

# **KIBOGORA POLYTECHNIC**

## **FACULTY OF HEALTH SCIENCE**

### **DEPARTMENT OF GENERAL NURSING**

#### **ASSESSMENT OF NURSES AND MIDWIVES' KNOWLEDGE AND PRACTICE TOWARD THE PREVENTION AND MANAGEMENT OF POSTPARTUM HEMORRHAGE**

##### **Case study: KIBUYE REFERAL HOSPITAL**

Undergraduate dissertation presented in partial fulfillment of the requirements for the Bachelor's degree with honor in general nursing.

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## **DECLARATION**

### **Declaration by the Candidate**

We, TUYUBAHE David and UWIMANA SHIMA Jean Luc hereby declare that this is our own original work and not a duplication of any similar academic work. It has therefore not been previously or concurrently submitted for any other degree, diploma or other qualification to Kibogora Polytechnic or any other institution. All materials cited in this paper which are not our own have been duly acknowledged.

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### **Declaration by the Supervisor**

I declare that this work has been submitted for examination with my approval as KP Supervisor

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## ABSTRACT

Postpartum hemorrhage (PPH) is defined as blood loss from the genital tract of 500 mL or more following a normal vaginal delivery or 1,000 mL or more following a cesarean section. Our study is concerned with nurses and midwives' knowledge toward prevention and management of PPH, where PPH is a leading cause of maternal deaths globally, contributing to a quarter of the deaths annually.

Our research was intended to evaluate the level of knowledge and the effectiveness of practices among nurses and midwives in preventing and managing postpartum hemorrhage at Kibuye Referral Hospital in Rwanda, with the aim of identifying gaps and providing recommendations for improved maternal care outcomes. The first objective was to evaluate the level of knowledge among nurses and midwives regarding preventive measures and management of postpartum hemorrhage at Kibuye referral hospital. The second objective was to evaluate the practices of nurses and midwives about management of postpartum hemorrhage at Kibuye referral hospital.

In our research, the target population was 25 nurses and midwives working in maternity ward of Kibuye referral hospital. On sampling procedure, we used census sampling procedure. Also we used a cross-sectional study design and quantitative approach also was used. As results, our study revealed that nurses were found to have varying level of knowledge. 91.3% had higher knowledge and 8.7% had low knowledge. Regarding practices, 6.3% had poor practices and 93.7% had good practices.

Our study reveals that the majority of nurses and midwives at Kibuye Referral Hospital have strong knowledge about preventing and managing postpartum hemorrhage. However, a small number have limited knowledge in this area. In terms of practice, although a few nurses and midwives have low practice levels, most exhibit high levels of practice. To improve postpartum outcomes, it's recommended that Kibuye Referral Hospital provide ongoing training for nurses on PPH management, encourage practical application of guidelines.

## **DEDICATION**

To our Almighty God

This research paper is dedicated to our parents for always loving and supporting us until our research was fully finished.

It is heartily and proudly dedicated to the people who served as an inspiration, like our supervisor, KP lecturers, classmates and some of our friends who extended their help during problems while doing this work.

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## **LIST OF ABBREVIATIONS/ ACRONYMS**

**AMTSL:** Active Management of Third Stage of Labor

**ANC:** Antenatal Care

**BEmONC:** Basic Emergency Obstetric and Newborn Care

**CCT:** Controlled Cord Traction

**ESMOE:** Essential Steps in the Management of Obstetric Emergencies

**FIGO:** Fédération Internationale de Gynécologie et d'Obstétrique.

**HBM:** Health Belief Model

**IU:** International Unit

**IV:** Intravenous

**JHPIEGO:** Johns Hopkins Program for International Education in Gynecology and Obstetrics.

**MMR:** maternal mortality ratio

**NCCEMD:** National Committee for the Confidential Enquiries into Maternal Deaths

**PPH:** Postpartum Hemorrhage

**SPSS:** Statistical Package for the Social Sciences

**TPB:** Theory of Planned Behavior

**UBT:** Intrauterine Balloon Tamponade

**WHO:** World Health Organization

## **CHAPTER ONE: GENERAL INTRODUCTION**

### **1.0. INTRODUCTION**

Postpartum hemorrhage (PPH) is defined as blood loss from the genital tract of 500 mL or more following a normal vaginal delivery or 1,000 mL or more following a cesarean section. PPH is a leading cause of maternal deaths globally, contributing to a quarter of the deaths annually (Ngwenya S. , 2016). According to Carroli, there are about 125 million births annually in the developing countries, the risk of maternal death from PPH is approximately 1 in 1000 deliveries (Carroli, 2008).

Chapter one of this study covers, the background of the study, the statement of the problem, the purpose of the study, research of questions, objectives of the study, specific objectives, significance of the study, limitations of the study and scope of the study.

### **1.1 BACKGROUND OF THE STUDY**

Postpartum Hemorrhage (PPH) occurs when blood loss exceeds 500 ml after vaginal delivery or 1000 ml after a cesarean section. It stands as the primary cause of maternal mortality worldwide, with an estimated global prevalence of 6%. Women in low-income countries bear the greatest burden of PPH (Bestman, 2019).

In 2010, approximately 287,000 maternal deaths were recorded worldwide (Ngwenya S. , 2016). As per the World Health Organization (WHO), statistics from 2017 indicate that 295,000 women pass away during pregnancy and childbirth globally. Additionally, there are an estimated 2 million stillbirths and 2.5 million early newborn deaths each year worldwide. Over 90% of these fatalities occur in low- and middle-income countries, including Rwanda. Prominent authorities suggest that between 70 to 88% of maternal and newborn deaths can be prevented or treated. In Rwanda, the most common birth complications are postpartum hemorrhage, accounting for 71.6% of cases (Nishimwe A. I., 2021).

Postpartum hemorrhage is a primary contributor to maternal mortality worldwide. Its prevalence stands at 6% globally, with low-income countries bearing the heaviest burden. In sub-Saharan Africa, PPH reaches a significant magnitude, with a rate of 10.5% (Traoré, 2018).

Most reported maternal deaths occur in Africa with PPH accounting for about 30% of these deaths. A recent study conducted in Kenya (East Africa), identified a total of 1307 cases of maternal morbidity, with obstetric hemorrhage being the most prevalent, comprising 601 cases. Among these, postpartum hemorrhage (PPH) accounted for 342 cases. In Africa, challenges persist in accurately estimating blood loss and diagnosing PPH, leading to wide variations in prevalence across the continent. However, a reliable systematic review of 19 studies that precisely measured blood loss revealed a prevalence of 10.5%, compared to 7.23% in 22 others that estimated blood loss visually. Prevalence rates are lowest in West Africa at 8.6%, while Middle and Eastern Africa exhibit rates of 18.7% and 14.2%, respectively (Habiba, 2019).

PPH is the leading cause of maternal mortality in sub-Saharan Africa. The region has poor health care facilities that are inadequate and inaccessible due to financial constraints. Most of the maternal deaths in this region are avoidable. Women giving birth in these regions face a far greater risk of dying in childbirth than their counterparts in resource-rich regions. The incidence of PPH for this unit or that for Zimbabwe has not been documented before in the literature. The incidence of PPH in a low-resource tertiary hospital in Nigeria was found to be 4.5%, in Uganda, (an African country) it was 9%, and it was 6.4% in the high-resource country of the Netherlands in Europe (Ngwenya S. , 2016).

Postpartum hemorrhage (PPH) is a significant contributor to maternal mortality, resulting in nearly 300,000 cases and approximately 72,000 PPH-related deaths each year in sub-Saharan Africa. One of the challenges of reducing maternal mortality associated with PPH in sub-Saharan Africa has been the low rate of hospital births and the lack of effective interventions to reduce PPH in community settings (McClure, 2014).

In 2020, a study was conducted in Nigeria to assess healthcare workers' knowledge and attitudes regarding the prompt referral of women with postpartum hemorrhage. The findings revealed that 86.5% of the respondents had good knowledge, 12% had moderate knowledge, and 1.5% had poor knowledge (Olowokere, 2020).

A 2014 study conducted in Ethiopia assessed the knowledge, attitudes, and practices of midwives regarding the active management of the third stage of labor at selected health centers

in Addis Ababa. The research involved 136 midwives working across 26 health centers. The results indicated that 82.4% of the midwives had a strong understanding of the active management of the third stage of labor. About 50.7% of midwives believed that this management approach helps prevent postpartum hemorrhage (PPH), while 25.7% noted that it improves uterine contractions and aids in placenta separation. Additionally, 77.9% administered oxytocin within the first minute after delivery. A significant 97.8% agreed that active management of the third stage should be employed and is beneficial for all pregnant women to prevent PPH. The study also found that 89% used controlled cord traction, 86% performed uterine massage within the first minute after delivery, and only 67.6% estimated blood loss. Furthermore, 51.5% of the midwives achieved satisfactory scores on knowledge questions, while 47% demonstrated proficient skills (Yaekob, 2015).

A nationwide retrospective cohort study on maternal death audit in Rwanda from January 2009 to December 2013 uncovered that out of 987 maternal deaths, nearly three-quarters (71.6%) occurred at district hospitals. Seventy percent of these deaths were attributed to direct causes, with postpartum hemorrhage being the primary cause (22.7%), followed by obstructed labor (12.3%). Indirect causes accounted for 25.7% of maternal deaths, with malaria being the most prevalent (7.5%) (Sayinzoga, 2016).

## **1.2 STATEMENT OF THE PROBLEM**

Postpartum bleeding, known as postpartum hemorrhage (PPH), is a critical situation in obstetrics occurring in 1–10% of childbirths. It stands as a prominent contributor to maternal death and illness on a global scale (Bláha, 2022).

Maternal mortality in low and lower-middle-income countries comprises 94% of total deaths, with over 25% attributed to postpartum bleeding (Bazirete O. N., 2022). In Africa, similar challenges exist, particularly regarding estimating blood loss and diagnosing postpartum hemorrhage (PPH), resulting in varying prevalence rates across the continent. (habiba,A.S., 2019). Rwanda reports a maternal mortality ratio (MMR) of 203 per 100,000 live births. The reduction of maternal mortality is a longstanding global health priority, with the United Nations

aiming to decrease the global MMR to below 70 per 100,000 live births by 2030 (Bazirete O. N., 2022).

The 2008-2010 triennial saving mothers report from the NCCEMD revealed that obstetric hemorrhage is a major contributor to maternal mortality in South Africa (Pattinson, 2012). The high percentage (42.0%) of deaths due to obstetric haemorrhage occurred at level 1 care and over half (52.0%) of these could have been avoided if the health workers were able to competently manage this condition. According to the report post-partum haemorrhage accounted for more than 78% maternal deaths from obstetric haemorrhage (Pattinson., 2012).

Postpartum hemorrhage (PPH) can be unpredictable, yet there are identifiable factors that can be mitigated to prevent deaths from PPH. The 2008–2010 National Committee for the Confidential Enquiries into Maternal Deaths (NCCEMD) report found that there is lack of appropriately trained health workers, especially at level 1 care, as a prominent administrative factor in deaths due to haemorrhage (R.C, 2012).

In 2014, it became mandatory for all medical interns to complete ESMOE training. It is assumed that nurses and midwives working in maternity units in Free State district hospitals must have adequate knowledge to identify and effectively handle PPH cases (Frank, 2009).

In Rwanda, PPH is still a problem also where in research conducted 2017-2019 showed that haemorrhage was second cause for maternal deaths (19%) following sepsis which was the most common cause (50%) of maternal deaths (Rulisa, 2021). In 2021, other research showed the increase in maternal death where 70% of maternal deaths result from direct causes and postpartum hemorrhage is the leading direct cause of maternal death with 22.7% of all documented cases. These demonstrate that the rate of maternal deaths caused by PPH in Rwanda, remains high compared to average rates of maternal deaths due to PPH in developed countries (8%) (Bazirete O. N., 2022).

As researchers, we want to conduct a research of nurses and midwives' knowledge toward prevention and management of PPH at Kibuye Referral Hospital because during our clinical placement at Kibuye referral hospital, we delivered 86 women within 2 weeks. Among these



women delivered, 5 women got PPH which is 5.8% of all women delivered during clinical placement in maternity ward.

### **1.3 PURPOSE OF THE STUDY**

The main purpose of our study is to assess the knowledge and practices of nurses and midwives on prevention and management of post-partum hemorrhage at Kibuye referral hospital, identifying gaps and providing recommendations for improved maternal care outcomes.

### **1.4. RESEARCH OBJECTIVES**

#### **1.4.1. General objectives**

To evaluate the level of knowledge and the effectiveness of practices among nurses and midwives in preventing and managing postpartum hemorrhage at Kibuye Referral Hospital, with the aim of identifying gaps and providing recommendations for improved maternal care outcomes.

#### **1.4.2. Specific objectives**

- To evaluate the level of knowledge among nurses and midwives regarding preventive measures and management of postpartum hemorrhage at Kibuye referral hospital.
- To evaluate the practices of nurses and midwives about prevention and management of postpartum hemorrhage at Kibuye referral hospital.

### **1.5 RESEARCH QUESTIONS**

1. What is the level of knowledge among nurses and midwives on prevention and management of postpartum hemorrhage at Kibuye referral hospital?
2. How the nurses and midwives at Kibuye referral hospital make practice on management of postpartum hemorrhage and its prevention.

## **1.6 SIGNIFICANCE OF THE STUDY**

This study is essential

### **1.6.1 To researchers**

The aim of this study was to enhance the understanding of nurses' and midwives' practices in managing patients with postpartum hemorrhage (PPH) at Kibuye Referral hospital. The study was to document the knowledge and practices of nurses and midwives at Kibuye Referral hospital in Rwanda regarding PPH management, laying the groundwork for future research in this area.

### **1.6.2 To Kibuye Referral Hospital**

The important of this study is to assist health professionals in identifying the strengths and gaps in nurses' and midwives' practices regarding the management of patients with PPH at Kibuye Referral Hospital. Taking into account the findings of this study will help enhance the quality of care provided to patients with PPH.

### **1.6.3 To the academics**

The outcomes of this study will contribute to enriching current understanding and stimulate new avenues for future research. Additionally, this research will serve as a reference and framework to aid academics and scientists in conducting further advanced studies in the field

## **1.7 LIMITATIONS OF THE STUDY**

The limitation in the study has been the financial cost and time constraints, which were required to conduct the study in a single district hospital. This made it challenging to generalize the results to all women admitted in other district hospitals.

## **1.8 SCOPE OF THE STUDY**

### **1.8.1 Scope of study in time**

The research is limited to 2 months ranging from May, 2024 to July, 2024

### **1.8.2 Scope of study in field**

As field, this study emphasized on maternal health with focus on assessment of knowledge and practice of nurses and midwives on prevention and management postpartum hemorrhage at Kibuye Referral Hospital.

### **1.8.3 Scope of study in space**

The research was conducted at Kibuye Referral Hospital located in Bwishyura sector, Karongi district in western province.

## CHAPTER TWO: LITERATURE REVIEW

### 2.1. INTRODUCTION

A literature review provides a summary of the material published on a subject by recognized scholars and researchers (Taylor, 2011).

Pilot and Beck outline various functions of the literature review within research. These include: identifying research problems and refining research questions or hypotheses; providing an overview of existing knowledge to determine how new research can contribute; highlighting gaps or inconsistencies in current research; recognizing the need to replicate studies in different contexts or populations; suggesting new clinical interventions for empirical testing; proposing theoretical or conceptual frameworks for research problems; recommending suitable research designs and data collection methods; aiding in the identification of potential expert consultants for research proposals; and assisting in the interpretation of study findings and the development of implications and recommendations (Denise F.Polit, 2003).

This chapter deals with the introduction, definition of key terms and concepts and will revise existing literature regarding knowledge of nurses and midwives about prevention and management of Post-partum hemorrhage.

#### 2.1 Definitions of key concepts/terms

**Postpartum Hemorrhage** is the loss of blood that is 500 ml or greater than 500ml following a vaginal delivery or blood loss that is more than or equivalent to 1000 ml post-caesarean section (Bestman, 2019).

**Primary PPH:** Occurs within the first 24 hours after vaginal delivery or C-section (Saleh, 2019).

**Secondary PPH:** is defined by unusual or increased bleeding from the birth canal occurring between 24 hours and 12 weeks following childbirth (Fox, 2023).

**Management:** is the coordination and administration of tasks to achieve a goal. These administrative tasks involve establishing the organization's strategy and orchestrating the collaboration of staff to achieve these goals by utilizing the resources at hand. (Schober, 2006).

**Maternal mortality:** The annual number of female deaths from any cause related to or aggravated by pregnancy or its management (excluding accidental or incidental causes) during pregnancy and childbirth or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy (WHO, 2022).

**Uterotonic:** is a type of medication that stimulates the contraction of the uterus. Uterotonics are commonly used to manage or prevent postpartum hemorrhage by promoting uterine contractions that help to expel the placenta and reduce bleeding (Duthie, 2016).

**Oxytocin:** is a hormone and neurotransmitter produced by the posterior pituitary gland. It plays a crucial role in various physiological processes, particularly in childbirth and lactation (Johnson M. H., 2023).

## **2.2 Knowledge of nurses and midwives about preventive measures and management of postpartum hemorrhage**

Maternal mortality due to postpartum hemorrhage (PPH) continues to be one of the most important causes of maternal death worldwide (Rath W. H., 2011).

Postpartum hemorrhage (PPH) is one of the main causes of maternal death. In Tanzania, 25% of maternal deaths are the result of PPH. Gaps in practitioner knowledge in the prevention and management of this issue may lead to severe maternal complications and death. Little has been documented about nurses' knowledge and skills regarding PPH prevention and management (Angelina, 2019).

The study was conducted at labour ward of Kiambu district hospital. Methods: After approval by University of Nairobi/ Kenyatta national hospital ethics and research committee and permission from Kiambu District Hospital management, the principal investigator and one research assistant collected data by use of structured questionnaire and an observation checklist after obtaining consent from eligible participants.

During the study period from July to August 2015, 22 midwives working at Kiambu district hospital labour ward filled the questionnaire and 18 of this were observed while conducting deliveries. All midwives were females, 59.1% had worked in a labour ward setting for 0-4 years and 68.2% were trained on active management of third stage of labour (AMSTL) which is key in

prevention of PPH. Knowledge on components of AMSTL was 100% for administration of uterotonics, 95.5% for controlled cord traction and 86.4% for uterine massage. 77.3% had knowledge that administration of uterotonic should be within a minute of delivery of the infant but on observed deliveries only 13.6% managed to administer within this time. Uterotonic supplies were always present and physiological management of third stage of labour was not practiced. Competence on AMSTL practice on observed deliveries was 44.4%. Conclusions: This study has yielded new knowledge on midwives knowledge and skills on prevention and management of PPH. Midwives had adequate knowledge on prevention of PPH (overall 90%) but need improvement in actual performance (skills) since majority of the mothers missed the preventive benefit associated with administration of prophylactic uterotonic within a minute of delivery of the infant (Mutunga, 2015).

The World Health Organization recommends that each woman giving birth should be administered uterotonic during the third stage of labour (TSL) for prevention of PPH (WHO, 2012). Use oxytocin and uterotonic agent blood loss was less and administration of mesoprostrol is safety during home delivery in Brazil (Martins, 2016). The same guideline proposes Oxytocin (IM/IV, 10IU) as the uterotonic drug of choice. Other injectable uterotonics and Misoprostol are recommended as alternatives for prevention of PPH in setting where Oxytocin is unavailable. In U.S.A. However, AMSTL consider gold standard for reducing incidence of PPH. by using non drug intervention (control cord traction and clamping) and uterotonic by using skilled health care workers. Misoprostol used at home during delivery (Bell, 2013).

Midwives nurse have higher knowledge about post-partum care. They check mothers vital signs in order to detect many fatal complications such as PPH. Which is the first leading cause to maternal mortality worldwide and Saudi Arabia (Elsabaa, 2015).

Majority of midwives have high 118(66.7%), 50 (28.2%) they have moderate knowledge on AMSTL, and 9(5.1%) have low knowledge (Nkwonta, 2015).

Oxytocin was used in 59% of cases in India, use of AMSTL by definition of International Confederation of Midwives and International Federation of Gynaecology (ICM/FIGO) was 61%.

Normal delivery care course definition (use oxytocin within one minute of birth) was 69%. Supervision and handholding is now required to prove the knowledge about AMTSL. Only 43% of respondents know about the correct sequence of steps of AMTSL (Tiwari, 2016).

Not only that but also in Australia Using oxytocin (at hospital, misoprostol (at community) 22 cases can be prevented. 6, 4, 130 and 42 women would require additional uterotonics, blood transfusion, shivering, and extra respectively. If misoprostol used in hospital and community no treatment using oxytocin at hospital 37 cases can be prevented and 70 would have uterotonic, blood transfusion, shivering and fever respectively. (Lang, 2015).

At labour ward of Kiambu district hospital 22 midwives were assessed among them 68.2% were trained on AMTSL. Which is the prevention key. 18 were observed while conducting delivery 100% administration of uterotonic, 95.5% controlled cord traction, 86.4% uterine massage, 77.3% knowledge that administration of uterotonic should be within a minute of delivery infant, 13.6% on observation during delivery manage to administer within this time. 44.4% Competence on AMTSL practice on observed delivery (Mutete, 2015). The majority of midwives performed well on use of oxytocin (87.4%), uterine massage (72.4%) and (51.2%) of midwives get training about AMTSL at the midwifery/nursing school at Dar es Salaam municipal hospital (Ramadhani, 2015).

### **2.3 Practices of nurses and midwives about prevention and management of postpartum hemorrhage**

Although there are several guidelines on treatment of PPH, the one guideline that is acceptable is that of the World Health Organization (2009). In this guideline According drug dose for management of atonic PPH are Oxytocin IV infuse 20 units in 1 litre IV fluid at 40 drops per minutes, Ergometrin/Methyl-ergometrine IM or IV (slowly) 0.2mg, 15-Methyl prostaglandin F<sub>2a</sub> IM 0.25mg. Management of retained placenta is 10IU of Oxytocin in combination with controlled cord traction (Gulmezoglu, 2012).

There are other procedures included in this process as recommended by both the World health organization and other guidelines and reports such as non-drug intervention (control cord traction and clamping) combined with uterotonic by using a skilled health care worker (Bell, 2013). Furthermore, fluid resuscitation and tranexamic acid is encouraged for recovery from PPH as the mother is losing too much blood and other fluids (WHO, 2012). It is recommended that for this

process to be successful, four components of management which are communication, resuscitation, monitoring, investigation and arresting bleeding Should be actively employed (Cuthbertson, 2015).

It is also recommended that, if the cause is uterine atony, uterine compression should be done, emptying the bladder then Ergometrine 0.5mg slow IV or IM syntometrine, misoprostol 800 microgram per rectum. If bleeding continue surgery should be considered and hemostasis continue until bleeding stop (WHO, 2012). In most African studies management of TSL follows the WHO recommendations which is Oxytocin 10 units IM if not available, use Ergometrine 1ampoule IM or Misoprostol 400-600mcg. Other management are controlled cord traction and to do uterine massage (Sangwi and Harshad, 2006).

Initial management include identifying PPH, determining the causes and implement appropriate interventions based on the etiology. Management of PPH varies according to available resources, management techniques, such as uterotonic medications, external uterine message, and bimanual compression. Procedures in management includes manual removal of the placenta and clots, uterine balloon tamponade and uterine artery embolization, laceration repair of genital tract trauma (Johnson, 2012).

## **2.4 Gap in literature**

The existing knowledge and practices of nurses and midwives regarding PPH management are not well-documented. Without a clear understanding of what nurses and midwives already know and practice, it's difficult to identify specific areas needing improvement or to measure the impact of any interventions (Kendall, 2017).

There is a lack of precise and current data on the prevalence and incidence of PPH at Kibuye Referral Hospital. Accurate prevalence and incidence data are crucial for understanding the scope of the problem, planning effective interventions, and measuring progress over time (Begley, 2019).

There is limited information on how effective current training programs are in improving PPH management among nurses and midwives at Kibuye Referral Hospital. Knowing the effectiveness of these programs is essential for ensuring that healthcare providers are well-



prepared to manage PPH, and for making necessary adjustments to training curricula (Nankunda, 2015).

## **2.5 Theoretical underpinning**

### **1. Health Belief Model (HBM)**

The Health Belief Model is useful in understanding health behaviors and the uptake of health services. It posits that health-related behaviors are influenced by an individual's perceptions of the threat posed by a health problem (perceived severity and susceptibility), the benefits of avoiding the threat, and factors influencing the decision to act (barriers, cues to action, and self-efficacy). The HBM can be used to understand the beliefs and attitudes of nurses and midwives towards PPH prevention and management. This includes their perceived susceptibility to encountering PPH, perceived severity of PPH, perceived benefits of adhering to best practices, and perceived barriers to effective management (Rosenstock, 1974).

### **2. Theory of Planned Behavior (TPB)**

The Theory of Planned Behavior emphasizes the role of intention in performing behaviors, which is influenced by attitudes toward the behavior, subjective norms, and perceived behavioral control. TPB can help assess the intention of nurses and midwives to follow protocols for PPH management by examining their attitudes, subjective norms, and perceived behavioral control over their actions (Ajzen, 1991).

### **3. Novice to Expert Model**

Patricia Benner's model describes the stages of clinical competence from novice to expert, emphasizing the development of skills and understanding over time through experience and learning. The model can be used to assess the level of competence of nurses and midwives in managing PPH, identifying whether they are novices, advanced beginners, competent, proficient, or experts, and how their level of experience influences their knowledge and practices. (Benner, 1982)

#### **4. Adult Learning Theory**

Adult Learning Theory, particularly Malcolm Knowles' principles of andragogy, highlights that adults are self-directed learners who bring experiences to their learning process, are motivated by internal factors, and seek learning that is relevant and practical. The principles of adult learning theory can guide the development of educational programs for nurses and midwives on PPH management. It emphasizes the importance of self-directed learning, practical experience, and relevance to their professional roles. (Knowles, 1980)

#### **5. Kurt Lewin's Change Management Model**

Lewin's model involves three stages: unfreezing, changing, and refreezing. This model can be applied to understand how changes in practices regarding PPH management can be effectively implemented and sustained. (Burnes, 2004)

This model can be used to develop strategies for changing and improving PPH management practices among nurses and midwives at Kibuye Referral Hospital, ensuring that changes are effectively adopted and maintained.

#### **6. Systems Theory**

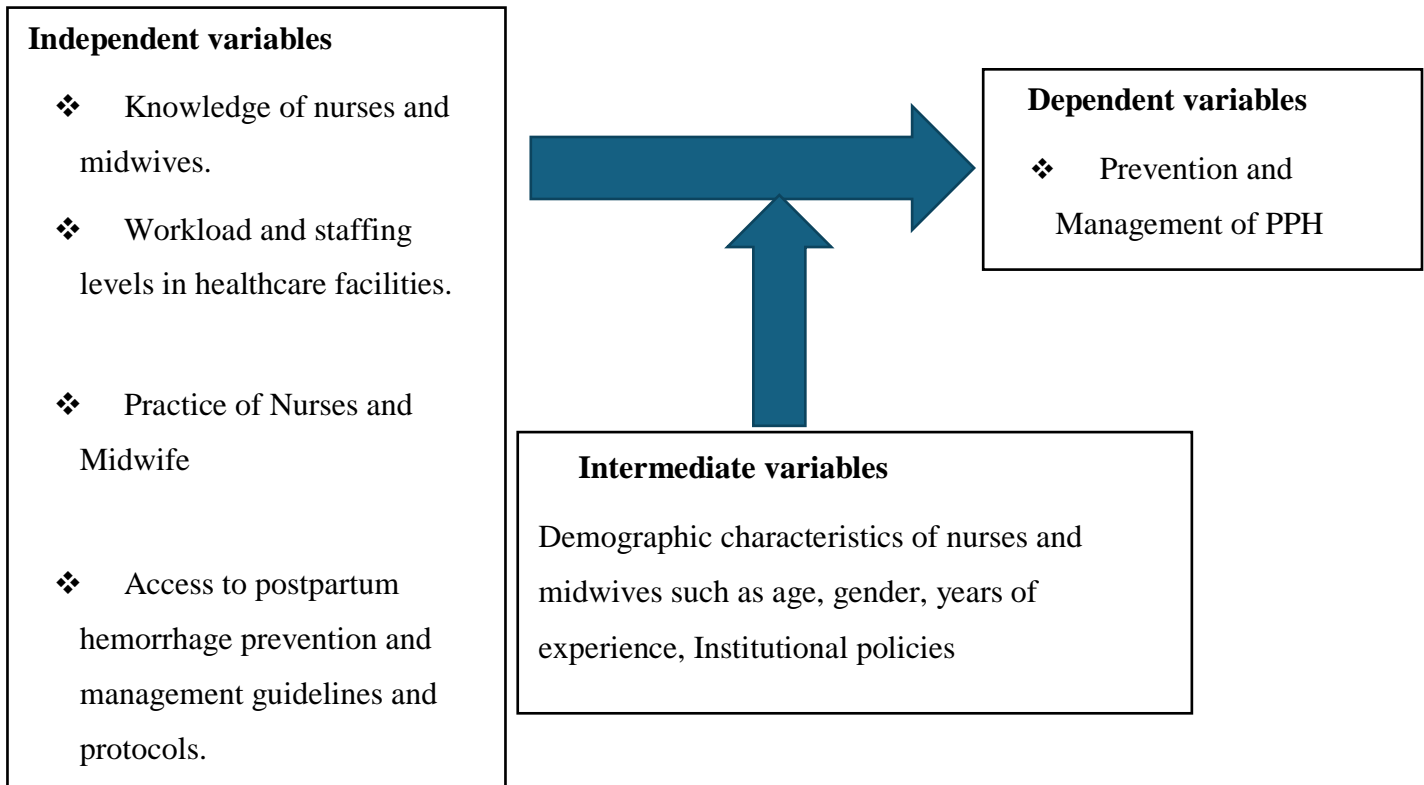
Systems Theory views organizations as complex entities composed of interrelated and interdependent parts. It emphasizes the importance of understanding the interactions between different components of a system. (Senge, 1990)

Systems theory can be applied to understand how different components of the healthcare system interact and influence PPH management. It can help identify systemic issues and areas for improvement.

### **2.6 Conceptual framework**

Dependent variables are the variables being tested and measured in an experiment, and depend on others variables. Independent variables are the variables the experiment manipulates or modify and are assumed to have a direct effect on the dependent variable. Whereas intermediate variables are variables that affects the strength of the relationship between dependent and independent variables.

**Figure 1: a conceptual framework**



In above figure Dependent variables: prevention and management of PPH are dependent on the Independent variables: Knowledge of nurses and midwives, Workload and staffing levels in healthcare facilities, Access to postpartum haemorrhage prevention and management guidelines and protocols. Intermediate variables: Institutional policies Demographic characteristics of nurses and midwives such as age, gender, years of experience.

## **2.7 Empirical study**

Various studies on nurses' knowledge and practices regarding the prevention and management of postpartum hemorrhage have been conducted in different countries and different results were found.

### **2.7.1 Studies on knowledge**

Nurses and midwives, especially in sub-Saharan hospitals, play a crucial role in birth care. However, inadequate performance of these professionals in managing birth complications has been widely recognized as a significant factor contributing to maternal and newborn deaths in

hospitals worldwide. Numerous studies have shown that despite their prior education, the knowledge and skills of nurses and midwives in low-resource settings often do not meet acceptable standards.

The research was conducted in two district hospitals in Rwanda: Masaka Hospital in Kigali, an urban area, and Nyamata Hospital in the eastern rural province. These hospitals were chosen from 12 district hospitals in the two provinces due to their high annual delivery rates. Both hospitals have been providing Basic Emergency Obstetric and Newborn Care (BEmONC) services for over five years.

A total of 54 participants, 33 midwives and 21 nurses completed the surveys. More than a half were from Masaka district hospital (30, 56%), the majority were female (33, 61%), The level of education was predominantly the advanced diploma (A1) in midwifery with 27 of 54 (50%) participants having A1 level in midwifery. The least represented level of education was the secondary school level (A2) in nursing with only one participant with A2 level in nursing. The majority of the participants had less than 6 years of experience in obstetric care (32, 59%), spent more than 10 h per week providing obstetric care (40, 74%) and participated in more than 10 deliveries per month ( 41, 76%). (Nishimwe A. I., 2021)

A cross-sectional survey of 246 midwives was conducted in the four main hospitals of Tamale, Ghana. Data were collected using a postpartum care knowledge questionnaire developed by JHPIEGO. Mean age of midwives was 31.9 years. The percentage of midwives who responded correctly to each postpartum care question ranged from 41.6% to 84.9%. knowledge about fundus location, postpartum examination, and care during first 2 hours postpartum was low. Hospital was associated with knowledge of postpartum care. Only 28.1% of midwives identified all warning signs of complications. Most midwives could identify severe bleeding, severe headaches, and high temperature as warning signs. More years of experience was associated with better knowledge of post-birth warning signs. (Adams, 2020)

### **2.7.2 Studies on practice**

A quantitative cross-sectional study was conducted to evaluate midwives' practices in managing PPH in Maseru, Lesotho. The study included 220 midwives, who were conveniently sampled

from different healthcare facilities and participated by completing a structured self-administered questionnaire.

There was a total of 220 participants in this study of which the majority were females 80% (n=178) and the dominating position held by the participants was a Nursing sister (a title for entry-level midwives) 78% (n=172). The educational level attained by most participants was Diploma 75% (n=166) followed by Degree 19% (n=41). Most of the participants 69% (n= 151) reported to have not attended an in-service training on guidelines on PPH. Participants with over 7 years 45% (n=99) of experience dominated followed by those with 1-3 years 30% (n=66). More than half of the participants were working in health centers 55% (n=122).

Estimating and recording blood loss immediately after childbirth is crucial for nurse-midwives to evaluate a woman's condition post-delivery. In the study, 124 midwives (56.4%) rated their proficiency in this practice as excellent, while only 6 (2.7%) considered themselves average. Regarding the assessment of placental completeness, 69.5% (153 midwives) rated themselves as excellent, 25.5% (56) as very good, and 5% (11) as good. For checking vital signs, 182 midwives (82.7%) rated themselves as excellent, with only one rating themselves as average. According to PPH guidelines, accurate assessment, monitoring of maternal condition, and recording of blood loss post-delivery are essential to promptly address any signs of hemorrhage and prevent complications. The midwives adhered to these guidelines by checking vital signs (82.7%), encouraging bladder emptying (80%), providing health education on postpartum danger signs (74.5%), completing patient records (71.8%), assessing the completeness of the placenta and membranes (70.9%), and estimating and recording blood loss (69.5%). (Chabeli, 2024)

According (Zoungrana, 2020), 81% of healthcare providers in sub-Saharan Africa correctly administered oxytocin for the management of postpartum hemorrhage. This percentage reflects adherence to the recommended practice of using oxytocin as part of active management

## **CHAPTER THREE: RESEARCH METHODOLOGY**

### **3.0 INTRODUCTION**

This chapter includes an introduction, details on the research approach and design, procedures for sampling the target population and determining sample size, the research instrument to be used for data collection, the procedure for data collection, ethical considerations, and measures for ensuring reliability and validity.

### **3.1 Research Approaches and Design**

#### **3.1.1 Research approach**

For this study, we used a quantitative method to assess nurses' and midwives' knowledge and practice toward prevention and management of PPH

#### **3.1.2 Research design**

In our research, we used a cross-sectional study design by asking nurses and midwives different questions (using questionnaires) regarding their knowledge and practices related to PPH management.

### **3.2 Target Population, Sampling Procedures and Sample Size**

#### **3.2.1 Target population**

The target population of our study were 25 nurses and midwives working in maternity ward of Kibuye Referral Hospital.

##### **3.2.1.1 Inclusion criteria**

All nurses and midwives of Kibuye referral hospital working in the Maternity ward.

##### **3.2.1.2 Exclusion criteria**

Other workers except for nurses and midwives working in the maternity ward of Kibuye referral hospital.

#### **3.2.2 Sampling procedures**

In this study, we used census sampling procedure where we used the entire population.

### **3.2.3 Sample size**

Sample size is the number of experimental units that need to be included in a study to answer the research questions. The main aim of sample size calculations is to determine the number of participants required to present a whole population (Noordzij, 2011).

In this study, sample size was 25 nurses and midwives.

## **3.3 Data Collection tools and Data procedures**

### **3.3.1 Research instruments for data collection**

Data collection was done by using self-report Questionnaires, Checklists, Laptop, Software (SPSS), Hardware (Books from libraries), Paper and pen.

### **3.3.2 Data collection procedures**

This involved to evaluate participants' comprehension of the questions for accuracy and clarity, explaining the research objectives, obtain signed consent forms, and ensuring participants understand their right to withdraw from the research at any time.

## **3.4 Data analysis technics and procedures**

During this study, we received primary data from the checklist by checking that questionnaire are properly filled. After we entered data, clean, check and analyze by SPSS

## **3.5 Reliability and validity measures**

### **3.5.1 Reliability**

This refers to the consistency of a measure (Price, 2015). Our questionnaire consistency was checked through pre-testing it by two participants nominated randomly among participants at the Hospital in order to check for consistency of answers that was provided through the questionnaire over time in the same group of respondents. We collected information using the questionnaire into the same individual and checklists of the population.

### **3.5.2 Validity**

Validity refers to how well the scores obtained from a measurement accurately reflect the intended variable (Price, 2015). Items of the questionnaire covered all research objectives. The questionnaire was checked to test whether it is complete. Data entry was accomplished and

analyzed to check the success of the research objectives. Variations was made accordingly, in case required, with the guidance of the supervisor.

### **3.6 Ethical consideration**

Ethical approval was granted by Kibogora Polytechnic, and permission was given by the hospital administration to conduct the study. Before filling the questionnaire, every participant signed a consent form. All information that participants provide was kept confidential, and data from this study will only be used for research purposes.



## **CHAPTER FOUR: DATA PRESENTATION, ANALYSIS, INTERPRESENTATION AND SUMMARY**

### **4.0 INTRODUCTION**

This chapter is focuses to presenting, analyzing, and interpreting the data gathered, providing a summary of the findings related to the Assessment of nurses and midwives' knowledge and practice toward the prevention and management of postpartum hemorrhage at kibuye referral hospital. This chapter is guided by the objective of the study.

The chapter aligns with the study's objectives. The results are detailed, discussed, and displayed in tables. Microsoft Excel and statistical package for social sciences (SPSS) software, version 16, were engaged in the analysis of the data

### **4.1. PRESENTATION OF FINDINGS**

**Table 1: demographic characteristics of respondents**

<b>Variables</b>		<b>Frequency</b>	<b>Percentage</b>
Gender	female	20	80.0%
	male	5	20.0%
	Total	25	100.0%
Age distribution in years	20-29	13	52.0%
	30-39	8	32.0%
	40-49	3	12.0%
	50 and above	1	4.0%
	Total	25	100.0%
Occupation	midwives	19	76.0%
	nurses	6	24.0%
	Total	25	100.0%
Highest academic qualification	diploma	21	84.0%
	bachelor's degree	4	16.0%
	Total	25	100.0%

Years of experience	1-5	13	52.0%
	6-10	10	40.0%
	10-above	2	8.0%
	Total	25	100.0%
Participation in training courses of PPH	yes	22	88.0%
	no	3	12.0%
	Total	25	100.0%

Table 1 shows that most of participants were female which was 20(80%), while male was 5 which contributes to (20%). This table shows that the largest respondent age group that respond to questioner were 20-29 which is (52.0%), followed by 30-39 which were (32.0%), then 40-49 which is (12.0%), least age group that respond to the questioner was respondent with 50 and above which was 1contributing to (4%). Table shows among respondents 19(76.0%) were Midwives and 6(24.0%) were Nurses. Table shows that they were different level of highest academic qualification among respondents, most of respondents was holding Diploma and were 21(86.0%), smallest portion of respondents were Bachelor's degree holders and was 4(16.0%). Years of experience of respondents were 1-5 year for 13(52.0%) respondents which was highest among others, respondents of 6-10 years were 10(40.0%) and finale respondents with 10 years and above were 2(8.0%). Table shows participation in training courses of PPH shows 88.0% have participated in training courses of PPH while 12.0% did not participate in training courses of PPH.

**Table 2: The knowledge of nurses and midwives on the management of postpartum hemorrhage**

<b>Variables</b>		<b>Frequency</b>	<b>Percentage</b>
training on PPH were given to you in the past year or years	Agree	21	84.0%
	Disagree	4	16.0%
	Total	25	100.0%
PPH is excessive vaginal bleeding of 500 ml or more after birth until 12 days	Agree	22	88.0%
	Disagree	3	12.0%
	Total	25	100.0%
post-partum hemorrhage is fatal	Agree	22	88.0%
	Disagree	3	12.0%
	Total	25	100.0%
Primary PPH is excessive vaginal bleeding within 24 hours after childbirth	Agree	24	96.0%
	Disagree	1	4.0%
	Total	25	100.0%
All women at risk for PPH should have an IV line during labor	Agree	23	92.0%
	Disagree	2	8.0%
	Total	25	100.0%
Give 20 IU oxytocin IM to the women with PPH	Agree	24	96.0%
	Disagree	1	4.0%
	Total	25	100.0%
An IV infusion with 20 IU oxytocin in 1000 ml Ringer's lactate is given to PPH woman	Agree	22	88.0%
	Disagree	3	12.0%
	Total	25	100.0%

The most effective strategy to prevent PPH is active management of the third stage of labour	Agree	23	92.0%
	Disagree	2	8.0%
	Total	25	100.0%
IV fluid, blood, blood product and oxygen is given to prevent shock	Agree	24	96.0%
	Disagree	1	4.0%
	Total	25	100.0%
Always inform the mother that she is having excessive bleeding	Agree	25	100.0%
	Disagree	0	0.0%
	Total	25	100.0%
Primary and secondary postpartum hemorrhage is treated the same way	Agree	21	84.0%
	Disagree	4	16.0%
	Total	25	100.0%

Table 2 Shows that majority of respondents 21(84.0%) agreed that training on PPH were given to you in the past year or years. While 4(16.0%) of respondent choose that he or she never had training on PPH in past year or years. Majority of participants 22(88.0%) choose correct answer about if PPH is excessive vaginal bleeding of 500 ml or more after birth until 12 days, while less participants 3(12.0%) choose incorrect answer. Participants 22(88%) agreed that Post-partum is fatal, while 3(12.0%) of participants was having lower level of knowledge.

This table shows that knowledge of participants about Primary PPH if is excessive vaginal bleeding within 24 hours after childbirth, was higher for 24(96%) participants and lower for 1(4%) participants respond that Primary PPH is not excessive vaginal bleeding occurring within 24 hours after childbirth. 23(92%) of nurses and midwives responded that all women at risk for PPH should routinely have an IV line during labor, 2(8%) of all women at risk for PPH should not routinely have an IV line during labor. 24(96%) Give 20 IU oxytocin IM to the women with PPH and 1(4%) did not give 20 IU oxytocin IM to the women with PPH.

From the above table, 22(88.0%) of nurses and midwives respond that an IV infusion with 20 IU oxytocin in 1000 ml Ringer's lactate is given to a PPH woman, 3(12.0%) respond that an IV infusion with 20 IU oxytocin in 1000 ml Ringer's lactate is not given to PPH woman. 23(92%) of nurse and midwives responded that the most effective strategy to prevent PPH is the active management of the third stage of labor and 2(8%) of the most effective strategy to prevent PPH is not active management of the third stage of labor.

24(96%) respond that IV fluid, blood, blood product, and oxygen are given to prevent shock, 1(4%) respond that IV fluid, blood, blood product, and oxygen are not given to prevent shock. 25(100%) of all nurses and midwives agreed that Always inform the mother that she is having excessive bleeding. 21(84%) respond that Primary and secondary postpartum hemorrhage is treated the same way, while 4(16%) respond that Primary and secondary postpartum hemorrhage is not treated the same way.

**Table 3: The practice of nurses and midwives on active management of postpartum haemorrhage**

Variable		Frequency	Percentage
All materials are available	yes	23	92.0%
	no	2	8.0%
	Total	25	100.0%
10 IU oxytocin was given to the women in one min	yes	25	100.0%
	no	0	0.0%
	Total	25	100.0%
The uterine massage was done	yes	25	100.0%
	no	0	0.0%
	Total	25	100.0%
Control cord traction was done	yes	25	100.0%
	no	0	0.0%
	Total	25	100.0%

Tissues were checked	yes	22	88.0%
	no	3	12.0%
	Total	25	100.0%
Tears were checked	yes	25	100.0%
	no	0	0.0%
	Total	25	100.0%
Bladder was emptied	yes	21	84.0%
	no	4	16.0%
	Total	25	100.0%
20 IU oxytocin IM was given to the women	yes	23	92.0%
	no	2	8.0%
	Total	25	100.0%
Manuel uterine compression	yes	22	88.0%
	no	3	12.0%
	Total	25	100.0%

From above table, the majority of nurses and midwives (92%) ensured that all necessary materials were available during postpartum care. However, 8% of the time, materials were missing. All nurses and midwives administered 10 IU of oxytocin within one minute of delivery, reflecting excellent adherence to this critical protocol for preventing postpartum hemorrhage. 25(100%) Uterine massage was performed by all assessed practitioners, indicating full compliance with this important procedure for uterine involution and bleeding control. 25(100%). While most practitioners 22(88%) checked tissues for abnormalities, 3(12%) did not. This suggests a minor gap in adherence to thorough postpartum examination.

25(100%) All participants checked for tears, ensuring comprehensive assessment and care of the perineum, which is crucial for preventing and managing potential complications. A majority of nurses and midwives 21(84%) performed bladder emptying, a practice important for reducing the risk of postpartum hemorrhage. However, 4(16%) did not perform this step. Most practitioners

23(92%) administered 20 IU of oxytocin IM, reflecting a high level of adherence to this treatment protocol. While 2(8%) who did not administer this dosage. Manual uterine compression was performed by 22(88%) of the nurses and midwives. This practice is essential for managing postpartum bleeding, but 3(12%) of participants did not perform Manual uterine compression.

#### **4.2. DISCUSSION OF FINDINGS**

This study analyzed the knowledge, attitudes, and practices of 25 nurses and midwives at Kibuye Referral Hospital, comprising 20 females (80%) and 5 males (20%). The overall percentage of participants with good knowledge was 91.7%, which is notably higher compared to similar studies conducted in other regions. For instance, a study in four main hospitals in Tamale, Ghana, found that only 84.9% of midwives responded correctly to postpartum care questions, leaving 15.1% with poor knowledge higher than the 8.3% observed in our study at Kibuye (Adams, 2020)

When comparing the number of participants, our study involved fewer respondents than the 310 healthcare workers who participated in a study conducted in Rwanda on postpartum hemorrhage (PPH) prevention and management in antenatal care (ANC). Despite this, 91.7% of our participants demonstrated good knowledge of the active management of PPH, which is significantly higher than the 48% reported in the Rwandan study. Moreover, 96.0% of our respondents correctly administered oxytocin for PPH management, surpassing the 81% of healthcare providers in sub-Saharan Africa who did so. (Zoungrana, 2020)

Our findings also revealed that 92.0% of nurses and midwives at Kibuye Referral Hospital recognized active management of the third stage of labor as the most effective strategy for preventing PPH. This is considerably higher than the 50.7% of midwives in a 2014 Ethiopian study who acknowledged this strategy. Additionally, 92.0% of our participants administered 20 IU of oxytocin IM to women with PPH, compared to 77.9% in the Ethiopian study. Furthermore, 100% of our participants performed controlled cord traction and uterine massage, surpassing the 89% and 86%, respectively, reported in the Ethiopian study. Moreover, 93.7% of our participants demonstrated good skills, significantly higher than the 47% in Ethiopia (Yaekob, 2015).

In 2020, a study conducted in Nigeria to assess healthcare workers' knowledge and attitudes regarding the prompt referral of women with postpartum hemorrhage, the findings revealed that 86.5% of the respondents had good knowledge which is lower than 91.3% compared to our study, and 13.5% had poor knowledge which is higher than 8.7% of our study (Olowokere, 2020).

#### **4.3 SUMMARY OF FINDINGS**

In our study the majority of participants were female (80%) and aged 20-29 (52%). Midwives made up 76% of respondents, with the largest group holding a diploma (86%). Most respondents had 1-5 years of experience (52%), and 88% had participated in training courses on Postpartum Hemorrhage (PPH).

The research findings indicate that a significant majority of respondents have received training on postpartum hemorrhage (PPH), with 84% confirming this. Most participants correctly identified PPH as excessive vaginal bleeding of 500 ml or more post-birth and recognized its potential fatality. Knowledge about primary PPH defined as bleeding within 24 hours after childbirth was also high, with 96% understanding this correctly. A strong consensus (92%) supported routine IV line placement for women at risk of PPH and the use of 20 IU oxytocin IM for treatment. Additionally, 88% affirmed the use of IV infusion with oxytocin in Ringer's lactate, and 92% endorsed active management of the third stage of labor as the most effective preventive strategy. All respondents agreed on the importance of informing the mother about excessive bleeding, though 84% believed primary and secondary PPH are treated the same way, and 16% did not.

Also the findings reveal that 92% of nurses and midwives ensured the availability of necessary materials during postpartum care, with only 8% reporting occasional shortages. All nurses and midwives adhered to administering 10 IU of oxytocin immediately after delivery and performed uterine massage, reflecting full compliance with these critical protocols. While 88% checked tissues for abnormalities, indicating minor gaps in thorough postpartum examination, all participants checked for tears and 84% performed bladder emptying. A high adherence rate was also noted for administering 20 IU of oxytocin IM (92%) and performing manual uterine compression (88%).



## **CHAPTER FIVE: GENERAL CONCLUSION AND RECOMMENDATIONS**

### **5.0 INTRODUCTION**

This chapter covers general conclusion and recommendations for our study which is assessment of nurses and midwives' knowledge and practice toward the prevention and management of postpartum hemorrhage at Kibuye referral hospital. Our research problems were to assess the level of knowledge among nurses and midwives on prevention and management of postpartum hemorrhage and how they make practice on management of postpartum hemorrhage and its prevention. We used quantitative approach and cross-sectional design to collect data and analyze data.

In this chapter, the answers to the research questions are presented. These are the research findings. It also presents the relationship of these findings to earlier findings, the implications of the current situation, suggested improvements, the questions raised and the suggestions for further research.

### **5.1 CONCLUSION**

This study was conducted to assess of nurses and midwives' knowledge and practice toward the prevention and management of postpartum hemorrhage at Kibuye referral Hospital. The majority of respondents 20(80.0%) were females and the majority of respondent 21(86.0%) were advanced diploma as level of education. The majority of respondents 13(52.0%) had year of working experience ranging from 1 to 5 years. This study revealed that nurses were found to have varying level of knowledge. 91.3% had higher knowledge and 8.7% had low knowledge. Regarding practices, 6.3% had poor practices and 93.7% had good practices. Kibuye Referral Hospital should implement measure regarding prevention and management of PPH which are continuous education and training remain crucial in keeping healthcare providers updated with the latest guildlines and practices in PPH management, these measures should target nurses who have shown weakness in practices and knowledge. By doing so, the hospital can ensure that it's staff is equipped to provide the best possible care for mothers during the post-partum period, thereby improving maternal outcome in the regional.

## **5.2 RECOMMENDATIONS**

To enhance the knowledge and practices of nurses and midwives, there are need of prompt interventions based on our research findings so the practices will be improved for better postpartum outcome. Based on the findings for this study, the following recommendations were made:

### **a. To Kibuye referral hospital**

Retraining nurses through ongoing in-service educational training and refresher workshops on PPH management and prevention is crucial. This training is necessary to reinforce the knowledge and skills required for nursing care procedures and to keep their knowledge and practice updated. Providing educational opportunities and the necessary resources for nursing studies will increase the level of knowledge and practice among nurses.

Encourage nurses to apply their knowledge in practice and stay aware of the preventive guidelines and policies for PPH, especially in the active management of the third stage of labor.

### **b. To health care providers**

Nurses and midwives are recommended to update their knowledge and practices on prevention and management of PPH especially those nurses who shown the poor practices. Nurses and midwives are also recommended to Implement standardized risk assessment procedures for all pregnant women upon admission, ensuring early identification of those at higher risk for PPH and proactive management.

### **c. To researchers**

Undertake cross-country studies to compare PPH management practices and outcomes in different cultural and healthcare contexts. This can provide insights into global best practices and highlight areas for improvement. Research to identify specific areas where training is lacking or where nurses may have misconceptions about PPH management. This can guide the development of targeted educational interventions.

### **5.3 SUGGESTION FOR FURTHER STUDY**

Combine Quantitative and Qualitative Data: Use a mixed-methods approach that combines quantitative surveys with qualitative interviews. This will provide a more holistic understanding of the current PPH management practices and areas for improvement

Conduct longitudinal studies to track changes in knowledge, practice, and patient outcomes over time, especially after implementing new training programs or policy updates.

Evaluate Training Effectiveness by conducting assessment of current training programs to identify strengths and areas for improvement. Consider evaluating both the content and the delivery methods of these programs.

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# **APPENDICES**

## **Appendix 1: Informed Consent Form**

**Title of Study:** Assessment of Nurses and Midwives' Knowledge and Practice Toward the Prevention and Management of Postpartum Hemorrhage at Kibuye Referral Hospital

**Contact Information:** 0789603513 [shimajluc@gmail.com](mailto:shimajluc@gmail.com)

0788943362 [tuyubahedavid@gmail.com](mailto:tuyubahedavid@gmail.com)

### **Introduction:**

You are being invited to participate in a research study that aims to assess the knowledge and practices of nurses and midwives regarding the prevention and management of postpartum hemorrhage (PPH). This study will help identify gaps in knowledge and practice and inform strategies to improve PPH management at Kibuye Referral Hospital.

This study has been approved by **Kibogora Polytechnic University**, Faculty of Health science Department of General Nursing, and will be conducted according to the ethical guidelines and principles of the Kibogora Polytechnic University.

### **Purpose of the Study:**

The purpose of this study is to evaluate current practices and knowledge levels among nurses and midwives concerning PPH. This information will be used to enhance and improve patient outcomes related to PPH.

### **Procedures:**

If you agree to participate, you will be asked to: Complete a questionnaire about your knowledge and practices related to PPH.

The questionnaire will take approximately 30 minute to complete. Your responses will be confidential and will not be linked to your identity.

**Voluntary Participation:**

Your participation in this study is entirely voluntary. You may choose not to participate or withdraw from the study at any time without any consequences or loss of benefits to which you are otherwise entitled.

**Risks and Benefits:**

There are no anticipated risks associated with participating in this study. The benefits of participating include contributing valuable information that could improve PPH management practices and patient outcomes at the hospital.

**Confidentiality:**

All information collected in this study will be kept confidential. Data will be anonymized and securely stored, and only aggregated results will be reported. Personal identifiers will not be used in any published materials.

**Consent to Participate:**

By signing this consent form, you acknowledge that you have been informed about the study’s purpose, procedures, risks, and benefits. You also acknowledge that you have had the opportunity to ask questions and have received satisfactory answers.

**Participant Statement:**

I have read and understood the information provided above. I agree to participate in this study and understand that I may withdraw at any time without penalty.

- **Participant's Signature:** .....
- **Date:** .....

## Appendix 2: Questionnaire

### Postpartum Hemorrhage (PPH) Questionnaire

**Title of the study** Assessment of nurses and midwives' knowledge and practice toward the prevention and management of postpartum haemorrhage at Kibuye Referral Hospital

#### Instructions

It will take approximately thirty (30) minutes to complete this questionnaire.

Please answer all the questions.

#### Section A: socio-demographic information

Please Place a Tick (✓) to the corresponding answer

#### socio-demographic information

##### Variables

1. Gender

a. Female       b. Male

2. Age distribution in years

a. 20-29

b. 30-39

c. 40-49

d. 50-59

3. occupation

a. Midwives

b. Nurses

4. Highest academic qualification

a. Diploma

b. Bachelor's degree

c. Masters

5. Years of experience in obstetrics care

a. <1-5

b. 6-10

c. >10

6. Participation in training courses of PPH

a. YES

b. NO

**Section B: Responses on knowledge of midwives and nurses toward management of PPH**

Please fill out the questionnaire by marking your answers with an X where appropriate.

**Table 4: Responses on knowledge of midwives and nurses toward management of PPH**

Variable	Agree	Disagree
Training on PPH were given to you in the past year or years		
Postpartum hemorrhage is defined as excessive vaginal bleeding of 500ml or more, occurring from delivery until 12 days postpartum.		
Postpartum hemorrhage is fatal		
Primary PPH is excessive vaginal bleeding occurring within 24 hours after childbirth		
All women at risk for PPH should routinely have an IV line during labor		
Give 20 IU oxytocin IM to the women with PPH		
An IV infusion with 20 IU oxytocin in 1000 ml Ringer's lactate is given to PPH woman		



The most effective strategy to prevent PPH is active management of the third stage of labour		
IV fluid, blood, blood product and oxygen is given to prevent shock		
Always inform the mother that she is having excessive bleeding		
Primary and secondary postpartum haemorrhage is treated the same way		

### Responses of participants on practice toward PPH

**Table 5: Checklist**

Variable	Activities	yes	no
	All materials used are available		
<b>PPH management</b>	10 IU oxytocin IM was given to the women		
	In one min		
	The uterine massage was done		
	Control cord traction was done		
	Tissues were checked		
	Teas were checked		
	Bladder was emptied		
	20 IU oxytocin IM was given to the women		

	Manuel uterine compression		
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### Appendix 3 : Acceptance letter

REPUBLIC OF RWANDA

Kibuye, August 1, 2024



WESTERN PROVINCE  
KARONGI DISTRICT  
KIBUYE REFERRAL HOSPITAL  
BP: 44 KIBUYE  
TEL:0780442626  
Email: [kibuyereferralhospital53@gmail.com](mailto:kibuyereferralhospital53@gmail.com)

To: -MUTUYIMANA David  
- UWIMANA SHIMA Jean Luc

#### Research Ethic Approval Notice

Dear Martin, Theophile, Bernadette and Madeleine,

Reference is made to your letter dated on 31<sup>st</sup> July, 2024 requesting the authorization to collect data as a part of your research topic entitled “**Assessment of nurses and midwives knowledge and practice towards the prevention and management of post-partum hemorrhage at Kibuye Referral Hospital**”. Furthermore, referencing to our accreditation procedures, after reviewing your pledge to ensure that all provided information will be used for academic purpose. And also, will be used in the strict to ethical principles and full respected, **approval has been granted to your topic work.**

You are required to present the result of your study in KRH Research Ethic Committee before publication. Please note that the present approval is valid for 6 months after receiving this letter.

Sincerely,

**UKURIKIYINEZA Japhet**  
Chairperson of Research Ethic Committee



#### Cc:

- Director General, Kibuye referral hospital
- Clinical Director, Kibuye Referral Hospital
- Director of Nursing and Midwifery, Kibuye Referral Hospital

Appendix 4: Research letter



KIBOGORA POLYTECHNIC



RESEARCH LETTER

Date: 2 / 7 / 2024

Ref: N° 02/GNKP-IRB/2024

**TO WHOM IT MAY CONCERN,**

We write this letter to humbly request you to allow:

1. Mr/Ms. TUYUBATE David ..... Reg Num. 2000748
2. Mr/Ms. UWIMANA SHINA Jean Luc ..... Reg Num. 2000641

To conduct research in your Organization/Institution/Territorial entity

The above mentioned are students at Kibogora Polytechnic pursuing Bachelor's degree in

1. General Nursing .....

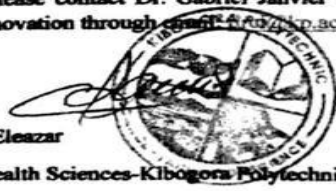
The candidate are conducting research entitled:

Assessment of Nurses And Midwives' knowledge toward the prevention and management of Postpartum Hemorrhage At Kibuye Referral Hospital

We are convinced that your Organization/Institution/Territorial entity will constitute a valuable source of information pertaining to their research. The purpose of this letter is to humbly requesting you to avail them with the pertinent information they may need. We pledge to ensure that all provided information will be used in the strict academic purpose.

For any inquiries, please contact Dr. Gabriel Janvier TUGIRINSHUTI, Director of Research, Consultancy, and Innovation through [gnkp@kibogora.ac.rw](mailto:gnkp@kibogora.ac.rw) or Tel: 0788793509

Yours sincerely,




Dr. NDABARORA Eleazar

Dean of faculty of Health Sciences-Kibogora Polytechnic

Email: [elezardaba@gmail.com](mailto:elezardaba@gmail.com)

Tel: 0785371340

Appendix 5: Plagiarism approval

 **PLAGIARISM CHECK.ORG**

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**25.44%** SIMILARITY OVERALL      **65.99%** POTENTIALLY AI      SCANNED ON: 23 AUG 2024, 8:17 AM

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**LIKELY AI** 40.03%       **HIGHLY LIKELY AI** 25.96%

**Report #22565175**

1 2 6 10 28 KIBOGORA POLYTECHNIC FACULTY OF HEALTH SCIENCE DEPARTMENT  
OF GENERAL NURSING ASSESSMENT OF NURSES AND MIDWIVES' KNOWLEDGE  
AND PRACTICE TOWARD THE PREVENTION AND MANAGEMENT OF POSTPARTUM  
HEMORRHAGE AT KIBUYE REFERRAL HOSPITAL Case study: KIBUYE REFERRAL  
HOSPITAL Undergraduate dissertation presented in partial fulfillment  
of the requirements for the Bachelor's degree with honor in general nursing. 1 6  
10 PAPER PREPARED BY: NAME: TUYUBAHE David REG: 2000748 UWIMANA  
SHIMA Jean Luc REG: 2000641 SUPERVISOR: Mr. NSENGIYUMVA Jean Paul  
RN, BCsPH,MHA,MPH Kibogora, August, 2024 2 DECLARATION Declaration  
by the Candidate We, TUYUBAHE David and UWIMANA SHIMA Jean Luc  
hereby declare that this is our own original work and not a  
duplication of any similar academic work. 1 2 4 6 7 9 10 12 13 16 18 19 20 21 23 25  
26 27 28 30 32 34 36 37 38 39 43 47 50 51 56 It has therefore not been  
previously or concurrently submitted for any other degree, diploma  
or other qualification to Kibogora Polytechnic or any other institution. 1 2 4 6  
7 9 10 11 12 13 14 16 18 19 20 21 23 25 26 27 28 30 32 34 36 37 38 39 40 42 43 47 48 50  
51 56 58 64 96 All materials cited in this paper which are not  
our own have been duly acknowledged. 1 6 10 TUYUBAHE David Signed.....  
..... Date.....  
UWIMANA SHIMA Jean Luc Signed.....  
.....  
1 4 6 7 9 10 11 12 14 16 18 19 21 23 27 28 30 34 36 38 42 43 48 50 64  
Date: ..... Declaration by the Supervisor: .....

*Approved by: KAGYLE IRON LIBRARIAN*

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