



UNIVERSITY *of*  
RWANDA

**EARLY BREASTFEEDING INITIATION AMONG MOTHERS IN  
POST-PARTUM AT SELECTED RWANDAN HOSPITALS.**

By

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**COLLEGE OF MEDICINE AND HEALTH SCIENCES**

**SCHOOL OF NURSING AND MIDWIFERY**

**NEONATAL TRACK**

**Supervisor:** Dr. Pamela Meharry.

**Co-Supervisor:** Mrs. Rose MUKARUBAYIZA

June, 2019



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By

**Joella MUKASHYAKA, Reg. No: 218000345**

A dissertation submitted in Partial Fulfilment of the Requirements for the award  
of the Master of Science Degree in Nursing

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## **DECLARATION**

I, hereby declare that this research dissertation is my own original work and not a duplication of similar published work of any scholar for academic purpose as partial requirement of any college or otherwise.

It has never been submitted to any other institution of higher learning for the award of a Certificate, diploma or degree in any field of the study. Any reference to the work done by any other person or institution or any material obtained from other sources have been properly cited and referenced.

Joella MUKASHYAKA \_\_\_\_\_ Date \_\_\_\_\_

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This dissertation has an approval of college supervisors.

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I am especially grateful to the staff of Training, Support and Access Model for Maternal, Newborn and Child Health (TSAM-MNCH) Project deserve a special thankful for your help to my study.

A special acknowledgement goes to my husband Joseph SIBOMANA, my son Gianni Gabriel HIRWA and my family who have lived through the whole process and have given me continuous support and encouragement.

May Almighty God bless you.

## **DEDICATION**

We dedicate this study:

To the Almighty God,

My husband,

My lovely son,

College of medicine and health sciences (CMHS) authorities,

Our lecturers,

My parent and siblings,

Lastly to all friends and colleagues who help us to perform this research proposal

Joella MUKASHYAKA.

## **ABSTRACT**

**Background:** Early initiation of breastfeeding within one hour of birth can decrease neonatal death. However, the prevalence of early initiation of breastfeeding is approximately 50% in many developing countries, and data remains unavailable for some countries.

The risks of not breastfeeding for mothers and neonates are many, health outcomes differ considerably for mothers and neonatal who feed on formula compared to those who breastfeed. Promotion of early initiation of breastfeeding is the single most cost-effective intervention to reduce neonatal mortality in developing countries. Counseling is helpful during antenatal care; most mothers make decisions about infant feeding early in pregnancy.

**Objective:** To assess the factors associated with early initiation of breastfeeding among mothers in immediate postpartum in selected Rwandan Hospitals.

**Methodology:** This study used a cross-sectional study design and data were collected from 25<sup>th</sup> March to 17<sup>th</sup> May 2019 to mothers in immediate postpartum period. A convenience sampling technique using an adopted questionnaire to 187mothers in selected Rwandan Hospitals.

**Results:** The majority of mothers (79.5%) breastfeed their neonates after one hour and less than a quarter are within one hour in selected Rwandan hospitals. The main reason of delaying breastfeeding was the perception of not enough breast milk presence.

**Conclusion:** The main reason for delaying of breastfeeding in immediate postpartum were factors influencing early initiation of breastfeeding problems. The ANC four visits sensitization would reduce the risk of delaying breastfeeding.

**Keywords:** Neonate, Early initiation of breastfeeding, morbidity and mortality.

## **LIST OF SYMBOLS AND ABBREVIATIONS/ACRONYM**

ANC: Antenatal consultation

BPCR: Birth Preparedness and Complication Readiness

EBF: Exclusive breastfeeding

PNC: Postnatal consultation

RDHS: Rwanda Demographic and health survey

SVD: Spontaneous vaginal delivery

UNICEF: United Nations children's fund

UR: University of Rwanda

WHO: World health organization

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# **CHAPTER ONE. GENERAL INTRODUCTION**

## **I.1.INTRODUCTION**

Early initiation of breastfeeding within one hour of birth can decrease neonatal death. However, the prevalence of early initiation of breastfeeding is approximately 50% in many developing countries, and data remains unavailable for some countries (Takahashi, Ganchimeg, Ota & Vogel, 2017).

The WHO recommendation is to start breastfeeding for a neonate in the first hour of life and continued breastfeeding up to two years of age or beyond. Promotion of early initiation of breastfeeding is the single most cost-effective intervention to reduce infant mortality in developing countries (Velusamy, Premkumar & Kang, 2017).

The risks of not breastfeeding for mothers and infants could be prevented by the health education in ANC for both parents (Altamimi, Al Nsour, Al Dalaen & Almajali, 2017). This chapter is composed of definition of key terms, background, problem statement, objectives, and research questions, significance of the study and subdivision of the study.

## **I.2. BACKGROUND TO THE STUDY**

Early initiation of breastfeeding within one hour of birth can decrease global neonatal morbidity and mortality rate of 2.5 millions children died in the first month of life in 2017 especially approximately 7 000 newborn deaths every day with about 1 million dying on the first day and close to 1 million dying within the next 6 days (Unicef, 2018). However, the prevalence of early initiation of breastfeeding is approximately 50% in many developing countries and data remains unavailable for some countries (Martines, 201 5).

Globally, there has been progress in improving child survival while though the world promised to reduce child deaths by two thirds by 2015 (Onah et al., 2014). The WHO recommendation to early initiation of breastfeeding in first one hour after birth and continuing breastfeeding up to two years of age or beyond. Promotion of early initiation of breastfeeding is the single most cost-effective intervention to reduce neonatal mortality in developing countries (Velusamy et al., 2017).

The risks of not breastfeeding for mothers and infants and health outcomes differ substantially for mothers and infants who feed on formula compared to those who breastfeed. Why would someone give birth and walk out of the hospital to stock formula milk for a

neonate that is just weeks old (Altamimi et al, 2017 and Dinour and Szaro, 2017). Counseling is helpful during antenatal care; most mothers make decisions about infant feeding early in pregnancy, therefore early in prenatal care the obstetrician can educate mothers about the health impact of infant feeding and address potential obstacles to breastfeeding (Idris, Gordiano, Tafeng, & Elgorashi, 2016) (Mukarubayiza & Gowan, 2019).

This study seeks to identify the factors associated with early initiation of breastfeeding among mothers in postpartum in selected Rwandan hospital. To achieve the above aim, the discussion with different mothers on the labor and who delivered in one hour in immediate post-partum about the benefits of early initiation of breastfeeding to achieve Exclusive breastfeeding like it shows in a study in India that neonatal and post neonatal deaths were five to six times lower in infants fed colostrum than among those not fed colostrum (Hassan, Taha, Ahmed, Ali, & Adam, 2018)(Hassan et al., 2018).

### **I.3. PROBLEM STATEMENT**

The early initiation of breastfeeding is still a problematic issue to the delivered mothers (RDHS, 2014). A recent systematic review and meta-analysis revealed that breastfeeding initiation after the first hour of birth doubles the risk of neonatal mortality. In specific countries, initiating within one hour reduced deaths by 19 % in Nepal and 22 % in Ghana (Sharma and Byrne, 2016) while the exclusive breastfeeding in Rwanda was reported at 87.3 % in 2015, according to the World Bank collection of development indicators. The early or timely initiation of breastfeeding, specifically within one hour of birth, refers to the best practice recommendation by the WHO (Idris, et al, 2013). The evidence, drawn from meta-analysis and over 63 developing countries, shows that early initiation of breastfeeding prevents newborn infections, averts newborn death due to sepsis, pneumonia, diarrhea and hypothermia, and facilitates sustained breastfeeding (Sharma and Byrne, 2016).

Considering the big Rwandan effort in improving breastfeeding, we still have what to do by making aware the factors affecting early initiation of breastfeeding and their scientific information with evidence based regarding early initiation of breastfeeding in Rwanda, my intention is to identify the factors associated with and the reason affecting Early Initiation of breastfeeding in selected Rwandan hospitals about the issue for a promotion of early initiation of breastfeeding and inspire future researchers to write and publish their studies on early initiation of breastfeeding (Survey, International, & Bank, 2017).

#### **I.4. PURPOSE OF THE STUDY**

The aim of the study is to assess the factors associated with Early Initiation of Breastfeeding and identify the factors influencing breastfeeding practices among mothers in postpartum in selected Rwandan hospitals.

#### **I.5. OBJECTIVE**

##### **1.5.1.MAIN OBJECTIVE**

To assess the factors associated with early initiation of breastfeeding among mothers in immediate postpartum period in selected Rwandan Hospitals.

##### **1.5.2. SPECIFIC OBJECTIVES**

- To identify the factors associated with early initiation of breastfeeding in selected Rwandan Hospitals.
- To determine the reasons for delay and challenges affecting early initiation of breastfeeding in selected Rwandan Hospitals.

#### **I.6. RESEARCH QUESTIONS**

- What are the factors associated with early initiation breastfeeding in selected Rwandan Hospitals?
- What are the reasons that may be contributing to the delay of initiation of early initiation of breastfeeding in selected Rwandan Hospitals?

#### **I.7. SIGNIFICANCE OF THE STUDY**

The study will generate information on the factors associated with early initiation of breastfeeding among mothers in postpartum in selected Rwandan Hospitals hospital. By supporting and promoting early initiation of breastfeeding as the crucial action in normal way to feed a newborn, the obstetrician-gynecologist, midwives and nurses can play a powerful role in improving health outcomes across both newborn and mother.

Counseling is helpful during antenatal care; most mothers make decisions about infant feeding early in pregnancy, therefore early in prenatal care the obstetrician can educate mothers about the health impact of infant feeding and address potential obstacles to breastfeeding.

The findings will be useful to the MOH and other organization working on Maternal and child survival program to plan interventions which could be helpful to improve early practice of breastfeeding initiation. Interventions of promoting Early Initiation of Breastfeeding should include the use of existing family structures, supportive cultural beliefs, and practices and promotion of an infant-friendly (which could be initiated in Rwanda) work environment. For the Ministry of Education especially in UR-CMHS as big school with students of different levels will help by our research document firstly to be used with other student researchers about Early initiation of breastfeeding and by the teachers to evaluate nurse students to conduct nurse students in research activities. The findings from this research will serve as baseline data for further researches in education, administration and evidence based in practice. The results will be valuable to community, nurses and midwives working in selected Rwandan hospitals, MINALOC, MIFOTRA in setting of policies regarding.

As the future nurses and midwives, this study will help me to bring my contribution to the increasing of the number of neonates who will be breastfed from direct after birth or at least in one hour. Which will affect positively the life of Rwandan, African and Global the new generation by fighting the breastfeeding myths (Kirkwood, Edmond, Bazzano, & Hill, 2018). The study aimed to provide up to date data on the initiation of breastfeeding and factors underlying this practice. The intent was development of strategies for early breastfeeding initiation, which is known to promote following exclusive breastfeeding by promoting Early Initiation of breastfeeding factors and how to overcome the challenges which contributing to the delay of breastfeeding.

## **1.8. OPERATIONAL DEFINITION OF TERMS**

**Post-partum or/and Postnatal period** is defined as the period beginning immediately after the birth of the neonate and extends up to six weeks (42 days) after birth (WHO, 2016). Neonate is an infant in the first 28 days after birth (WHO, 2016).

**Early initiation of breastfeeding** is a breastfeeding done within one hour after birth for mothers who have delivered via spontaneous vaginal delivery or cesarean section mothers who have delivered under spinal anesthesia. For mothers who have had a cesarean section under general anesthesia early initiation is as soon as mother recovers from the general anesthesia (USAID, 2018a).

**Colostrum** is the first fluid that comes from the breast immediately after birth. It is yellowish in color and contains high protein and anti-bodies. It is often described as the first form of ‘immunization’ for a new born child (Kirkwood et al, 2018).

**Exclusive breastfeeding** means that the infant receives only breast milk for six months. No other liquids or solids are given not even water with the exception for oral rehydration solution, or drops/ syrups of vitamins, minerals or medicines (Watkins & Meltzer-brody, 2017).

**Healthcare provider** is defined as a healthcare professional within an institution that provides preventive, curative, promotional or rehabilitative health care services in a systematic way to individuals, families or communities (Global et al., 2017).

**Prelacteal feeds** is defined as the feeding of a neonate with any solutions or fluids before establishing or initiation of breastfeeding (USAID, 2018b).

**Mother with complications** defined as any mother who after delivery is not able to initiate breastfeeding because of health reasons e.g ecliptic mother, comatose but excludes post-spinal anesthesia headache (Takahashi et al., 2017).

## **I.9. ORGANIZATION OF THE STUDY**

This study is divided into two mains parts: The first part is composed by title page, declaration, dedication, acknowledgment, summary, table of contents, list of symbols and abbreviations, list of tables and list of figures.

The second part is composed by introduction as chapter one, the literature review: Chapter two, Methodology: Chapter three, presentation of the results: Chapter four, Conclusion and recommendation as chapter five plus References, Annexes of the applicants profile and the institution.

## **I.10.CONCLUSION**

The study was carried out in selected Rwandan Hospitals where the researcher can find mothers in postpartum, for the benefits of the Rwandan neonates of reducing morbidity and mortality through the early initiation of breastfeeding.



## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1. INTRODUCTION**

This part discussed theoretical and empirical literature information such as the factors associated with the early initiation of breastfeeding and the strategies to adopt for promoting early initiation breastfeeding for the well-being of the infants' and their mothers' health. In addition, focus to the multi sector action on those factors. Critical Review and research gap identified in this study were identified and at the end the conceptual framework which describe maternal physiological and psychological factors contributing to the delay initial breastfeeding.

### **2.2. EARLY INITIATION OF BREASTFEEDING OVERVIEW**

Mothers have to initiate breastfeeding within one hour after delivery. Initiation of breastfeeding within the first one hour after birth can prevent up to 22% of neonatal mortality. This behavior requires a baby to be immediately after birth placed on a new mother's chest after birth (Group, 2016).

The WHO highlighted and recommends early initiation of breastfeeding within one hour after birth, as they indicate exclusive breastfeeding for the first six months of age and appropriate complementary feeding with timely, nutritionally safe and adequate food thereafter while breastfeeding continues up to two years of the child's life or beyond (the Rwanda MOH recommend 1000days) (Velusamy et al., 2017). It also recommends standard indicators to estimate population-level prevalence of infant-feeding practices such as early initiation and exclusive breastfeeding (Salasibew, 2015).

It affirmed the improvement of maternal and child survival through the behavior acceleration of mother on breastfeeding initiation within one hour after delivery. To place newborn on breast immediately after birth and allow newborn to suckle immediately even if milk does not appear to be present (USAID, 2018b).

### **2.2. Theoretical Literature**

#### **Social Cognitive Theory**

Any attempt to understand the wordless and/or manifest interactive influences between individuals and their social environment is most likely to gather some success when placed under appropriate theoretical guidance. This in part can be explained by the central role of theories in supporting our efforts to make sense of the social world.

According to the theory, health behavior is influenced by a core set of determinants namely, knowledge, perceived self-efficacy, outcome expectation, perceived facilitators and social structural weaknesses.

Knowledge as declared in the theory, it is an important element of health behaviour change. When people are adequately informed about the risk and benefits of certain actions or life styles, they will be more likely or motivated to initiate a change. This knowledge or information as Bandura argued is a necessary but not a sufficient basis for change. What is needed in addition is the belief in personal efficacy. Self-efficacy as defined by Bandura in 1998 is “beliefs in one’s capabilities to organize and execute the courses of action required to produce given levels of attainments” (p. 624). Self-efficacy enables people to set goals for themselves, and pursue the realization of those goals with much commitment and perseverance (Islam et al., 2019). In the words of Bandura (2004), ‘unless people believe they can produce desired effects by their actions, they have little incentive to act or to persevere in the face of difficulties’ (p. 144). That is, individuals’ actions or inactions are closely tied to their perceived capacity to produce desired results (Islam et al., 2019). Although important in modifying individuals’ beliefs and lifestyles, self-efficacy however, it is not an independent determinant of behaviour. It is always an impetus, which in concert with other determinants e.g. perceived outcome works to produce a desired effect. Perceived outcome is a negative or positive self-evaluation of one’s behaviour or action. From a social perspective, perceived outcome may also refer to any kind of approval or disapproval that accompanies’ an individual’s action or behaviour. For any anticipated positive or good outcome, people are likely to put up behaviours to that effect while on the other hand, the same or similar behaviours may be withheld if the anticipated outcome is deemed to be bad or negative. In all cases nonetheless, individuals’ behaviour change efforts can be impeded by personal, socio-structural, economic, cultural, religious, or environmental factors etc.

In relation to breastfeeding behaviors, previous use of this theoretical framework did lead to some important insights. In one study for instance, showed that a woman’s significant other (an important or influential person in somebody’s life) was found to be strongly and positively affected by intention to breastfeed. The theory’s application in this study is similarly hoped to broaden our understanding and ability to explain the early initiation of breastfeeding in the context of rural and urban families (Mukarubayiza & Gowan, 2019).

## **Empirical literature**

Place newborn on breast immediately (within first hour) after birth allow the newborn to suckle immediately (no prelacteal feeding) even if milk does not appear to be present. The policies banning distribution of other than breastmilk in health facilities should be respected and reinforced by the health providers through the health education in ANC. They have to keep the mothers and neonate together immediately after birth. Both new parents and families should understand the benefit of early breastfeeding and colostrum (USAID, 2018b).

According to (Zs & Za, 2015), baby- friendly hospital initiatives within the health system should institutionalized by policymakers. It is a possible program strategy to create a framework for keeping the mother and newborn together also ensure the availability of breastmilk bank by training in lactation the nurse and midwives (Mukarubayiza & Gowan, 2019).

## **Reasons for late initiation**

Literature shows many changes related to post birth experiences which affected the mothers by avoiding them to breastfeed early, like to give the breast to the child after the mother and the neonate had bathed and she had some porridge to eat. She wanted to give the breast to the child the same day after birth, but she was dizzy and weak from the birth and she needed rest, so she waited until the next day (Nommsen-rivers, 2015). Fight with the myths about breastfeeding also will contribute a lot to the Early Initiation of Breastfeeding (Child and Programmes, 2018).

When their mind-set is neonate needs rest or was asleep, which meant that it was not hungry so she didn't feed him. She said that if the child had cried she would have put it to her breast earlier or when it is her first child so it took a long time for her to push the neonate out, a lot of elderly people had to assist her (Unicef, 2018).

To identify the factors contributing to non-practice of early initiation of breastfeeding we think to the neonate who received in-hospital formula supplementation by thinking to the insufficient milk supply signs of inadequate intake and poor latch or breastfeeding. It is unclear whether early formula supplementation is causally related to shortened breastfeeding duration (Nommsen-rivers, 2015).

Findings from this study suggest that it is important to raise awareness of the importance of early initiation of breastfeeding among mothers in postpartum. The complications during pregnancy were associated with delayed early initiation of breastfeeding and it is possible

that complications are more likely to cause intrapartum and early postpartum morbidity requiring immediate interventions for mothers or neonates that delay the mother-newborn interaction. Prevention of pregnancy complications and special support for mothers with complications, which are linked with postnatal care after hospital discharge, are essential to promoting early initiation of breastfeeding (Mukarubayiza & Gowan, 2019). Although WHO commends only one hour of care for mothers and neonates after birth to reflect on the positive evidence of postnatal care given in the communities in low- and middle-income countries, the implementation of early initiation of breastfeeding to reduce maternal and neonatal health risks (Takahashi et al., 2017).

A not enough breastmilk is physical signs of absent or insufficient breast milk she did not give breast milk because there was none in her breast she squeezed and realized that nothing at all was coming out. The breast milk came in the evening of the second day. The breast was flat and nothing came out. While the beliefs about colostrum she does not give the first breast milk to the baby on the first day after birth (Maria, Esteves, Daumas, & Leite, 2017). She gives the breast milk to the baby the next day after birth when the first breast milk has mixed with the second breast milk. She squeezed the first breast milk away until the white milk came because the former was not good. Then she breast-fed the baby with the white milk (Adhikari, Khanal, Karkee, & Gavidia, 2018).

Beliefs about the timing of the arrival of breast milk it is their belief that there is no milk in the breast when a woman gives birth, a woman has to eat hot food and drink warm water for 3 days before the breast milk comes in and that was what she did, so they have to give the breast to the baby to suck whatever is in the breast before the real milk will come (Sullivan, Perrine, & Rasmussen, 2018).

To explore why women in Ghana initiate breastfeeding early or late, who gives advice about initiation and what foods or fluids are given to neonates when breast-feeding initiation is late. The major reasons for delaying initiation of breast-feeding were the perception of a lack of breast milk, performing post-natal activities such as bathing, perception that the mother and the neonate need rest after birth and the neonate not crying for milk (Edwards, 2016). Facilitating factors for early initiation included delivery in a health facility, where the staff encouraged early breast-feeding, and the belief in some groups that putting the neonate to the breast encourages the milk (Altamimi et al., 2017).

Policy makers is accentuated and tended to focus on exclusive breast-feeding rather than early initiation. Most activities for the promotion of early initiation of breast-feeding were focused on health facilities with very few community activities. It is important to raise awareness about early initiation of breastfeeding in communities and in the policy on ground (Kirkwood et al., 2018).

### **Factors associated with Early Initiation of Breastfeeding**

The factors are associated with early initiation of breastfeeding are existing in the literature according to the maternal psychological factors like maternal attitudes towards early initiation of breastfeeding; that should be offered to the mother during ante, peri and post-natal care. Here the level of education of the mother make them understanding well the importance of early breastfeeding. For the parity, more they get pregnancy more they make an effort to reach to four ANC visits (WHO, 2013). The employed mother start early formula to familiarize their neonate to leave home sooner for their business and avail those fluids at any cost. The mother who live in urban area are more having the accessibility to the health care so that can affect the increasing chance to have education on early initiation of breastfeeding and both parents influence the relatives to do soon as possible (Sharma & Byrne, 2016b).

Additionally, women are more likely to have higher self-respect and improved level of concentration, which leads to increased productivity. Incorporating workplace breastfeeding friendly measures can also enhance the exclusive breastfeeding like to express and store breast milk so to start early help to show them how they will do at home (Mukarubayiza & Gowan, 2019).

Factors associated with maternal physiological are maternal age, more mothers are mature enough are coping with challenges of delivery, nutrition some time it takes a long time find what to eat. Some time when the mothers face complication on pregnancy or during delivery lead the neonate to take other fluid first while are waiting to the mother's recovery. The breast status to delay the initiation of breastfeeding early especially when the nipple is flat while the neonates' reflexes are still weak (Sharma & Byrne, 2016b).

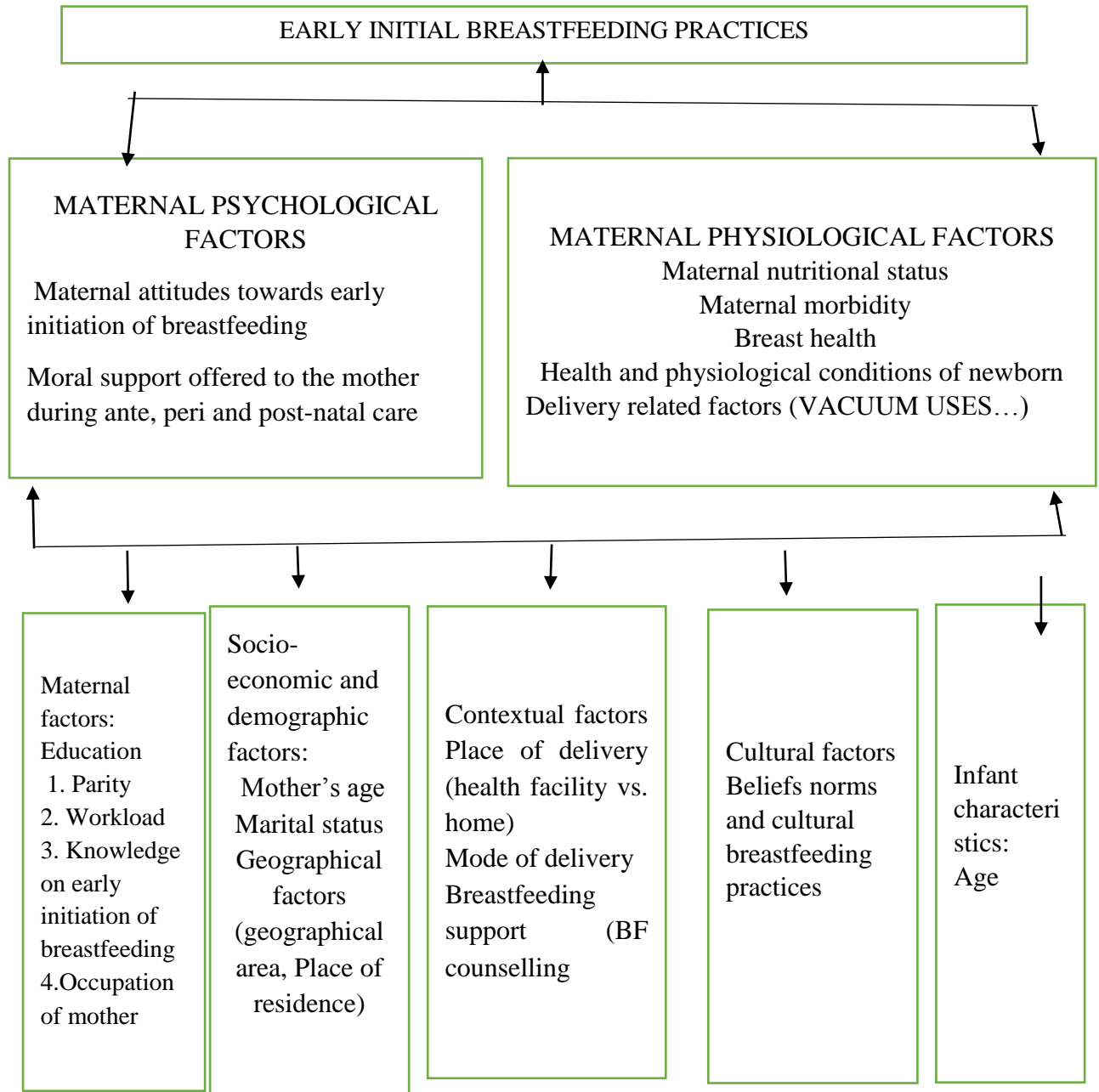
The contextual factors of place of delivery on health facilities or at home and mode of delivery (vaginally or caesarian section) also can affect the early when there is no baby friend to the hospital to support and encouraging early breastfeeding (Goyal, Attanasio, & Kozhimannil, 2014).

### **Critical Review and Research Gap identification**

The Rwanda health survey's data present exclusive breastfeeding during the first six months after birth is widely practiced in Rwanda. Currently, mothers exclusively breastfeed 87 % of children younger than age 6 months. The percentage of young children who are exclusively breastfed decreases sharply from 94% among infants age 0-1 month to 90% among those age 2-3 months and 81% among those age 4-5 months (RDHS, 2014) but the researchers are not presenting the reality in one hour except 20.5% as it is found in selected Rwandan hospitals.

## CONCEPTUAL FRAMEWORK FOR THE STUDY

This study was adopted from Ochola's concept framework on factors associated with early initial breastfeeding among mother in postpartum (Leah & Home, 2012).



**Figure 1. CONCEPTUAL FRAMEWORK FOR THE STUDY**

Figure 1. demonstrates all maternal factors associated with delaying early initiation of breastfeeding and how they are set together according to their relationship.

## **CHAPTER THREE: METHODOLOGY**

### **3.1. INTRODUCTION**

This chapter is describing the methodology used in assessment of factors associated with early initiation of breastfeeding to the mothers in postpartum and it includes introduction, research design, research approach, research setting, population, sampling, sampling strategy, sample size, data collection, data collection instruments, data collection procedure, data analysis, ethical considerations, data management, data dissemination, limitations, challenges and conclusion. The research instruments used in were Hinari, google scholar and UR Resources.

### **3.2. RESEARCH DESIGN**

Given the purpose of this study, a cross-sectional design was used to describe the relationship between the Early Initiation of Breastfeeding variable and the factors associated with it.

The data was collected by interviewer-administered questionnaires to mothers after delivery in selected Rwanda hospitals. The participants had responded the information accordingly and then returned to us the questionnaire.

### **3.3. RESEARCH APPROACH**

In this research a quantitative approach were used. This study gives findings that are more reliable. Quantitative research is the numerical representation and manipulation of observations for the purpose of describing and explaining the phenomena in which those observations reflected on (Salasibew, 2015).

### **3.4. RESEARCH SETTING**

The study was conducted in immediate post-partum ward in selected Rwandan Hospitals. Kabgayi District Hospital is one of the health institutions of Muhanga district one the rural and urban area, in south province while Kacyiru District Hospital is located in Gasabo district, Kigali city in urban area.

### **3.5. STUDY POPULATION**

The target population was the mothers after birth at In selected rwandan hospitalss in formal settlement. The number of client for this hospital is over 350clients, was estimated number of population in two months of women who delivered in selected Rwandan hospitals.



### **3.6. ENROLMENT CRITERIA**

#### **Inclusion criteria**

All mothers in immediate postpartum in selected Rwandan hospitals, willing to participate in the study in formal settlement before the study was given a chance to be included in the study. All mothers who are willing to participate and sign a consent form before enrollment to the study.

#### **Exclusion criteria**

The HIV positive mothers with neonates who choose to not breastfeed their newborns and mothers with premature neonates hospitalized in NICU and willingly to disclose this information were excluded from the study. Alternatively, other mothers who were unable or unwilling to participate and who delivered prematurely.

#### **3.6.1. SAMPLE SIZE**

The sample size was about 187mothers during one month for each hospital found by using Taro Yamane formula for a period of two months of data collection for about 350 clients found purposefully in two hospitals.

N= the population size, n= the sample size, e=the acceptance sampling error, 95% confidence level and p=0.5 are assumed

P=5%, e=0.05, N=350 Early Initiation of Breastfeeding.

$$n = \frac{N}{1+N(e)^2} = \frac{350}{1+350*(0.05)^2} = 186,66667 \approx 187$$

#### **3.6.2. SAMPLING STRATEGY**

All mothers in immediate post-partum service was involved in this research on the proportion of 100 mothers at Kabgayi District Hospital and 87mothers at Kacyiru District Hospital.

A convenience sampling technique was used to generate the quantitative data. The quantitative data collected by developed questionnaire.

### 3.6.3. MEASUREMENT

**Section 1.** Consists social demographic characteristics include the age, level of education, residence, religion, employment, gravidity, mode of delivery and location of antenatal visit (8items). These variables were measured in frequencies (Table1).

**Section 2.** Show the mothers' perception on the factors affecting the early initiation of breast feeding especially the importance of early breastfeeding health education during ANC, the risks of giving water, formula or other supplements to the neonate in first hour of life or not at all breastfeeding (3items). The variables were measured in means and standard deviation (SD) (Table2).

**Section3.** The person who fed the neonate include the following variables which motivating people surrounding the newborn to give other than colostrum; like ignorance on Breast functioning in immediate postpartum, the breastmilk -Colostrum presence, the availability of other fluid to nourish the newborn in immediate postpartum, the neonate sucking or latching reflex, the any infant Feeding Difficulty reported or Nipple status too. Those are (5 items) analyzed in frequency (Table3).

**Section4.** In case there is a consummation of other than breastmilk here in Table4. it shows different (5items) which are given to the neonates like; Breastfeeding only, Breastfeeding and formula, Formula only, Other fluid some time mothers do not know what exactly given to their neonates those data are in frequencies (Tables4).

**Section5.** The mother herself, relatives medical staff some times are those to choose what to give-to-give to the neonates, this is represented in frequency in (Figure 1).

**Section6.** The time to which define the early initiation of breastfeeding is when it happens soon as possible means within one hour (3tems) (Figure2), sometime the location (3tems) (Figure3) and status of the newborns comparing to the mother's situation (3items) (Figure4).

**Section7.** Association between social demographics and early initiation of breastfeeding (2items) variables were measured using chi-square (Table5).

### **3.7. RELIABILITY AND VALIDITY**

#### **Reliability**

The study adopted a face-validated questionnaire used for in a study by Ochola,2008 (Leah, 2015). The questionnaire was delivered to two supervisors and the recommended modifications to specific items to be done to suit the study objectives. Data checking and cleaning was done simultaneously during data collection. At the end of every field, data were checked for completeness and consistency.

#### **Validity**

Validity of the research instruments was ensured through the use of a well-designed questionnaire. All questionnaires were being checked daily to ensure that they are appropriately filled. The research instruments, questionnaires and interview schedules are also presented to my supervisors, the experts in the School of Nursing for their input.

### **3.8. DATA COLLECTION PROCEDURE**

#### **Type of the instrument**

We have used validated questionnaire with closed ended questions to collect information on mother's characteristics (sex and age), maternal demographic characteristics (age, education and marital status), maternal socio-economic characteristics (occupation), maternal knowledge on early initiation of breastfeeding, sources of breastfeeding information, maternal delivery experience, infant feeding practices and breastfeeding complications. The questionnaire was adopted from a one used in a study in a low-resource urban setting by Ochola (2008) and was modified according to Leah's study (Leah and Home, 2015). It has eight parts, we tested its feasibility to ten mothers in selected Rwanda Hospitals and adjust some questions as how you see it in annexes documents.

### **3.9. DATA ANALYSIS**

Data were collected from (25<sup>th</sup> March to 17<sup>th</sup> May2019). The findings checked, coded and entered into SPSS software for analysis. All the analysis of quantitative data were using the Statistical Package for Social Sciences (SPSS) version 23. Descriptive summary statistics such as frequencies, percentage, means, standard deviation and median will be used to describe infant characteristics (age), maternal demographic characteristics, socio-economic characteristics, infant feeding practices, maternal knowledge, sources of breastfeeding information and maternal delivery history.

Bivariate statistical analysis was used to describe variables using frequencies. Variable's Pearson correlation model is used for the factors association with early initiation of breastfeeding, which are identified. In reporting early initiation of breastfeeding rate, T-test was used to compare means in knowledge for the early initiation of breastfeeding and maternal demographic characteristics (age and level education, occupation and gravidity).

### **3.10. ETHICAL CONSIDERATIONS**

All ethical dimensions in this study were of highest interest. An ethical clearance approval obtained to permit the study from University of Rwanda (UR). Clearance had obtained from in selected Rwandan hospitals and the researcher reported to the area chief in charge of maternity and neonatology unit. Informed written or thumb print consent was being well explained about the purposes and methods of the study and voluntary to the study participants who were selected to take part in the study to respond correctly. Confidentiality was assured before carrying out the research or any form of identification in the research instrument. All measures were hence taken to guard against any form of harm and discomfort to this study.

### **3.11. DATA MANAGEMENT**

The management of data consist their storage, observations and electronically data is a fundamental to this research. Data from each day's trip to the field were stored in password protected computer and kept under lock and key. While being in the field, the obtained data through Interviews were on printed file are kept confidentially for a purpose of verification then they will be destroyed as it recommended by the guideline of responsibility data management.

### **3.12. DATA DISSEMINATION**

After accomplishment of this study the results should be shared in University of Rwanda, Ministry of Health, In selected Rwandan hospitals and other hospital in Rwanda, Colleagues of medicine and health sciences, the result should be used to improve quality care promoting early initiation of breastfeeding. Conferring to the guideline of responsible data management, the researchers were not obligated to share their findings while research is ongoing, data sharing usually occurs once a study has been accomplished, and typically the findings may be published results in a scientific journal or article. Before publication there is often no obligation to share any preliminary data that have been collected, however data in some cases preliminary, data should be shared immediately with the public if there is any risk or any other important benefit.

### **3.13. LIMITATIONS AND CHALLENGES OF THE STUDY**

This study was a quantitative study. There might a not despondence of some question and declassification of mothers on their attitude status due to the fewer number of questions or the reasons related to the not understanding well the objectives of the researcher. There might be recall bias since mothers who not being interviewed to recall their experience.

The study was carried out in selected Rwandan Hospitals where the researcher can find mothers in postpartum, for the benefits of the Rwandan neonates the results will be applied to other area with similar characteristic. The research was limited by generalization of the findings due to small sample size. The flowing chapter will present results found.

### **3.14. CONCLUSION**

The researcher has used descriptive cross-sectional design. A quantitative research approach conducted in selected Rwandan hospitals, the respondents participated in the study 187mothers and self-structured questionnaire was used.

## **CHAPTER FOUR. RESULTS PRESENTATION**

### **4.1. INTRODUCTION**

This chapter show the summary of the main findings of the study on Assessment of factors associated with early initiation of breastfeeding

The content of this chapter is demographic information, the tables showing the knowledge on early initiation on breastfeeding through the Antenatal consultation and descriptive statistics used to describe and interpret the data that were collected on the 187mothers in post-partum in selected Rwandan hospitals explaining how different factors are affecting early initiation of breast feeding.

### **4.2. DEMOGRAPHIC INFORMATION**

This part is indicating the information collected on 187mothers in post-partum delivered by spontaneous vaginally and by cesarean section. It shows different elements like the age, Level of education, Residence, Religion, Employment, Gravidity, Mode of delivery frequency and location of antenatal visit.

**Table 1. Sociodemographic Characteristics of participants(n=187)**

<b>Variables</b>	<b>n (%)</b>
<b>Age (years)</b>	
14 -24	100 (52.4)
25 to 34	57 (30.5)
35 to 44	20 (10.7)
Above 45	10 (5.4)
<b>Residence</b>	
Urban	111 (58.1)
Rural	76 (39.8)
<b>Level of education</b>	
No formal education	38 (19.9)
Some primary	53 (27.7)
Completed primary	28 (14.7)
Some secondary	24 (12.6)
Completed secondary	10 (5.2)
More than secondary	34 (17.8)
<b>Employment/ Occupation</b>	
Employed	127 (66.5)
No employment	60 (31.4)
<b>Religion</b>	
Christian	146 (76.4)
Muslim	41 (21.5)
<b>Gravidity</b>	
Primigravida	38 (19.9)
Multigravida	149 (80.0)
<b>Pregnancy</b>	
Singleton	150 (78.5)
Multiple	37 (20.4)
<b>Mode of delivery</b>	
Vaginal	110 (58.8)
Cesarean	77 (41.2)
<b>Did you attend ANC</b>	
Yes	172 (90.1)
No	15 (8.9)
<b>ANC Location</b>	
Health Centre	130 (68)
Private clinic	42 (22)
<b>ANC Visits</b>	
One	80 (41.9)
Two	50 (26.2)
Three	24 (12.6)
Four	18 (9.4)

The Table1. Shows social demographic characteristics are presented in Table 1.the majority is between the ages of 14-24 years had 100 out of 187 (52.4%), who are resident in urban (58.1%). On the level of education, the respondent majority were attending same primary on

(27.7%), the number of respondent according to their Employment/ Occupation representing (66.7%) employed, many respondents were Christian (76.4%), and multigravida (78%) while those with singleton birth (78.5%). Respondents who had birth vaginally 58.8%. The good proportion 80 (41.9%) of the respondents had attended Antenatal consultation on at least once.

### **4.3. THE PERCEPTION OF RESPONDENT ACCORDING TO ASSESSMENT OF SELF REPORTED FACTORS FOR EARLY INITIATION OF BREASTFEEDING (n=187)**

**Table 2 Factors identified for Early Initiation of Breastfeeding by mothers**

<b>Variables</b>	<b>Mean</b>	<b>S.D</b>
The importance of early breastfeeding discussed during ANC.	1.4278	0.49609
Risks of giving water, formula or other supplements to the neonate in the first hour after birth.	1.8021	0.39946
A neonate consumes other than breastmilk since he/she was born?	1.6417	0.48078

Table 2. Shows the respondents in two hospitals Kacyiru and Kabgayi agreed with first statement was the importance of early breastfeeding discussed during ANC, which was got the mean of 1.4278 and standard deviation of 0.49609 this implies acceptance of respondents.

#### **Importance of early breastfeeding discussion during ANC**

It is very important to be accomplished within hospitals, and they had same similar and other had different perception in mind, 56% of respondents it had similar perception.

The second statement was Risks of giving water, formula or other supplements to the neonate in the first hour if breastfeeding was got mean of 1.8021 and standard deviation was. 0.39946 this indicate that respondent don't accept that Risks of giving water, formula or other supplements to the neonate in the first six months if breastfeeding, and they have the different perception in mind, 78% of respondent were negatively respondent on this question. The third statement has your neonate been given anything other than breast milk since he/she was born? Was got the mean of 1.6417 (1-2,4 =weak) and standard deviation was. 0.48078 (homogeneity) this indicate that respondent refuse that, it is as your neonate been given



anything other than breast milk since he/she was born they had the different perception in mind. This means 62% of respondents were in negative side of that question.

**Table 3. The reason for giving supplement**

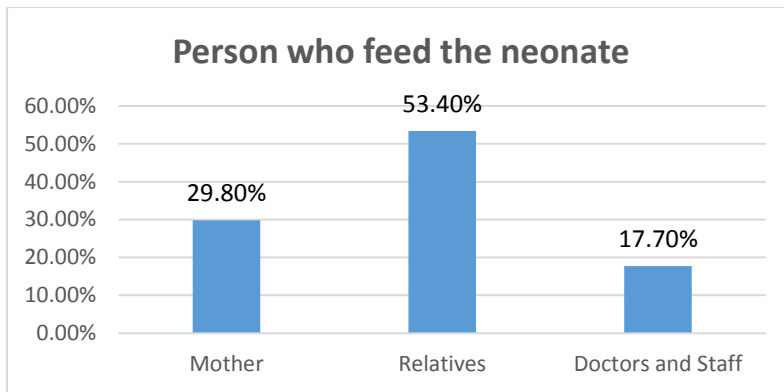
Variables	n (%)
Awareness of breast functioning in immediate postpartum.	35(18.3)
The Presence of breastmilk –Colostrum.	80(41.9)
The availability of other fluid to nourish the neonate in postpartum.	30(15.7)
Neonate’s weak sucking or latching reflex	20(10.5)
Neonate’s Feeding Difficulty report. E.g :Nipple status	22(12.5)

This table3 show the result of question shows the reason for giving supplement, and how the respondent react on this reason 35 out of 187 (18.3%) you Were aware of Breast functioning in immediate postpartum, 80 out of 187 (41.9%) was the breastmilk -Colostrum present, 30(15.7%) there is availability of other fluid to nourish the newborn in immediate postpartum and 20 (10.5%) was your neonate had a strong sucking or latching reflex while 22 (12.5%) react on there is any infant feeding difficulty reported (Nipple status) this means the majority of respondent had the similar on was the breastmilk-Colostrum present which is high percentages of 41.9 (%).

**Table 4. Neonate’s Feeding provided**

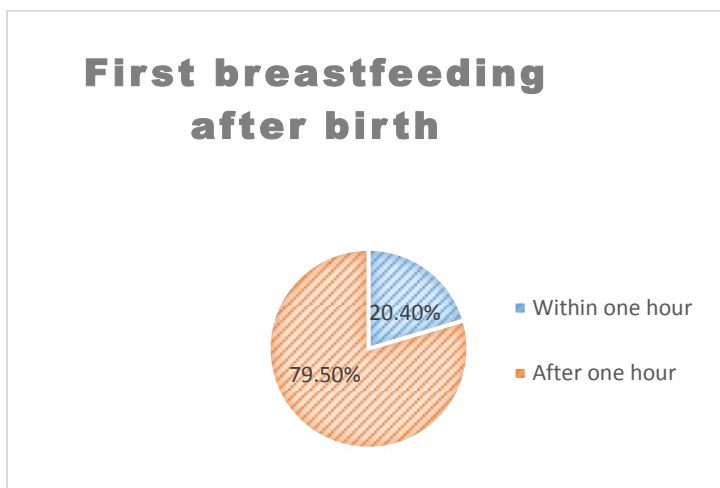
Variable	n (%)
Breastfeeding only	120(62.8)
Breastfeeding and formula	29(15.2)
Formula only	21(11)
Other fluid	10(5.2)
Don' t know	7(4.7)

This statement shows this; many respondents were 120 out of 187(62.8%) they got the breastfeeding only, others was on breastfeeding and formula 29 out of 187(15.2%) while the remain were on other fluid (glucose 10% table 4).



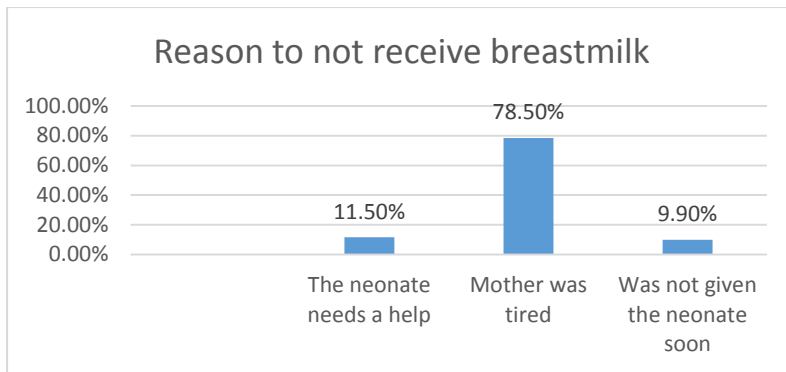
**Figure 2. Person who feed the neonate**

This Figure 2. shows by who requested for supplements to the neonate, the 57 (29.8%) was representing myself, 100 (53.4%) was relatives who requested it, while 30 (16.7%) were doctors or other staff help. This means the majority of respondents were requested by relatives considering the mother's weakness and pain after birth.



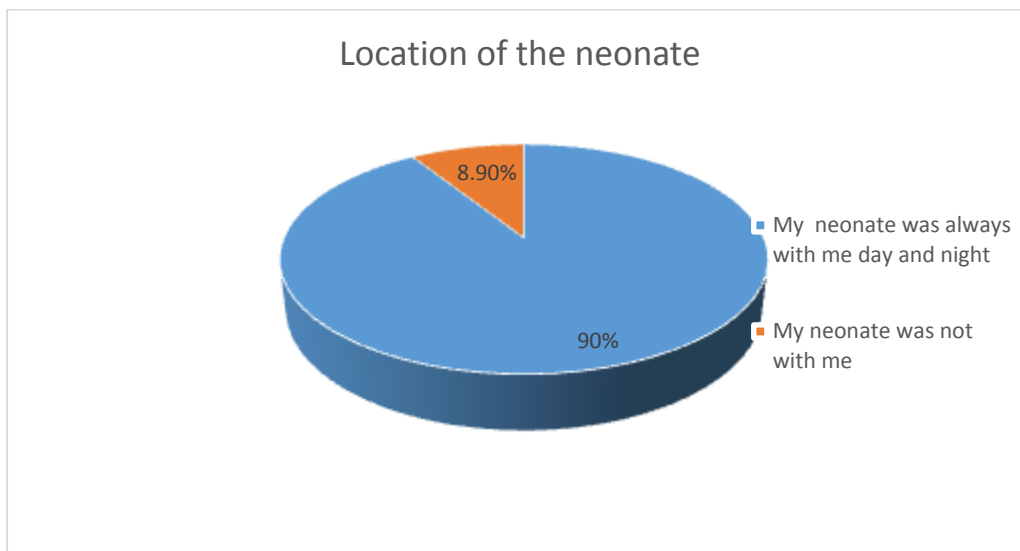
**Figure 3. Time it takes to breastfeed the neonate**

The Figures 3. Represent how long after birth did you breastfeed your neonate 150 out of 187(79.5%) were after one hour, while 37(20.4%) was within one hour. This means majorities of respondent were breastfeeding their neonates after one hour.



**Figure 4. The reason influencing the to not receiving breastmilk**

The Figure 4 If it took more than a hour, after birth to hold your neonate the reason was the tiredness of the mother on (78.5%).



**Figure 5. Location of the newborn**

The Figure 5. The neonate was always with the mother all the day and night as dominant data which represent 170 out of 187(90.0%) in the maternity services after giving birth.

**Table 5. Correlations**

	IV	DV
I Pearson Correlation	1	.960**
V Sig. (2-tailed)		.000
N	187	187
D Pearson Correlation	.960**	1
V Sig. (2-tailed)	.000	
N	187	187

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

Table 5, gives a justification of relationship between IV and DV, on the sample size of N=187 mothers and the significant level is 0.01, the statistical evidence depicts that there is a significant relationship between IV (early initiation of breastfeeding) and DV(factors associated) which is 0.960 \*\* (heterogeneity=Strong positive correlation), the P value is 0.000 which is less than 0.01(homogeneity), when p-value is less than significant level, it means that the variables are correlated.

## CHAPTER FIVE. DISCUSSION

In this early initiation of breastfeeding study in selected Rwandan hospitals, specifically within one hour of birth refers to the WHO recommendations of practices. We found the results on 187 mothers in the immediate postpartum.

We found the maternal complication, which lead the mothers to deliver by cesarean section consequently the neonatal delaying to the early initiation of breastfeeding due to the operation.

A recent systematic review and meta-analysis revealed that initiation after the first hour of birth double the risk of neonatal mortality. In specific countries, initiating breastfeeding within one hour after birth reduced deaths by 19% in Nepal and 22% in Ghana (Kirkwood et al., 2018). The evidence, drawn from meta-analysis and over 63 developing countries, shows that early initiation of breastfeeding prevents newborn infections, averts newborn death due to sepsis, pneumonia, diarrhea and hypothermia, and facilitates sustained breastfeed (Moore, Anderson, Bergman, & Dowswell, 2015). Initiation of breastfeeding within the first hour ensures the newborn does not miss on the colostrum, which is immunologically beneficial to the neonate. Importantly, delays in initiation of breastfeeding interfere with the appearance of mature breastmilk, putting the neonate at risk for dehydration or excessive weight loss after birth (Hassan et al., 2018).

Furthermore, such delays may lead to giving formula or other fluid, which have no immunological value, are nutritionally deficient, and maybe contaminated with aquatic gram-negative organisms that can cause life threatening neonatal sepsis.

Our study conducted in two district hospitals of selected Rwandan hospitals, only 41,2% (Table1) of mothers delivered via CS initiated breastfeeding within an hour. Of greater concern, the neonates initiated breastfeeding more than one hour after delivery. A small proportion (58,2%) (Figure1) of mothers reported to have delayed initiating breastfeeding with one hour due to the factors such as feeling tired or the neonate be asleep or/and need special care. This shows the need of neonate friendly hospitals in our country for a fully compliant to early initiation of breastfeeding policy (Smith et al., 2017).

From our study, the delay in initiating breastfeeding was mainly due to hospital factors not initiating breastfeeding in operating room or at receiving/recovery room, and delay in taking mother to postnatal ward because they were awaiting a bed, leading to considerable delay time in uniting the newborn with the mother.

Similarly, from the systematic review, rate of early breastfeeding (initiation or at hospital discharge) were lower after CS compared with SVD (pooled OR: 0.57; 95% CI: 0.50, 0.64; P, 0.00001) (Velusamy et al., 2017). Because Early Initiation of Breastfeeding recommends that neonates be placed skin to skin contact with their mothers immediately following birth for at least in one hour and mother should recognize their baby and be encouraged to breastfeed soon as possible. If this recommendation were to be implemented the rate of mothers who initiate breastfeeding within the recommended one hour would significantly increase. The mothers initiating breast-feeding late, it is reasonable that the rate of other than breastmilk together, not being aware of what their neonates have received in one hour while were receiving special cares after birth.

Similarly, a study in Uganda found key pro-lactation as a factor which delay breastfeeding initiation to a day and beyond after birth (LR=6.1, P<0.0005) and in mothers who had delivered via cesarean section. Further this study reported that low level of information about breastfeeding among the mother was also significant (LR=0.6, p<0.0005). This however contrasts with our study in which we found the ANC information on initiation was not significantly associated with time to initiation of breastfeeding or increased risk of giving other than colostrum (Mukunya et al., 2017).

Other contrasting studies have shown antenatal counselling helps to motivate the mothers for initiation of breastfeeding after birth (AOR: 2.7(1.86-3.94) 40, though these studies were carried out in mixed population of CS and SVD 34, 40. But findings from our study suggest that most mothers who deliver via CS usually do not participate in decision making on whether to give other fluid than breastmilk as it shows 53.4% (Figure 2) of relatives who provide formula milk instead of breastmilk in immediate postpartum (Velusamy et al., 2017). Overall, the decision on giving other fluid appears to be made at the discretion of the medical staff. This may explain why counseling on initiating breastfeeding within one hour after birth was not a significant factor to the both parents and relatives (Watkins & Meltzer-brody, 2017).

However, it is concerning that only 47% as it explained in Table 1 of the mothers in our study knew that their neonate should be put to breast within one hour despite high ANC attendance. The risk of delaying breastfeeding could be decreased with increased frequency of ANC visits. This suggests that a single visit is not adequate to cover the full package of ANC care

and hence reinforces the need to continue encouraging completion of the recommended four ANC visits (Idris et al., 2016).

The main cause of delay in initiation of breastfeeding in the two hospitals was attributed to hospital factors. These hospital factors were mainly; Lack of early initiation of breastfeeding in theatre and immediate postpartum (SVD). Lack of bringing the neonate to mother in the waiting/recovery room, constraint of finding a free postnatal bed for mothers due to separation of CS mothers from SVD ones. Overall, the low breastfeeding initiation rate within one hour from our study shows that breastfeeding initiation in CS delivery is still a challenge even in hospitals that have been trained and adopted early initiation of breastfeeding guidelines (Khan, Vesel, & Martines, 2018).

Importantly our findings further demonstrate that although guidelines are an important starting point to improving care, simply training healthcare workers on any set of guidelines may raise their knowledge but not markedly improve practice (Velusamy et al., 2017).

Bridging this gap between knowledge and practice is more about process of care organization within health facilities in order to optimize adherence to set standards/guidelines and ensure consistency in care delivery. Some of the promising concepts to address these issues have been deliberate the application of improvement of principals/approaches in healthcare settings. It is therefore paramount that beyond trainings on new guidelines, concerted efforts are made to enable healthcare managers and frontline practitioners build effective care delivery in systems to improve quality of care (Unicef, 2017).

The use of assessment tools e.g. the early initiation of breastfeeding self-appraisal tool should be used regularly so as to evaluate and monitor if the hospitals are keeping up to the required standards. For any training carried out there should be followed as recommended by WHO which has regular training of their health care workers covering early initiation of breastfeeding.

To achieve greater and sustained impact at care Microsystems, there is need to integrate components of how to 'organize processes' of care in any training aimed at rolling out care guidelines and or standards (Martines, 2015).

It's further notable, that in bivariate analysis, the risk of giving formula milk reduced with increasing education level. This compares with other studies that have shown having formal education to be a predictor of timely initiation of breastfeeding ( $p < 0.05$ ) (Kirkwood et al., 2018). However, in our study, high level of education was not independently associated with reduced risk of delaying of breastfeeding. It is possible that similar explanations as outlined

under level of information on initiating breastfeeding hold; given that mothers were not involved in the decision to give any other supplement; hence any maternal factors would not be expected to be significant.

In summary, this study clearly demonstrates that the practice of initiating breastfeeding in one hour especially in theatre where spinal anesthesia is used is hardly practiced. Concerted efforts are also needed to re-educate health workers on the dangers of delaying breastfeeding our finding that all neonates who were given prelacteal feed it was suggested and given by nurse/midwives as it represented by 30 correspondent to 17.7% (Table3.) of health provider who uses not breastmilk to feed the newborns in one hour(Sullivan et al., 2018).

The Table 5. Show us the association of demographic characteristics and the reasons of delaying early initiation of breastfeeding through the pearson correlation table that shows the means which gives a justification, on the sample size of 187 and the significant level of 0.01, the statistical evidence depicts that there is a significant relationship between IV and DV which is 0.960 \*\* (Strong positive correlation), the p value is 0.000 which is less than 0.01, when p-value is less than significant level, this means the cpprelation of the variables.



## **CHAPTER SIX. CONCLUSION AND RECOMMENDATIONS**

### **6.1. INTRODUCTION**

The effect of promoting early initiation of breastfeeding to the reduction of neonatal morbidity and mortality rate is very crucial. Breastfeeding has many health benefits for both the mother and infant. Breast milk contains all the nutrients an infant need in the first six months of life (N et al., 2019) (Adhikari et al., 2018). Breastfeeding protects against diarrhea and common childhood illnesses such as pneumonia, and may also have longer-term health benefits, such as reducing the risk of overweight and obesity in childhood and adolescence provision of mother's breast milk to infants within one hour of birth is referred to as "early initiation of breastfeeding" and ensures that the infant receives the colostrum, or "first milk", which is rich in protective factors (Global et al., 2017).

Current evidence indicates that skin to skin contact between mothers and newborn immediately after birth helps to initiate early breastfeeding for one to four months of life as well as the overall duration of breastfeeding. A neonate interacted with her mothers by skin to skin cry less (Idris et al., 2016).

### **6.2. CONCLUSION**

The majority of respondent who breastfeed their neonates are after one hour on 79.5% (150mothers) and only 37 (20.4%) was within one hour. Even the rate of receiving other than colostrum is correspondent to 67 (36.1%) and 120 (62.8%) but they provide breastmilk late. The main reason for delaying of breastfeeding in a postpartum were factors influencing early initiation of breastfeeding problems like: trouble getting breastmilk flow to start, neonate had trouble sucking or latching, insufficinnt breastmilk(Colostrum, breast dysfunction availability of othe milk even infant feeding difficulty(Takahashi et al., 2017).

Almost pregnant women have done the ANC, atleast one visit not mean visit in the first trimester it is only one checkup for her pregnancy, most of the times it is when she is approaching the delivery. That affect the ways all parents should receive different health information even on early initiation of breastfeeding.

### **6.3. RECOMMENDATIONS**

Findings from this study suggest the importance of raising awareness of early initiation of breast feeding among mothers in postpartum.

The complications during pregnancy were associated with early initiation of breastfeeding and it is possible that complications are more likely to cause intrapartum and early postpartum morbidity requiring immediate interventions for mothers or neonate that delay the mother-newborn interaction. To all health providers; prevention of pregnancy complications and special support for mothers with complications are essential to promoting early initiation of breastfeeding as WHO recommends should be considered to reduce maternal and neonatal health risk due to the ignorance of relatives and tiredness of the mothers in immediate postpartum.

All mothers should be supported to initiate breastfeeding soon as possible after birth within one hour after delivery. Here the neonate friendly hospitals are needed a lot in our country for a fully compliant to early initiation of breastfeeding policy.

The use of assessment tools e.g. the early initiation of breastfeeding self-appraisal tool should be used regularly so as to evaluate and monitor if the hospitals are keeping up to the required standards. For any training carried out there should be followed as recommended by WHO has regular training of their health workers covering the early initiation of breastfeeding.

Early initiation of breastfeeding also recommend to place skin to skin contact with their mothers just after birth, when it performs soon as possible after birth encourage mothers and neonate to recognize the breast to be offered and stimulate immediately after birth.

The ANC attendance frequencies sensitization of four visits could reduce the risk of delaying breastfeeding.

## REFERENCES

- Adhikari, M., Khanal, V., Karkee, R., & Gavidia, T. (2018). *Factors associated with early initiation of breastfeeding among Nepalese mothers : further analysis of Nepal Demographic and Health Survey , 2011*. 1–9.
- Altamimi, E., Al Nsour, R., Al Dalaen, D., & Almajali, N. (2017). Knowledge, Attitude, and Practice of Breastfeeding among Working Mothers in South Jordan. *Workplace Health and Safety*, 65, 210–218.
- Child, Y., & Programmes, F. (2011). *Improving Exclusive Breastfeeding Practices by using Communication for Development in Infant and Young Child Feeding Programmes*. (June 2010).
- Dinour, L. M., & Szaro, J. M. (2017). Employer-Based Programs to Support Breastfeeding Among Working Mothers: A Systematic Review. *Breastfeeding Medicine*, 12, 131–141.
- Edwards, M. E. (2016). *Confidence in Initiation of Breastfeeding*. (December).
- Global, W. H. O., Bank, D., Feeding, Y. C., Children, T., Children, U., Children, R., ... Children, S. (2007). *Date updated: 2010-05-07*.
- Global, W. H. O., Bank, D., Feeding, Y. C., Children, T., Children, U., Children, R., ... Children, S. (2017). *Date updated: 2010-05-07*.
- Goyal, N. K., Attanasio, L. B., & Kozhimannil, K. B. (2014). *Hospital Care and Early Breastfeeding Outcomes Among Late Preterm , Early-Term , and Term Infants*. (December), 330–338.
- Group, N. S. (2016). *Timing of initiation , patterns of breastfeeding , and infant survival : prospective analysis of pooled data from three*. (January).
- Hassan, A. A., Taha, Z., Ahmed, M. A. A., Ali, A. A. A., & Adam, I. (2018). *Assessment of initiation of breastfeeding practice in Kassala , Eastern Sudan : a community-based*

- study*. 1–8.
- Idris, S. M., Gordiano, A., Tafeng, O., & Elgorashi, A. (2016). Factors Influencing Exclusive Breastfeeding among Mother with Infant Age 0-6 Months. *International Journal of Science and Research (IJSR) ISSN (Online Index Copernicus Value Impact Factor, 14*, 2319–7064.
- Islam, A., Mamun, A., Hossain, M., Bharati, P., Saw, A., Lestrel, P. E., & Id, G. H. (2019). *Prevalence and factors associated with early initiation of breastfeeding among Bangladeshi mothers : A nationwide cross-sectional study*. 1–13.
- Khan, J., Vesel, L., & Martines, J. (2018). *Timing of Breastfeeding Initiation and Exclusivity of Breastfeeding During the First Month of Life : Effects on Neonatal Mortality and Morbidity — A Timing of Breastfeeding Initiation and Exclusivity of Breastfeeding During the First Month of Life : Effec.* (January 2015).
- Kirkwood, B. R., Edmond, K., Bazzano, A., & Hill, Z. (2008). *Early initiation of breastfeeding in Ghana : barriers and facilitators*. 46–52.
- Kirkwood, B. R., Edmond, K., Bazzano, A., & Hill, Z. (2018). *Early initiation of breastfeeding in Ghana : barriers and facilitators*. 46–52.
- Leah, M., & Home, N. B. E. D. (2012). *FACTORS INFLUENCING EXCLUSIVE BREASTFEEDING AMONG INFANTS*. (June).
- Leah, M., & Home, N. B. E. D. (2015). *Factors influencing exclusive breastfeeding among infant*. (June).
- Maria, T., Esteves, B., Daumas, R. P., & Leite, I. C. (2017). *Factors associated to breastfeeding in the first hour of life : systematic review Fatores associados à amamentação na primeira hora de vida : revisão sistemática*. 48(4), 697–708.
- Martines, C. (2015). *Timing of Breastfeeding Initiation and Exclusivity of Breastfeeding During the First Month of Life : Effects on Neonatal Mortality and Morbidity — A*

- Systematic Review and Meta-analysis*. 468–479.
- Moore, E. R., Anderson, G. C., Bergman, N., & Dowswell, T. (2015). *Europe PMC Funders Group Early skin-to-skin contact for mothers and their healthy newborn infants*.
- Mukarubayiza, M. R., & Gowan, M. (2019). *Educational Intervention to Increase Parental Care of Preterm Neonates at District Hospital in Kigali*. 2(2), 105–111.
- Mukunya, D., Tumwine, J. K., Nankabirwa, V., Ndeezi, G., Odongo, I., Tumuhamy, J., ... Tylleskar, T. (2017). Factors associated with delayed initiation of breastfeeding: a survey in Northern Uganda. *Global Health Action*, 10(1), 1410975.
- N, S. R., Sindhu, K. N., Ramanujam, K., Bose, A., Kang, G., & Mohan, V. R. (2019). *Exclusive breastfeeding practices in an urban settlement of Vellore , southern India : findings from the MAL-ED birth cohort*. (June), 0–6.
- Nommsen-rivers, L. A. (2015). *NIH Public Access*. 164(6), 1–26.
- Onah, S., Osuorah, D. I. C., Ebenebe, J., Ezechukwu, C., Ekwochi, U., & Ndukwu, I. (2014). Infant feeding practices and maternal socio-demographic factors that influence practice of exclusive breastfeeding among mothers in Nnewi South-East Nigeria: A cross-sectional and analytical study. *International Breastfeeding Journal*, 9.
- Rwanda Dwmograghic health survey. (2014). *Rwanda*.
- Salasibew, M. M., & Diseases, T. (2015). *Measurement of early initiation of breastfeeding :*
- Sharma, I. K., & Byrne, A. (2016a). Early initiation of breastfeeding : a systematic literature review of factors and barriers in South Asia. *International Breastfeeding Journal*, 1–12.
- Sharma, I. K., & Byrne, A. (2016b). Early initiation of breastfeeding : a systematic literature review of factors and barriers in South Asia. *International Breastfeeding Journal*, 1–12.
- Smith, E. R., Locks, L. M., Manji, K. P., Mcdonald, C. M., Kupka, R., Kisenge, R., ... Duggan, C. P. (2017). *Delayed Breastfeeding Initiation Is Associated with Infant Morbidity*.

- Sullivan, E. J. O. Ó., Perrine, C. G., & Rasmussen, K. M. (2018). *Early Breastfeeding Problems Mediate the Negative Association between Maternal Obesity and Exclusive Breastfeeding at 1 and 2 Months*. (February), 2369–2378.
- Survey, H., International, I. C. F., & Bank, W. (2017). *Rwanda : Nutrition Profile*.
- Takahashi, K., Ganchimeg, T., Ota, E., & Vogel, J. P. (2017). Prevalence of early initiation of breastfeeding and determinants of delayed initiation of breastfeeding : secondary analysis of the WHO Global Survey. *Nature Publishing Group*, (February), 1–10.
- Unicef. (2017). *Hospital care for mothers and newborn babies : quality assessment and improvement tool*.
- Unicef. (2018). *Postnatal care of the mother and newborn 2018*.
- USAID. (2018a). *ACCELERATE BEHAVIOR PROFILE SAMPLE : EARLY INITIATION OF BREASTFEEDING*. 2018.
- USAID. (2018b). *Accelerate behavior profile sample:Early initiation of breastfeeding*. 2018.
- Velusamy, V., Premkumar, P. S., & Kang, G. (2017). Exclusive breastfeeding practices among mothers in urban slum settlements: Pooled analysis from three prospective birth cohort studies in South India. *International Breastfeeding Journal*, 12.
- Watkins, S., & Meltzer-brody, S. (2017). *Early Breastfeeding Experiences and*. 118(2), 214–221.
- WHO. (2013). *Postnatal care of the mother and newborn 2013*.
- Zs, L., & Za, B. (2015). *Community-based intervention packages for reducing maternal and neonatal morbidity and mortality and improving neonatal outcomes ( Review ) Community-based intervention packages for reducing maternal and neonatal morbidity and mortality and improving neon. (3)*.

# **ANNEXE**

## INDIVIDUAL INFORMED CONSENT FORM (ENGLISH VERSION)

I am Joella MUKASHYAKA; student in masters of Science in Nursing, department of Neonatology, school of nursing and midwifery in the college of medicine and health sciences/University of Rwanda. Under the supervision of Dr. Pamela Meharry and Mrs. Rose MUKARUBAYIZA, lecturers at college of medicine and health sciences, I am conducting a research dissertation on “Assessment of factors associated with early initiation of breastfeeding among mothers in post-partum at In selected rwandan hospitals hospital” as partial fulfilment of my studies.

I am seeking your cooperation to participate in this study. This study is important because it will help the researchers to learn more about factors associated with early breastfeeding among employed mothers in immediate post-partum in Kabgayi/Kacyiru district hospital. From the information collected and studied in this project, we hope to learn more about how the best these factors can be implement in improvement of early initiation of breastfeeding in Kabgayi/Kacyiru district and reduce artificial milk.

This study will hopefully help us to learn about some challenges and barriers that mothers face in terms of adherence to early initiation of breastfeeding mothers delivered in Kabgayi/Kacyiru district.

With your permission, I kindly request you to give as much information as possible seek by responding to the questions in the questionnaire will be addressed to you.

There are no anticipated risks associated with this study. Your decision whether or not to participate in this study will not affect you at all.

The information you provide will be confidential and only used for the purpose of this research.

Your identity will not be disclosed in any published and written material resulting from the study.

The participation in this study is voluntary,

I agree to participate in this study, and understand that I can decide at any time to stop my participation, I can ask questions later if I have them, or discuss any changes with me.

Date and Signature of Participant \_\_/\_\_/2019



Dear Sir, Madam,

I am Joella MUKASHYAKA; student in masters of Science in Nursing, department of Neonatology, school of nursing and midwifery in the college of medicine and health sciences/University of Rwanda. Under the supervision of Dr. Pamela Meharry and Mrs. Rose MUKARUBAYIZA, lecturers at college of medicine and health sciences, I am conducting a research dissertation on “Assessment of factors associated with early initiation of breastfeeding among mothers in immediate post-partum at In selected rwandan hospitals hospital” as partial fulfilment of my studies.

It is for this regard that I seek your cooperation to respond to the questions in this questionnaire. The information you provide will be kept and only used for the purpose of this research confidentially. The questionnaire will remain anonymous and no name will be published.

Instructions

1. The questionnaire is addressed to you individually
2. No names must be mentioned on questionnaire
3. Select the appropriate response by a tick (✓) in the provided space
4. There is no more than one option that may be given as answer.

Your contribution is highly appreciated for the success of this study.

Contact information :

Joella MUKASHYAKA, Mob: +250722489231/+250 788489231

# QUESTIONNAIRE

## A. Demographic information

- 1) **Age:** 14 -24years' old   
25 to 34 years' old   
35 to 44 years' old   
Above 45 years' old

2) **Residence**

- a) Urban   
b) Rural

3) **Level of education**

- No formal education   
Some primary   
Completed primary   
Some secondary   
Completed secondary   
More than secondary

4) **Employment/ Occupation**

- a) Employed: Yes  No   
b) No employment: Yes  No

5) **Religion**

- a) Christian: Yes  No   
b) Muslim: Yes  No

6) **Gravidity:**

- Primigravida   
Multigravida

**7) Multiple birth at this pregnancy:**

Singleton birth

Multiple births

**Maternal knowledge on early initiation of breastfeeding**

**8) ANC information**

1) Did you attend ANC? Yes  No

**If Yes, ANC Location**

a) Health Centre

b) Private clinic

**2) ANC Frequencies**

One visit

Two visit

Three visit

Four visit

9) Was the importance of early breastfeeding discussed during ANC? Yes  No

10) Risks of giving water, formula or other supplements to the neonate in the first hour after birth? Yes  No

**Birth period**

11) Has your neonate been given anything other than breastmilk since he/she was born?

Yes  No

12) If yes, what was given to feed your neonate?

a) Breastfeeding only:

b) Breastfeeding and formula:

c) Formula only:

d) Water or sugar water:

e) Other fluids:

f) Don't know:

**13) What was the reason of giving other than breastmilk?**

Insufficiency of breastmilk-colostrum.

Breast dysfunction.

Neonatal feeding difficulties.

Too much availability of fluid and formula.

**14) If your neonate was given supplements who requested it?**

a. My self

b. A relative requested it

c. My doctor or other staff requested

**15) How long after birth did you breastfeed your neonate?**

1. Within one hour:

2. After one hour:

**16) If it took more than an hour after birth to hold your neonate what was the reason**

a. My neonate needed help/observation

b. I didn't have the energy

c. I wasn't given my neonate this soon and I don't know why Other reason

**Maternal delivery experience**

**17) What was mode of delivery; SVD  CS**

**18) Where was your neonate while you were in the maternity services after giving birth?**

a. The neonate was always with me day and night

b. The neonate was not with me

DATE

NO

## **KWEMERA KU BUSHAKE KUJYA MU BUSHAKASHATSI**

Ndemeza ko namenye kubushake ubushakashatsi bukorwa na **Joëlla Mukashyaka**. Kandi namenye icyo ubushakashatsi bugamije, icyo nsabwa.

Nabonye ibaruwa ibumenyesha, nasobanuriwe mu rurimi numva neza kandi numvise ibiyikubiyemo. Bityo rero nemeye kugira uruhare k'ubushake ngasubiza ibibazo kandi amakuru ntanga ashobora gukoreshwa n'abashakashatsi mu buryo yansobanuriye buzubahiriza ibanga. Kandi nasobanuriwe ko nshobora guhagarika ubushakashatsi igihe icyo aricyo cyose ntangaruka bingizeho. Nagize igihe gihagije cyo kubaza ibibazo.

Amazina: .....

Umukono: .....

Itariki: ...../...../2019

Hagize ikibazo kidasanzwe mbona, nsabwa kubimenyesha uwakoze ubushakashatsi kuri uyu mworndoro:

Joëlla MUKASHYAKA  
Student at UR, Neonatology track  
Kigali, Remera campus  
Telephone: +250 788489231  
Email: joellashyaka@gmail.com

# IBIBAZO BIBAZWA ABABYEYI MU KINYARWANDA

## A. Umwirondoro w'umubyeyi

- 1.Imyaka:** Hagati ya 14- 24   
Hagati ya 25-34   
Hagati ya 35-44   
Hejuru ya 45

## 2.Aho utuye

- a) Umugi   
b) icyaro

## 3.Amashuri wize:

- Ntabwo nageze mu ishuri   
Amashuri abanza   
Icyiciro rusange   
Amashuri yisumbuye   
Kaminuza   
Andi mashuri waba warize,

## 4. Ibijyanye n'umurimo

- a)Ufite akazi   
b)Nta akazi ugira

## 5. Idini

- a) Umukirisitu   
b) Umusiramu

## 6. Imbyaro wigeze:

- a. Iyi ni inda ya mbere watwisse   
b. Iyi ni inda ya kenshi

## 7. Inda yavutse ni

- a. Umwana umwe   
b. Ni impanga

**Ubumenyi bwerekeye konsa umwana akivuka**

**8. Amakuru ajyanye no kwitabira gukurikirana umwana uri mu nda**

Wigeze witabira kwipimisha inda utwite? Yego  Oya

**9. Niba ari yego, wipimishirije hehe?**

- a) Ikigonderabuzima
- b) Ku ivuriro ryigenga

**10. Wabikoze inshuro zingahe?**

- a. Inshuro imwe
- b. Inshuro ebyiri
- c. Inshuro eshatu
- d. Inshuro enye

11. Mwishijwe ku bijyanye n'akamaro ko konsa umwana akivuka? Yego  Oya

12. Mwasobanuriwe ingaruka zo guha abana ibitari amashereka atarageza amezi atandatu? Yego  Oya

**13. Umwana yahawe iki bwa bwa mbere**

- a) Uronsa gusa:
- b) Uronsa, ukamuha n'amata yagenewe abana?
- c) Amata y' ifu yonyine:
- d) Amazi cg isukari
- e) Ibindi binyobwa.
- f) Simbizi

**14. Waba uzi impamvu batamuhaye amashereka**

- a. Amashereka yari atarazamo
- b. Ibere riba ritaratangira gukora
- c. Umwana ntiyabashaga gukurura
- d. Ni uko hari amata yo kumuha meza

**15. Niba umwana baramuhaye inyunganizi ni inde wayisabye?**

- Njye ku giti cyanjye
- Umurwaza wanjye
- Muganga cg abandi

**16. Umwana avutse wamwonkeje ryari?**

- a. Mugihe cy' isaha yaronse
- b. Nyuma y' isaha nibwo yonse

**17. Ni iyihe mpamvu yatumye wonsa hashize isaha yose?**

- a. Umwana yari akeneye ubufasha no kwitabwaho
- b. Nta ntege nari mfite
- c. Ntibampaye umwana kdi sinzi n' impamvu yabiteye

**18. Amakuru ajyanye no kubyara**

**Wabyaye mu buhe buryo:** Wabyaye utabazwe  Ubazwe

**19. Umwana amaze kuvuka bamujyanye hehe?**

- a. Umwana twarikumwe igihe cyo
- b. Umwana ntitwarikumwe



Kigali, 14/01/2019  
Ref: CMHS/IRB/026/2019

**MUKASHYAKA Joella**  
School of Nursing and Midwifery, CMHS, UR


Dear MUKASHYAKA Joella

**RE: ETHICAL CLEARANCE**

Reference is made to your application for ethical clearance for the study entitled "*Assessment of Factors Associated with Early Initiation of Breastfeeding among Mothers in Post-Partum at Kagayi and Kacyiru Hospital*".

Having reviewed your protocol and found it satisfying the ethical requirements, your study is hereby granted ethical clearance. The ethical clearance is valid for one year starting from the date it is issued and shall be renewed on request. You will be required to submit the progress report and any major changes made in the proposal during the implementation stage. In addition, at the end, the IRB shall need to be given the final report of your study.

We wish you success in this important study.

  
Professor Jean Bosco GASHU  
Chairperson Institutional Review Board  
College of Medicine and Health Sciences, UR

**Cc:**

- Principal College of Medicine and Health Sciences, UR
- University Director of Research and Postgraduate studies, UR

REPUBLIC OF RWANDA



MINISTRY OF HEALTH  
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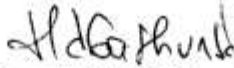
✓ MUKASHYAKA Joëlla/ Tel: 0788489231  
MUJAWAMARIYA Françoise/ Tel: 0783302009  
MUREKATETE Claudine/ Tel: 0788545982  
School of Nursing  
University of Rwanda/CMHS  
**KIGALI**

**Re: Authorization of research**

Reference is made to the letters requesting authorization of research for completion of your master's program in Nursing;

I hereby authorise your research as well as those of your colleagues in same situation to facilitate the entire cohort to speed up their academic activities. The students will have to present the CMHS/IRB research approval letter with this one to any health facility to have access of data.

Sincerely,

  
Dr. Diane GASHUMBA  
Minister of Health



Cc:

- Principal of College of Medicine Health Sciences
- Dean of School of Nursing and Midwifery/CMHS/UR

26 MARS 2019  
Kigali,  
N° 20/1770 /DGPHFIS/2019

REPUBLIC OF RWANDA

Kigali, on 25/02/2019  
Ref N° 29.../KH/19



MINISTRY OF HEALTH  
GASABO DISTRICT  
KACYIRU HOSPITAL  
Email: [kacyiru.hospital@moh.gov.rw](mailto:kacyiru.hospital@moh.gov.rw)  
B.P. 6183 KIGALI

To Mrs Joella MUKASHYAKA

**Re: Response to your Letter**

Reference is made to your letter dated on 03/02/2019 requesting for permission to conduct a research study.

It is with great pleasure that I write this letter to inform you that, your request has been accepted for the research study.

We wish you all the best in your study period.

CP Dr Daniel NYAMWASA  
Director General of Kacyiru Hospital



REPUBLIC OF RWANDA



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MUKASHYAKA Joëlla/ Tel: 0788489231

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School of Nursing

University of Rwanda/CMHS

KIGALI

**Re: Authorization of research**

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I hereby authorise your research as well as those of your colleagues in same situation to facilitate the entire cohort to speed up their academic activities. The students will have to present the CMHS/IRB research approval letter with this one to any health facility to have access of data.

Sincerely,

Dr. Diane GASHUMBA  
Minister of Health



28 MARS 2019  
Kigali,  
N° 20/1770/DGPHFIS/2019



- Cc:
- Principal of College of Medicine Health Sciences
  - Dean of School of Nursing and Midwifery/CMHS/UR