice of AMTSL, which means that if the midwives have the knowledge of AMTSL they are most likely to practice AMTSL. The study discovered that the midwives practice AMTSL haphazardly. The question then is 'do they practice AMTSL? The possible reasons for haphazard practice could be lack of policy on the management of the third stage of labour. It could also be that the midwives are not provided with the necessary in-service training needed to upgrade their knowledge on the current trend in the management of the third stage of labour as recommended by the WHO and ICM/FIGO. The recommendations state that all laboring women should be actively managed during the third stage of labour in order to prevent postpartum haemorrhage which is the leading cause of maternal mortality worldwide. Therefore, if any of these factors are responsible for the haphazard practice of AMTSL, it is recommended that provisions should be made to ensure that the midwives are constantly being trained and re-trained to ascertain that they are always abreast with the current trend in midwifery practice and a policy to fall back on.

In summary, findings from the study revealed the midwives surface knowledge on active management of third stage of labour and their haphazard practice of AMTSL. The study also found the relationship between the socio-demographic characteristics such as gender, religion, years of practice, type of hospital and knowledge and practice of AMTSL among the midwives. It was discovered that these variables determined the knowledge and practice of AMTSL among the midwives. There was also a significant relationship between knowledge and practice of AMTSL among the midwives. All these findings

resonate with previous empirical studies reviewed, with no barrier detected in this study for the non practice of AMTSL by the midwives. Therefore, majority of the midwives in Osogbo, Osun State of Nigeria have some knowledge on AMTSL but practice AMTSL haphazardly.



## CHAPTER SIX

### SUMMARY, IMPLICATIONS, CONCLUSION, AND RECOMMENDATIONS

#### 6.0 Summary

Active management of third stage of labour is believed to be an important strategy in reducing postpartum haemorrhage which is the leading cause of maternal morbidity and mortality worldwide. It is an intervention introduced by the WHO in conjunction with ICM/FIGO in order to help reduce maternal death related to postpartum haemorrhage. AMTSL involves three main interventions carried out in the third stage of labour, which are; prophylactic administration of uterotonic drug (especially oxytocin) immediately after the birth of the baby, use of CCT in the delivery of the placenta and uterine massage after the delivery of the placenta.

This study aimed at assessing midwives knowledge on active management of third stage of labour in Osogbo, Nigeria. A non- probability purposive sampling approach was employed on all midwives working in the maternity units of the healthcare facility selected for the study. The instrument used for the data collection was a structured questionnaire. The questionnaires were administered to the selected participants with a response rate of 100%. All 300 questionnaires administered were retrieved and analyzed.

Data was analyzed using SPSS version 20.0. The mean age of the midwives was (34 years). Majority were female, Christians; working in tertiary healthcare facility and had between 1 to 5 years of working experience.

Findings suggested that religion, the type of healthcare facility and years of experience of the midwives were all predisposing determinants of knowledge and practice of AMTSL among the midwives.

There was no major barrier detected to the practice of AMTSL in this study. However, some of the midwives have identified some factors that have been hindering them from practicing AMTSL to include, not remembering all the components of AMTSL because a copy of the guideline is not available in their healthcare facilities, unavailability of oxytocin at all times in the hospital, shortage of staff and not being trained on ICM/FIGO guidelines. The findings suggested that increased knowledge of midwives on AMTSL will improve their practice of AMTSL.

## **6.2 Implications**

The findings of this study have numerous implications for maternal and child health nursing, and these can be addressed in the areas of nursing practice, nursing education, nursing administration, and nursing research.

### **6.2.1 For Nursing Practice**

This study discovered that christian midwives and those midwives working in tertiary healthcare facility with about 1 to 5 years working experience in midwifery practice are likely to have more knowledge and practice AMTSL better than other midwives. This implies that labouring women that fall into the hands of these category of midwives are more likely to enjoy better care during the third stage of labour than others. Similarly, midwives who have more knowledge of AMTSL are likely to practice AMTSL better than others. Thus, policies should be developed that will make it compulsory for all midwives to develop their knowledge in order to improve their practice.

### **6.2.2 For Nursing Education**

Nursing and midwifery training curricular should be updated to meet the current trend of global practice. All midwives in training should be thoroughly furnished with the various ways of managing the different stages of labour effectively such that

complications are prevented to the barest minimum. Therefore, all midwifery educators should be allowed to attend in-service training and workshop in order to update their knowledge on the current trends in midwifery practice and should disseminate such knowledge to their students appropriately.

### **6.2.3 For Nursing Administration**

Nurse Managers and Administrators at healthcare facilities and ministry levels should find out and address the staff shortage problems related to the practice of AMTSL among midwives by reporting to the appropriate quarters or recruiting and posting considerable number of midwives to the various healthcare facilities where they are needed. It will also be helpful if they can be engaged in proper monitoring and supervision to ensure the adherence of midwives to the standards of practice. Nurse administrators can organise in-service training for the midwives where experts will be invited to train the midwives on AMTSL.

### **6.2.4 For Nursing Research**

One of the reliable ways of knowledge acquisition for evidence based practice is research. Every nurse or midwife need to be research minded in identifying the major issues related to women of reproductive age. The knowledge and competencies acquired by midwives in providing AMTSL will not be enough if they do not avail themselves to the opportunities in individual self development through conducting and participating in research studies in order to provide the best practice to labouring women. Midwives can conduct research either qualitatively or quantitatively to discover the most effective ways of preventing postpartum haemorrhage in the third and fourth stages of labour. Research can be carried out on the best approach to managing the different stages of labour to help reduce duration of labour and prevent PPH.

### **6.3 Limitations of the Study**

The study was limited to midwives in just two healthcare facilities in Osogbo (LAUTECH Teaching Hospital and State Specialist Hospital, Osogbo) excluding other midwives who might be having challenges in their practice of AMTSL. This can affect the generalizability of the result. However, exclusion of other midwives in the study was due to limited time and resources. Finally, due to lack of enough sample frames for midwives, simple random sampling was not possible. Instead, a purposive non probability sampling was used. However, to minimize bias, midwives that were working in the maternity units of the healthcare facilities were selected for the study.

### **6.4 Conclusion**

This study found that the age, religion, the type of healthcare facility and years of experience of the midwives were all predisposing determinants for knowledge and practice of AMTSL among the midwives.

There was no major barrier detected to the practice of AMTSL in this study. However, some of the midwives have identified some factors that have been hindering them from practicing AMTSL. Midwives in Osogbo, Nigeria are aware of AMTSL with slight variation in its components which have great influence on their practice of AMTSL. Consequently, the midwives practice AMTSL haphazardly because of their lack of knowledge on current trends in the management of third stage of labour.

### **6.5 Recommendations**

The following recommendations are proposed based on the findings of the study to the following bodies:

### **6.5.1 To Ministry of Health**

The State's ministry of health should;

- Develop favorable policies that will enable midwives to further their knowledge
- Provide a professional practice environment that is conducive for effective service delivery.
- Ensure the constant supply of drugs and consummables that are needed by midwives to assist labouring women throughout the period of labour (e.g. oxytocin).
- Improve the necessary infrastructure to make the work place conducive for the midwives.
- Always organize seminars and workshops on AMTSL to help midwives update their knowledge and thus improve their practice.

### **6.5.2 To Hospital's Management Board**

The Hospital's management board should;

- Recommend to the ministry of health the need to develop policies that will compel midwives to advance their Knowledge
- Ensure constant monitoring and supervision of midwives to enhance adherence to standards.

### **6.5.3 To Nurse Managers**

Nurse Managers should;

- ensure proper monitoring and supervision of midwives in their practice to ascertain compliance with standards and any deviation should be called to order.
- Encourage the midwives to attend workshops and seminars on AMTSL to help improve their service delivery.

- Establish a clear pattern of achieving the directives (policy) about how to manage the third stage of labour as released by the ministry of health. This would probably increase the correct use of AMTSL and promote consistency in practice.

### **6.5.3 To Midwives and Midwifery Educators**

Midwives should:

- Improve their knowledge on AMTSL and practice it according to standards.

Midwifery educators should:

- Ensure that all student midwives in training are taught AMTSL following the WHO, ICM/FIGO recommendations.

### **6.5.4 To Nurse Researchers**

Nurse researchers should;

Use qualitative approach to explore the barriers to the practice of AMTSL among midwives.



**REFERENCES**

- AbouZahr C.(2003). Global burden of maternal death and disability. *British Medical Bulletin* 67:1-11.
- Afshari, P., Medforth, J., Aarabi, M., Abedi, P. & Soltani, H. (2013). Management of third stage of labour following vaginal birth in Iran: A survey of current policies. *J. Midwifery* 30:65-71.
- Althabe, F., Bergel, E., Buekens, P., Sosa, C. & Belizán, J.M. (2006). Controlled cord traction in the third stage of labour. Systematic review. *Int J Gynaecol Obstet* 94(2):126-7.
- Artymuk, N., Surina, M. & Marochko, T. (2013). Active management of the third stage of labour with and without controlled cord traction. *International Federation of Gynaecology and Obstetrics*. 0020-7292. Published by Elsevier Ireland Ltd.
- Audu, B.M., Takai, U.I.& Bukar, M.,(2010). Trends in maternal mortality at University of Maiduguri teaching hospital, Maiduguri, Nigeria - A five year review .*Nigeria Medical Journal* 51(4):147-151).
- Babbie,E. (2005). *The Basics of Social Research* (3rd ed.).Canada:*Thompson Wadsworth Inc.*
- Begley, C.M. (2002). ‘Great fleas have little fleas’: Irish Student midwives’ views of the hierarchy in midwifery. *Journal of Advanced Nursing*. 38(3): 310-317.
- Begley,C.M., Gyte, G.M., Murphy, D.J., Devavane, D., McDonald, S.J., & McGuire, W. (2010) Active versus expectant management for women in the third stage of labour. *Conchrane Database Syst. Rev.* 7:007412.
- Bimbashi, A., Ndoni, E., Dokle, A. & Duley, L. (2010) Care during the third stage of labour: Obstetrician views and practice in Albanian maternity Hospital. *Biomedcentral Pregnancy and childbirth* 10:4,1471-2393.
- Brewerton, P., & Millward, L.J. (2001). *Organizational Research Methods* London: *Sage Publications*.

- Buckley, S.J. (2009). Leaving well Alone in the third stage of labour. *Birthspirit Midwifery Journal* 1:29-34.
- Carroli, G., Cuesta, C., Abalos, E. & Gulmezoglu, A.M.(2008). Epidemiology of postpartum haemorrhage: a systematic review. *Best Practice & Research Clinical Obstetrics and Gynaecology* 22:999-1012.
- Dawson, A., Ith,P., Homer, C.S.E. & Whelan, A.K. (2012) Practices of Skilled Birth Attendants during labour, birth and the immediate postpartum period in Cambodia. *J. Midwifery* 29:300-307. [www.elsevier.com/midw](http://www.elsevier.com/midw).
- Dean, E. (2011). NMC will look at ethnic make up of staff in fitness to practice hearings. *Nursing standard* 26(12):7.
- DeCastro Parreira, M.V.B & Gomes, N.C.F (2013) Preventing postpartum haemorrhage: active management of third stage of labour. *Journal of Clinical Nursing*; 22: 3372-3387
- Dixon, L., Fletcher, L., Tracy, S., Guillard, K., Pairman, S. & Hendry, C. (2009). Midwives care during the third stage of labour: An analysis of New Zealand college of Midwives Midwifery Database 2004-2008. *New Zealand college of midwives journal* 41: 20-5.
- Downey, C. & Bewley, S. (2010). Childbirth Practitioners' attitudes to third stage management. *British Journal of Midwifery*. 18(9):576-582.
- Fawcus,S. (2007).Treatments for primary postpartum haemorrhage: RHL commentary.*The WHO Reproductive Health Library*; Geneva: World Health Organization.
- Fawole, B., Awolude, O.A, Adeniji, A.O. & Onafowokan, O.(2013). WHO recommendations for the prevention of postpartum haemorrhage: RHL guideline . *Int J Womens Health* 5: 737–752.
- Figueras, A., Narvaez, E., Valsecia, M., Vasquez, s., Rojas, G., Camilo, A., Valle, J. & Aguilera, C. (2008). An Education and Motivation intervention to change clinical management of third stage of labour- The GIRMMAHP Initiative. *Journal compilation, Wiley periodicals. BIRTH* 35:4.

Future of the World Muslim Population (2011) *Retrieved on 2nd June, 2015.*

Gilda S., Henshaw S., Susheela S. et al.(2007). Induced abortion: Estimated rates and trends worldwide.*Lancet*. 370 (9595): 1338-1345.

Global Christianity: A Report on size and distribution of the World's Christian Population. *Retrieved on 2nd June, 2015.*

Gulmezoglu, A.M., Lumbiganon, P., Landoulsi, S., Widmer, M., Abdel-Aleem, H. et al., (2012). Active management of the third stage of labour with and without controlled cord traction: a randomised controlled, non-inferiority trial. *Lancet*, 379:1721-1727.

Gulmezoglu, A.M., Widmer, M., Merialdi, M., Qureshi, Z., Piaggio, G., et al. (2009). Active management of the third stage of labour without controlled cord traction: a randomized non- inferiority controlled trial. *Reproductive health journal* 6:2, 1186/1742-4755.

Hammah, J., & Donkor, E.S. (2013). Assessment of practicing midwives on the management of third stage of labour. *African journal of midwives and women's health* 7:2.

Harvey, S.A, Blandon, Y.C.W., Mc Caw- Binns, A., Sandino, I. et al. (2007). Are skilled birth attendants really skilled? A measurement method some disturbing results and a potential way forward. *Bulletin of World Health Organization* past issues. 85:10,733-820.

Hofmeyr, G.J., Abdel-Aleem, H., Abdel-Aleem, M.A. (2008). Uterine massage for preventing postpartum haemorrhage. *Cochrane Database Syst Rev* 3:006431.

Implementation Guideline for Uganda (2011). Active management of third stage of labour (AMTSL): Implementation Guideline for Uganda. *Reproductive Health Division Ministry of Health.*

International Confederation of Midwives (ICM); International Federation of Gynaecologists and Obstetrician (2003). Management of the third stage of labour to prevent postpartum haemorrhage. International Joint Policy Statement

developed by ICM and FIGO, and reviewed and endorsed by the Society of Obstetrics and Gynaecology. *Journal of Obstetrics and Gynaecology of Canada* 25(11): 952—3.

International Confederation of Midwives (ICM); International Federation of Gynaecologists and Obstetricians (FIGO) (2004): Joint statement: management of the third stage of labour to prevent post-partum haemorrhage. *J Obstet Gynaecol Can* 26:1110-1112.

International Confederation of Midwives (ICM); International Federation of Gynaecologists and Obstetricians (FIGO) (2007). Prevention and treatment of post-partum haemorrhage. New advances for low resource settings. *International Journal of Gynecology and Obstetrics* 2007;97:160 -163.

Jangsten, E., Mattson, L.A., Lyckestam, I., Hellstrom, A.L, Berg, M. (2010). A Comparison of Active management and Expectant management of the third stage of labour: A Swedish randomised controlled trial. *BJOG* 118:362-369.

Khan, J. (2012). Research Methodology. New Delhi: *APH Publishing corporation*.

Leduc, D., André B, V.S.& Lalonde (2009) Active Management of the Third Stage of Labour: Prevention and Treatment of Postpartum Hemorrhage. *Society of Obstetricians and Gynaecologists of Canada* 235.

Leedy, P.D., & Ormrod, J.E. (2005). Practical Research: Planning and Design. (8th ed) *Pearson Merrill Prentice Hall*.

Lubaki, J.F., Ngolo, J.M. & Maniati, L.Z.(2010). Active management of third stage of labour, post-partum haemorrhage and maternal death rate in the Vanga Health Zone, Province of Bandundu, Democratic Republic of the Congo. *African Journal of Primary Health Care & Family Medicine* (2):1.

Mannheimer, S., Elyas, A., Brew, G.& Petterson, K.O. (2014) Experiencing challenges when implementing Active Management of Third Stage of Labour (AMTSL): A qualitative study with midwives in Accra, Ghana. *BMC Pregnancy and Childbirth*. 1471-2393. [www.biomedcentral.com](http://www.biomedcentral.com).

- Mfinanga, G.S., Kimaro,G.D. , Ngadaya, E., Massawe, S. & Mtandu, R. et al,(2009). Health facility-based Active Management of the Third Stage of Labor: findings from a national survey in Tanzania *Health Research Policy and Systems* (7) 6.
- Miller, S., Lester, F.& Hensleigh, P.(2004). Prevention and Treatment of Postpartum Hemorrhage: New Advances for Low-Resource Settings. *J Midwifery Women's Health*. 49(4).
- Naamala, M.A.(2007). Knowledge, attitudes and practices of midwives towards active management of third stage of labour to preventing post partum heamohage: a case study in Mulago Hospital. *Makere University Institutional Repository*.
- Ofori, R. & Dampson, D.G. (2011). Research Methods and Statistics using SPSS. *Kumasi: Payless Publication*.
- Ogunjimi,L.O., Ibe, R.T.& Ikorok, M.M.(2012). Curbing maternal and child mortality:The Nigerian experience. *International Journal of Nursing and Midwifery* 4(3), pp. 33-39.
- Oladapo, O.T., Akinola, O.I., Fawole, A.O., Adeyemi, A.S, Adegbola, O., et al(2009). Active management of third stage of labour: evidence versus practice. *Acta Obstetricia et Gynecologica* 88:1252-1260.
- Opoku, J.Y. (2006). Tutorials in Inferential Social Statistics (2nd ed.). Accra: *Ghana University Press*.
- Osborne, J.W.(1990) Some basic existential- phenomenological research methodology for counselors. *Canadian journal of counseling and psychotherapy/ Revue canadienne de counseling et de Psychotherapie*, 24(2).
- Piper, L. (2010). The professionalization of midwifery in the late middle ages. *Canadian Journal of Midwifery Research and Practice*. 9(1): 21-34.
- Polar Engineering Consulting Limited.(2007) Statistical Package for Social Sciences. Retrieved from [http:// www.winwrap.com](http://www.winwrap.com)

- Prendiville, W.J., Elbourne, D., McDonald, S., (2000). Active versus expectant management in the third stage of labour. *Cochrane Database of Systematic Reviews* 3, CD000007.
- Prendiville, W.J., Harding, J.E., McDonald, S., (2001). Active versus expectant management in the third stage of labour. *Cochrane Database of Systematic Reviews* 3, CD000007.
- Prevention of Postpartum Hemorrhage Initiative (POPPHI, 2007): Facility-based management of the third stage of labour and community perceptions and actions on postpartum haemorrhage. Retrieved December 2, 2014 from <http://www.pphprevention.org>.
- Prevention of Postpartum Hemorrhage Initiative (POPPHI, 2013). Tackling the Biggest Maternal Killer: How the Prevention of Postpartum Hemorrhage Initiative Strengthened Efforts Around the World. *POPPHI End of Project Report Page 2*.
- Punch, K.F. (2005). Introduction to Social Research: Qualitative and Quantitative Approaches (2<sup>nd</sup> ed). London: Sage Publications.
- Qureshi, Z. & Luban, K.(2011). Uterine timing of prophylactic uterotonics for the third stage of labour after vaginal birth: RHL Commentary. The WHO Reproductive Health Library; Geneva. *World Health Organization*.
- Ramadhan, F. (2011). Midwives' Competency for implementing active management of the third stage of labour in Dares salaam Municipal Hospitals, Tanzania. *Muhimbili University of Health and Allied Sciences*. [http://hdl.Handle.net/123456789/35](http://hdl.handle.net/123456789/35).
- Schack, S.M., Elyas, A., & Pettersson, K.O. (2014). Experiencing challenges when implementing Active Management of Third Stage of Labor (AMTSL): a qualitative study with midwives in Accra, Ghana. *BMC Pregnancy Child birth* 14:193.
- Sheldon , W.R., Durocher, J., Winikoff , B., Blum , J.& Trussell, J.(2013) . How effective are the components of active management of the third stage of labor? *BMC Pregnancy and Childbirth* , 13:46.

- Smit, M., Stralen, G.V., Wolterbeek, R., Dillen, J.V., Roosmalen, J.V., et al. (2012). Survey of prophylactic use of uterotonics in the third stage of labour in the Netherlands. *J.Midwifery* 29:859-862.
- Soltani, H. (2008). Global implications of evidence based practice: management of third stage of labour. *Midwifery News* 24:2.
- Stanton, C., Armbruster, D., Knight, R., Ariawan, I., Gbangbade, S., Getachew, A., et al.(2009). Use of active management of the third stage of labour in seven developing countries. *Bulletin of the World Health Organization* 87:207-215.
- Tan, W.M., Klein, M.C., Saxell, L., Shirkoohy, S.E. & Asrat, G. (2008). How do physician and Midwives manage the third stage of labour? . *BIRTH* (3)35:220-229.
- Tanzania Survey (2006). Health facility-based Active Management of the Third Stage of Labor: *findings from a national survey in Tanzania*.
- Tsu, V.D., Mai, T.T.P., Nguyen, Y.H. & Luu, H.T.T. (2006). Reducing postpartum haemorrhage in Vietnam: Assessing the effectiveness of active management of the third stage of labour. *J. Obstet. Gynaecol;* 32,5: 489-496.
- Uganda Survey ( 2007). Active Management of the Third Stage of Labor: Data Obtained from National Survey in Uganda.
- Vivio, D., Fullerton, J.T., Forman, R., Mbewe, R.K., Musumali, M. & Chew, P.M. (2010) Integration of the practice of active management of third stage of labour within training and service implementation programming in Zambia. *J Midwifery Women Health;* 55:447-454
- Welman, C., Kruger, F. & Mitchell, B. (2005). Research Methodology. London: *Oxford University Press*.
- WHO Making Pregnancy Safer Technical Update (2006): Prevention of Postpartum Haemorrhage by Active Management of Third Stage of Labour.
- Winter, C., Macfarlane, A., Deneux-Tharoux, C., Zhang, W.H., Alexander, S, Brocklehurst, P., et al. (2007). Variations in policies for management of the third

stage of labour and the immediate management of postpartum haemorrhage in Europe. *BJOG* 114:845–54.

World Health Organization (2004). Making pregnancy safer : the critical role of the skilled attendant : a joint statement by WHO, ICM and FIGO.

World Health Organization (2007) WHO Recommendations for the prevention of postpartum Haemorrhage: 15. [www.who.int/.../WHO Recommendations for PPHaemorrhage.pdf](http://www.who.int/.../WHO_Recommendations_for_PPHaemorrhage.pdf) (accessed December 2, 2014).

World Health Organization (2012). *WHO recommendations for the prevention and treatment of postpartum haemorrhage*. WHO: Geneva, Switzerland.

Zubor, P., Kajo, K., Dokus, K., Krivus, S., Straka, L. et al (2014) Recurrent Secondary post partum haemorrhage due to placental site vessel subinvolution and local uterine tissue coagulopathy. *BMC Pregnancy and childbirth* 14:80. 1471-2393 [www.Biomedcentral.com](http://www.Biomedcentral.com).



## APPENDICES

### **Appendix A: Consent Form**

**Title:** Assessment of midwives on active management of third stage of labour in Osogbo, Nigeria

**Principal Investigator:** Oke Rebecca Oluwaseun

**Address:** School of Nursing, College of Health Sciences, University of Ghana, Legon-Accra, Ghana

### **General Information about Research**

Active management of the third stage of labour (AMTSL) is a combination of actions performed during the third stage of labour to prevent bleeding after birth. You are being invited to participate because you are a midwife who currently conducts deliveries. If you agree to participate, you will be required to fill out a questionnaire, which will take about 10 minutes of your time. Your name and address are not needed on the questionnaire and you are assured that the information you provide will be confidential.

### **Possible Risks and Discomforts**

You are not exposed to any risk by your participation and no cost will be incurred by your participation in this study

### **Possible Benefits**

There are no direct benefits to you as a participant. However, the potential benefit of participation in this study is that you have the opportunity to explore your feelings

regarding active management of third stage of labour and you may possibly influence other midwives to do the same.

### **Confidentiality**

The confidentiality of your response to this questionnaire will be protected. Your name. Address or phone number will not be used. I will protect your information to the best of my ability. You will not be named in any reports. The questionnaire and other information will be locked and can be accessed by the researcher and the supervisors.

### **Compensation**

There will be no compensation for your participation in the study.

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

Your participation to this research is voluntary and you have the right to withdraw from the study at any point

### **Contacts for Additional Information**

You have the right to contact the following in case you have any question.

Oke Rebecca Oluwaseun

School of Nursing, University of Ghana, Legon-Accra, Ghana.

Phones: +233545463943, +2348032110925

Email: [rebeccoye@yahoo.com](mailto:rebeccoye@yahoo.com).

Dr. Florence Naab

School of Nursing, University of Ghana

Legon, Accra, Ghana

Phone: 0204522332

Email: [fnaab@ug.edu.gh](mailto:fnaab@ug.edu.gh)

### **Your rights as a Participant**

This research has been reviewed and approved by the Institutional Review Board of Noguchi Memorial Institute for Medical Research (NMIMR-IRB). If you have any questions about your rights as a research participant you can contact the IRB Office between the hours of 8am-5pm through the landline 0302916438 or email address: [nirb@noguchi.mimcom.org](mailto:nirb@noguchi.mimcom.org).

### **VOLUNTEER AGREEMENT**

The above document describing the benefits, risks and procedures for research title **ASSESSMENT OF MIDWIVES ON ACTIVE MANAGEMENT OF THIRD STAGE OF LABOUR IN OSOGBO, NIGERIA** has been read and explained to me. I have been given an opportunity to ask questions about the research and have answered to my satisfaction. I agree to participate as a volunteer.

-----

Date

-----

Name and signature or mark of volunteer

**If volunteers cannot read the form themselves, a witness must sign here:**

I was present while the benefits, risks and procedures were read to the volunteer. All questions were answered and the volunteer has agreed to take part in the research.

-----

Date

Name and signature of witness

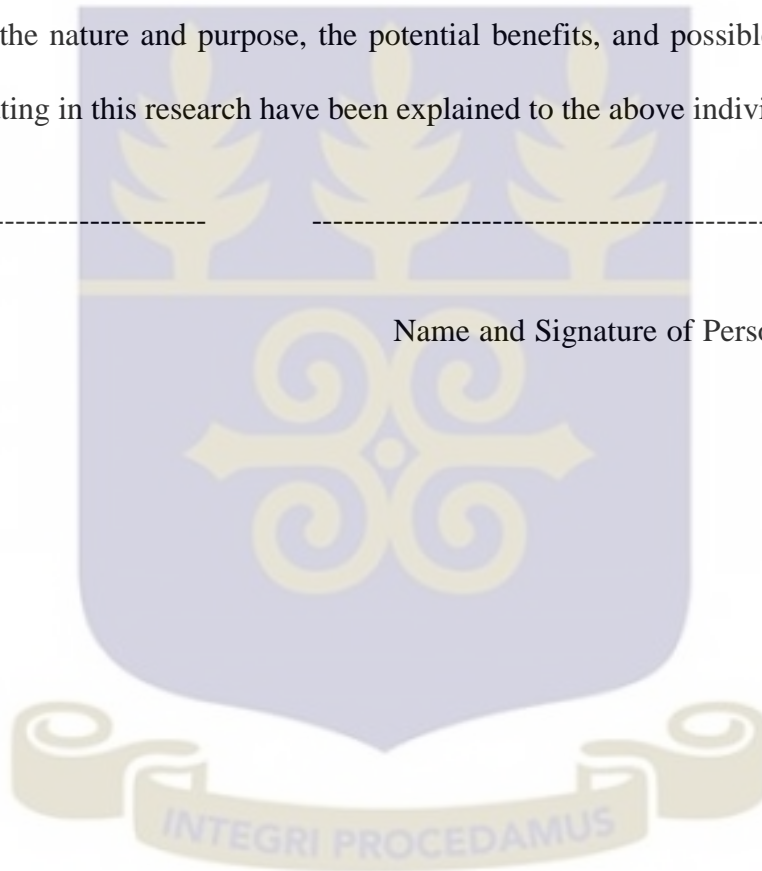
I certify that the nature and purpose, the potential benefits, and possible risks associated with participating in this research have been explained to the above individual.

-----

Date

Name and Signature of Person Who Obtained

Consent



## **Appendix B: Questionnaire**

### **ASSESSMENT OF MIDWIVES ON ACTIVE MANAGEMENT OF THIRD STAGE OF LABOUR IN NIGERIA**

Dear respondents,

This questionnaire was designed to generate information on the topic above. The information will be used for academic purpose only. Your confidentiality is guaranteed. Thanks for your co-operation.

#### **SECTION A**

##### **SOCIO-DEMOGRAPHIC DATA.**

1. How old are you? (a) 18- 30 ( )1 (b) 31- 40 ( )2 (c) 41- 50 ( )3 (d) 51- 60 ( )4
2. What sex are you? (a) Male ( )1 (b) Female ( )2
3. Religion: (a) Christianity ( )1 (b) Islam ( )2 (c) Traditional ( )3
4. Which categories of health workers are you ? (a) Registered Midwife ( )1 (b) Registered Nurse ( )2 (c) Medical Doctor ( )
5. Which categories of hospital setting are you working (a) Tertiary ( )1 (b) Secondary ( )2 (c) Primary ( )3
6. How long have you been practicing (a) 1-5years ( )1 (b) 6-10years ( )2 (c) 11-15years ( )3 (d) > 16years ( )4

**SECTION B****KNOWLEDGE ON THE ACTIVE MANAGEMENT OF THIRD STAGE OF LABOUR (AMTSL)**

1. Are you aware of AMTSL as obstetric intervention to prevent Postpartum haemorrhage

(a) Yes ( )1 (b) No ( )2

2. AMTSL has how many components according to ICM/FIGO guideline (a) 2 ( )1

(b) 3 ( )2 (c) 5 ( )3 (d) 7 ( )4

The following are included in the ICM/FIGO guidelines of AMTSL

Components	Yes	No
3. Prophylactic administration of oxytocin 10 IU within 1 minute following the birth of the baby.		
4. Prophylactic administration of oxytocin 10 IU within 3 minute following the birth of the baby		
5. Prophylactic administration of oxytocin 10 IU within 5 minute following the birth of the baby		
6. Early cord clamping		

7.Delivery of placenta with controlled cord traction (CCT)		
8.Blood Transfusion		
9.Uterine artery Ligation		
10.Uterine massage after delivery of the placenta every 15 minutes for two hours.		
11.Uterine massage after delivery of the placenta every 30 minutes for two hours.		
12.Uterine massage after delivery of the placenta every 30 minutes for four hours.		

**SECTION C****PRACTICE OF AMTSL AMONG MIDWIVES**

<b>About timing and route of Oxytocin administration</b>	Yes	No
1.During delivery of the fetus		
2.Within one minutes after delivery of fetus		

3. Within three minutes after delivery of fetus		
4. Within five minutes after delivery of fetus		
5. Should be given I.V push		
6. Should be given I.V drip		
7. Should be given I.M		
8. Should be given Orally		
<b>About controlled cord traction</b>		
9. Controlled cord traction is not necessary all the time		
<b>About Uterine massage after delivery of placenta</b>		
10. Uterine massage is carried out every 15 minutes for 2 hours		
11. Uterine massage is carried out every 30 minutes for 2 hours		
12. Uterine massage is carried out every 30 minutes for 4 hours		

**SECTION D****BARRIER TO THE PRACTICE OF AMTSL**

What is the reason why you have not been practicing AMTSL

1.Reason for not practicing AMTSL	Yes	No
2.I dont remember all the components because there is no guidelines to referred to in my facility		
3.Oxytocin is not always available in my center		
4.We are short staffed in my center		
5.I have not been trained on ICM/FIGO guidelines in my practice		
6.We dont use oxytocin in my center		
7.We dont use ICM/FIGO guideline in my center		

**Thank you for completing this questionnaire.**

**Appendix C: SPSS Output Of The Result****❖ Frequency Tables on socio-demographic Variables****Sex**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	9	3.0	3.0	3.0
	Female	290	96.7	97.0	100.0
	Total	299	99.7	100.0	
Missing	99.00	1	.3		
Total		300	100.0		

**Religion**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	traditional	1	.3	.3	.3
	Islam	66	22.0	22.1	22.4
	Christianity	232	77.3	77.6	100.0
	Total	299	99.7	100.0	
Missing	99.00	1	.3		
Total		300	100.0		

**Type of Hospital**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Primary	12	4.0	4.0	4.0
secondary	110	36.7	36.7	40.7
Tertiary	178	59.3	59.3	100.0
Total	300	100.0	100.0	

**Length of practice**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 11-15years	36	12.0	12.0	12.0
6-10years	47	15.7	15.7	27.8
above 16years	53	17.7	17.7	45.5
1-5years	163	54.3	54.5	100.0
Total	299	99.7	100.0	
Missing 99.00	1	.3		
Total	300	100.0		

❖ **Resposes on Knowledge of ATMTSL**

**Are you aware of AMTSL as obstetric intervention to prevent postpartum heamorrhage?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	20	6.7	6.7	6.7
	Yes	278	92.7	93.3	100.0
	Total	298	99.3	100.0	
Missing	99.00	2	.7		
Total		300	100.0		

**AMTSL has how many components according to ICM/FIGO guideline**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	7	6	2.0	2.4	2.4
	2	38	12.7	15.2	17.6
	5	45	15.0	18.0	35.6
	3	161	53.7	64.4	100.0
	Total	250	83.3	100.0	
Missing	99.00	50	16.7		
Total		300	100.0		

**Prophylactic administration of oxytocin 10 IU within 1 minute following the birth of the baby.**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid No	39	13.0	13.2	13.2
Yes	257	85.7	86.8	100.0
Total	296	98.7	100.0	
Missing 99.00	4	1.3		
Total	300	100.0		

**Prophylactic administration of oxytocin 10 IU within 3 minute following the birth of the baby.**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Yes	114	38.0	40.9	40.9
No	165	55.0	59.1	100.0
Total	279	93.0	100.0	
Missing 99.00	21	7.0		
Total	300	100.0		

**Prophylactic administration of oxytocin 10 IU within 5 minute following the birth of the baby.**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	95	31.7	36.4	36.4
no	166	55.3	63.6	100.0
Total	261	87.0	100.0	
Missing 99.00	39	13.0		
Total	300	100.0		

**Early cord clamping**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid no	49	16.3	17.1	17.1
yes	238	79.3	82.9	100.0
Total	287	95.7	100.0	
Missing 99.00	13	4.3		
Total	300	100.0		

**Delivery of placenta with controlled cord traction (CCT)**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid no	18	6.0	6.1	6.1
yes	277	92.3	93.9	100.0
Total	295	98.3	100.0	
Missing 99.00	5	1.7		

**Delivery of placenta with controlled cord traction (CCT)**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid no	18	6.0	6.1	6.1
yes	277	92.3	93.9	100.0
Total	295	98.3	100.0	
Missing 99.00	5	1.7		
Total	300	100.0		

**Blood Transfusion**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	45	15.0	15.8	15.8
no	240	80.0	84.2	100.0
Total	285	95.0	100.0	
Missing 99.00	15	5.0		
Total	300	100.0		

**Uterine artery Ligation**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	63	21.0	24.0	24.0
no	200	66.7	76.0	100.0
Total	263	87.7	100.0	
Missing 99.00	37	12.3		
Total	300	100.0		

**Uterine massage after delivery of the placenta every minutes for two hours.**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Yes	107	35.7	38.1	38.1
No	174	58.0	61.9	100.0
Total	281	93.7	100.0	
Missing 99.00	19	6.3		
Total	300	100.0		

**Uterine massage after delivery of the placenta every 30 minutes for two hours.**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid No	115	38.3	40.9	40.9
Yes	166	55.3	59.1	100.0
Total	281	93.7	100.0	
Missing 99.00	19	6.3		
Total	300	100.0		

**Uterine massage after delivery of the placenta every 30 minutes for four hours.**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Yes	72	24.0	26.7	26.7
No	198	66.0	73.3	100.0
Total	270	90.0	100.0	
Missing 99.00	30	10.0		

**Uterine massage after delivery of the placenta every 30 minutes for four hours.**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Yes	72	24.0	26.7	26.7
No	198	66.0	73.3	100.0
Total	270	90.0	100.0	
Missing 99.00	30	10.0		
Total	300	100.0		

❖ **Responses on Practices of AMTSL**

**During delivery of the fetus**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	80	26.7	28.3	28.3
no	203	67.7	71.7	100.0
Total	283	94.3	100.0	
Missing 99.00	17	5.7		
Total	300	100.0		

**Within one minutes after delivery of fetus**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid no	71	23.7	24.0	24.0
yes	225	75.0	76.0	100.0
Total	296	98.7	100.0	
Missing 99.00	4	1.3		

**Within one minutes after delivery of fetus**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid no	71	23.7	24.0	24.0
yes	225	75.0	76.0	100.0
Total	296	98.7	100.0	
Missing 99.00	4	1.3		
Total	300	100.0		

**Within three minutes after delivery of fetus**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	107	35.7	37.7	37.7
no	177	59.0	62.3	100.0
Total	284	94.7	100.0	
Missing 99.00	16	5.3		
Total	300	100.0		

**Within five minutes after delivery of fetus**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	98	32.7	35.4	35.4
no	179	59.7	64.6	100.0
Total	277	92.3	100.0	
Missing 99.00	23	7.7		

**Within five minutes after delivery of fetus**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	98	32.7	35.4	35.4
no	179	59.7	64.6	100.0
Total	277	92.3	100.0	
Missing 99.00	23	7.7		
Total	300	100.0		

**Should be given I.V push**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	30	10.0	10.3	10.3
no	260	86.7	89.7	100.0
Total	290	96.7	100.0	
Missing 99.00	10	3.3		
Total	300	100.0		

**Should be given I.V drip**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid no	121	40.3	42.3	42.3
yes	165	55.0	57.7	100.0
Total	286	95.3	100.0	
Missing 99.00	14	4.7		
Total	300	100.0		

**Should be given I.M**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid no	49	16.3	16.6	16.6
yes	246	82.0	83.4	100.0
Total	295	98.3	100.0	
Missing 99.00	5	1.7		
Total	300	100.0		

**Should be given Orally**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	10	3.3	3.5	3.5
no	273	91.0	96.5	100.0
Total	283	94.3	100.0	
Missing 99.00	17	5.7		
Total	300	100.0		

**Controlled cord traction is not necessary all the time**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	53	17.7	18.1	18.1
no	240	80.0	81.9	100.0
Total	293	97.7	100.0	
Missing 99.00	7	2.3		
Total	300	100.0		

**Uterine massage is carried out every 15minutes for 2hours**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid no	91	30.3	32.4	32.4
yes	190	63.3	67.6	100.0
Total	281	93.7	100.0	
Missing 99.00	19	6.3		
Total	300	100.0		

**Uterine massage is carried out every 30 minutes for 2hours**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	117	39.0	41.8	41.8
no	163	54.3	58.2	100.0
Total	280	93.3	100.0	
Missing 99.00	20	6.7		
Total	300	100.0		

**Uterine massage is carried out every 30 minutes for 4hour**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	66	22.0	24.1	24.1
no	208	69.3	75.9	100.0
Total	274	91.3	100.0	
Missing 99.00	26	8.7		

**Uterine massage is carried out every 30 minutes for 4hour**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	66	22.0	24.1	24.1
no	208	69.3	75.9	100.0
Total	274	91.3	100.0	
Missing 99.00	26	8.7		
Total	300	100.0		

❖ **Responses on Barriers to the practice of AMTSL**

**I don't remember all the components because there is no guidelines to referred to in my facility**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	101	33.7	33.9	33.9
no	197	65.7	66.1	100.0
Total	298	99.3	100.0	
Missing 99.00	2	.7		
Total	300	100.0		

**Oxytocin is not always available in my center**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	40	13.3	13.4	13.4
no	258	86.0	86.6	100.0
Total	298	99.3	100.0	
Missing 99.00	2	.7		

**Oxytocin is not always available in my center**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	40	13.3	13.4	13.4
no	258	86.0	86.6	100.0
Total	298	99.3	100.0	
Missing 99.00	2	.7		
Total	300	100.0		

**We are short staffed in my center**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	109	36.3	36.6	36.6
no	189	63.0	63.4	100.0
Total	298	99.3	100.0	
Missing 99.00	2	.7		
Total	300	100.0		

**I have not been trained on ICM/FIGO guidelines in my practice**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	118	39.3	40.1	40.1
no	176	58.7	59.9	100.0
Total	294	98.0	100.0	
Missing 99.00	6	2.0		
Total	300	100.0		

**We don't use oxytocin in my center**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	17	5.7	5.7	5.7
no	281	93.7	94.3	100.0
Total	298	99.3	100.0	
Missing 99.00	2	.7		
Total	300	100.0		

**We don't use ICM/FIGO guideline in my center**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	78	26.0	26.8	26.8
no	213	71.0	73.2	100.0
Total	291	97.0	100.0	
Missing 99.00	9	3.0		
Total	300	100.0		




## Appendix D: Ethical Clearance

**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.mimcom.org](mailto:nirb@noguchi.mimcom.org)  
Telex No: 2556 UGL GH

Post Office Box LG 581  
Legon, Accra  
Ghana



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

20<sup>th</sup> February, 2015

**ETHICAL CLEARANCE**

**FEDERAL WIDE ASSURANCE FWA 00001824** **IRB 00001276**

**NMIMR-IRB CPN 051/14-15** **IORG 0000908**

On 20<sup>th</sup> February 2015, the Noguchi Memorial Institute for Medical Research (NMIMR) Institutional Review Board (IRB) at a fullboard meeting approved an expedited protocol titled:

**TITLE OF PROTOCOL** : **Assessment of midwives on active management of third stage of labour in Osogbo, Nigeria**


**PRINCIPAL INVESTIGATOR** : **Oluwaseun Oke Rebecca, MSc 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 19<sup>th</sup> February, 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 E: Introductory Letter Lautech Teaching Hospital, Osogbo**

**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](mailto:nursing@ug.edu.gh)  
SON/P.II



P. O. Box LG 43  
LEGON, GHANA

March 12, 2015

Our Ref:.....  
Your Ref:.....

The Director of Nursing Service  
LAUTECH Teaching Hospital  
Osogbo

Dear Sir/Madam,

**MSC CANDIDATE: OKE REBECCA OLUWASEUN**

I am writing to introduce Rebecca Oke Oluwaseun, an MSc student under my supervision at the School of Nursing, College of Health Sciences, University of Ghana, Legon. Since the commencement of the programme, Rebecca has demonstrated maturity, diligence and commitment in all aspects of her work. We are very happy with her progress to date and we have had regular supervisory meetings with her. She has also demonstrated unique intellectual skills evidenced by critical analysis exhibited in her contributions during academic seminars.

Her thesis research is entitled “Assessment of Midwives on Active Management of third stage of labour in Osogbo, Nigeria”.

I would be very grateful if you could grant her permission to recruit participants for her study. Please feel free to contact me if you need further information. I can be reached via email at [fnaab@ug.edu.gh](mailto:fnaab@ug.edu.gh)

Thank you.

Yours sincerely,  
  
Dr. Florence Naab  
Lecturer/Thesis Supervisor



**Appendix F: State Specialist Hospital, Asubiaro, Osogbo**

**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/F.11.....  
Your Ref:.....

March 12, 2015

The Director of Nursing Service  
Osun State Specialist Hospital  
Asubiano  
Osogbo

**DEPUTY DIRECTOR OF  
NURSING SERVICES  
STATE SPECIALIST HOSPITAL  
ASUBIARO, OSOGBO**

Sign   
Date..... 15/3/15.....

Dear Sir/Madam,

**MSC CANDIDATE: OKE REBECCA OLUWASEUN**

I am writing to introduce Rebecca Oke Oluwaseun, an MSc student under my supervision at the School of Nursing, College of Health Sciences, University of Ghana, Legon. Since the commencement of the programme, Rebecca has demonstrated maturity, diligence and commitment in all aspects of her work. We are very happy with her progress to date and we have had regular supervisory meetings with her. She has also demonstrated unique intellectual skills evidenced by critical analysis exhibited in her contributions during academic seminars.

Her thesis research is entitled "Assessment of Midwives on Active Management of third stage of labour in Osogbo, Nigeria".

I would be very grateful if you could grant her permission to recruit participants for her study. Please feel free to contact me if you need further information. I can be reached via email at [fnaab@ug.edu.gh](mailto:fnaab@ug.edu.gh)

Thank you.

Yours sincerely,

Dr. Florence Naab  
Lecturer/Thesis Supervisor

INTEGRI PROCEDAMUS