

***EVALUATING QUALITY OF HEALTH EDUCATION MESSAGES AMONG
POSTNATAL WOMEN IN THE POSTNATAL WARDS, KENYATTA NATIONAL
HOSPITAL***

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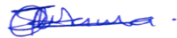
**A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE AWARD OF MASTER OF SCIENCE IN
NURSING (MIDWIFERY AND OBSTETRIC NURSING) IN THE
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NAIROBI**

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DECLARATION

I Tessa Muyaku Shitandi hereby declare that this thesis submitted for the Masters of Science in Nursing (Obstetrics Nursing and Midwifery) is my original work and not a duplicate of any other scholar's work.

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DEDICATION

This thesis is dedicated to my dear family, my spouse Philip, my children Barbara, Zenani and Philip Jnr. You have been patient, accommodating and inspiring during this period.

To my mum Pamela and my siblings, thank you for your steadfast prayers. You have been a great support.

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LIST OF ABBREVIATIONS

ACN	Assistant Chief Nurse
CDC	Centre for Disease Control and Prevention
DRH	Division of Reproductive Health
ERC	Ethics and Review Committee
FP	Family Planning
GFA	Ground Floor A
GFB	Ground Floor B
HCP	Health Care Providers
HIV	Human Immunodeficiency Virus
HOD	Head of Department
KDHS	Kenya Demographic Health Survey
KMTC	Kenya Medical Training College
KNH	Kenyatta National Hospital
MMRC	Maternal Mortality Review Committee
MOPHS	Ministry of Public Health and Sanitation
MTCT	Mother-to-Child Transmission
PHC	Primary Health Center

PMTCT	Prevention of Mother-to- Child Transmission
PNC	Postnatal Care
PP	Postpartum
PPC	Postpartum Care
RH	Reproductive Health
SACN	Senior Assistant Chief Nurse
SDG	Sustainable Development Goals
SPSS	Statistical Package for the Social Sciences
STI	Sexually Transmitted Infections
UON	University of Nairobi
UTI	Urinary Tract Infection
WHO	World Health Organization

OPERATIONAL DEFINITIONS

Postnatal: This starts from the time of admission in the postnatal wards to the time of discharge from the postnatal wards for both postnatal woman and her newborn.

Mothers: Refers to postnatal women who have given birth in Kenyatta National Hospital.

Health Education: Information given to a woman to promote an understanding of how to take care of herself and the baby.

Quality health education messages: In this study, entails the provision of relevant health messages specific to postnatal care, ensuring messages are timely, suitable, clear and simple for women to understand.

Postpartum Care: Care provided by the nurse to a woman and her newborn within 72 hours of admission in postnatal ward.

Components: An important element(s) that constitute what health messages are supposed to be given.

Timing: A particular point when the health message is given.

Clarity: Ability of the health message to be easily understood.

Simplicity: A health message that is not complicated, free of jargon

Postnatal period: The immediate period after childbirth up to 6 weeks after birth.

Rural residence: Living in areas outside Nairobi City County

Urban residence: Living in areas within Nairobi City County

ABSTRACT

Background: Quality health education received by postnatal women is very important in helping them become responsible for their own health status and that of the baby. It also helps women recognize danger signs and thus reduce maternal and neonatal morbidity and mortality. When health messages are not sufficient, timely, appropriate, acceptable and understandable, women delay seeking care. Specific consideration should be paid on the nature of health education messages on postnatal care given in health facilities.

Objective: To evaluate quality of health education messages shared to postnatal women in the postnatal wards at Kenyatta National Hospital (KNH).

Methodology: A descriptive cross-sectional study employing quantitative methods was used. Data was collected through an interviewer administered questionnaire among 118 women admitted in postnatal wards at KNH. The respondents were selected by simple random sampling method. Pretesting of the study tools was done. Data was cleaned, numerically coded to facilitate analysis and edited. Data analysis was done by use of Statistical Package for Social Sciences (SPSS). Descriptive statistics including frequencies and percentages were utilized. Study data was also analyzed inferentially. Results were presented in tables and figures. Research was carried out after ethical approval from the Kenyatta National Hospital-University of Nairobi (UoN) Ethics and Research Committee.

Results: A statistically significant positive association was established between the timing of the health messages on postnatal care and quality of health education messages among the postnatal women ($r = 0.575$, $p < 0.05$). Similarly, modes of delivery of health messages were found to have a statistically significant positive association with the quality of health education messages among the postnatal women ($r = 0.631$, $p < 0.05$). A statistically significant positive association was also established between simplicity of language used to convey the health messages and quality of health education messages among the postnatal women ($r = 0.689$, $p < 0.05$).

Conclusions: The timing of the health messages on postnatal care, modes of delivery of health messages and simplicity of the language used in sharing the health messages to postnatal women were significant determinants of the quality of health education messages among postnatal women at KNH's postnatal wards.

Recommendations: There is need for greater emphasis on timing, modes of delivery and simplicity of language used in delivery of health education messages on postnatal care among postnatal women.

CHAPTER ONE: INTRODUCTION

1.1 Introduction

Receiving and seeking health information are important aspects of postpartum care. Health messages shared by health personnel are a crucial aspect of primary health care. It is listed by the World Health Organization as one of the eight essential elements (WHO, 2021). Postnatal period refers to the time between which a baby is delivered and the first 42 days. It is a critical moment, considering it is the time during which most maternal and newborn deaths occur. There is a high risk of maternal and newborn deaths within the first 24 to 48 hours of childbirth (Fogel, 2017).

World Health Organization (WHO) estimates that every year, close to three million infants or more die within their first week of birth, and another 900,000 die in the next three weeks (Kamau, 2014). Offering maternal postnatal education is therefore important as it ensures continuity of care for the woman and baby even after their discharge and averts possible dangers. The study herein was aimed at evaluating the quality of postnatal education being given to women.

1.2 Background of the Study

The immediate hours, days and weeks after child birth, pose a great danger to both the woman and her newborn baby. Globally more than half a million women between 15 and 49 years of age faced death each year because of the complications that arise from labor and pregnancy. Thus, maternal demise happens pretty much almost every minute of every year, out of which close to 100% are in low-income countries (Timilsina et al., 2015). Around 66% of mother and child deaths arise during early postnatal period in low-income states and a vast majority in sub-Saharan Africa. The

Centers for Disease Control and Prevention (CDC) and Maternal Mortality Review Committees (MMRC) estimate that over half of maternal deaths occur within the postpartum period (Effective health care agency, 2021). This was described within the following discrete time intervals: 1-6 days postpartum (19%), 7-42 days postpartum (21%).

Despite maternal, neonatal, and infant mortality rates steadily declining in Kenya, they are still below the targets Kenya set for the Sustainable Development Goals (SDGs); for example, the maternal mortality rate was at 362 deaths by 100,000 live births in 2014 compared to a target of 147 by 2015 (Strategic Purchasing for Primary Health Care, 2021). It is therefore essential that appropriate care be dispensed during the period, as a way of preventing or reducing some of the fatalities.

In Kenya, elements of postnatal care targets are health wellness messages and advices. Targeted postnatal care is a strategy that spells out what of postnatal care services should be provided to the woman and her newborn. Health messages to be given to women are; Exclusive breast feeding and breast care, personal hygiene, cord care, danger signs for mother and baby, exercises, care of the perineum/caesarian section site, essential newborn care, family planning, resumption to sexual activity and immunizations.

A study done in Al-khobar Primary Health centers (PHC) in Saudi Arabia showed that some health messages were stressed more than others (Al-Sowielem, 2001). This situation is similar in an educational intervention study that targeted parents postnatally which was done in low and middle-income countries (Dol et al., 2019). The study found out that most postnatal education programs in Low- and Middle-Income Countries (61%) only cover a single topic, usually breast feeding. Multi-topic

programs prefer teaching breast feeding (50%) over other subject areas (cord care 13%, recognition of danger signs 27%, infection prevention 30%, warmth care 37%). The choice of health education message should be determined according to the priorities of health problems.

A study done in Al-khobar Primary Health centers (PHC) in Saudi Arabia found out that most posters that were used to convey health information were mostly in Arabic. The non-Arabic speaking attendees who only knew English couldn't understand the messages shared (Al-Sowielem, 2001). Anecdotal evidence in the customer care book at KNH showed a client from the minority group who expressed need for a translator to be able to understand health messages shared. It is therefore imperative to share health information in a clear, simple language that is understood by the client.

Postnatal wards provide a perfect opportunity for supporting and educating parents. Women receive education from nurses, midwives, and physicians, nutritionists, counselors and other health workers. Women should be educated with every encounter from admission, correct any misinformation, share information in layman terms and use visual aids often. Healthcare service providers should also use return demonstration when giving health messages. Sufficient dissemination of information to mothers improves health outcome for both mother and baby.

There was no published data regarding evaluation of health education messages provided to postnatal women upon discharge in Kenyatta National Hospital. Hence this research evaluated women's knowledge on postnatal care, timing of messages shared, mode of delivery of messages shared, and the simplicity of language used.

1.3 Problem Statement

The immediate period after childbirth, poses great danger to both the woman and her newborn baby. Considering that close to 67% of mother and newborn mortality takes place around this time, is a justification enough for provision of critical care to the mother and child. Kenya and other resource starving countries experience such a trend, as research shows that mother and baby are discharged earlier than is necessary; 24 to 48 hours for normal births (Kamau, 2014). The resultant effect of this trend was that most postnatal care occurs at home; the mother taking care of herself and the baby, with the support of the family. In this regard, quality of health education for postnatal women is critical to avert fatalities in the postnatal period.

The Operational Guidelines and Standards for Health Promotion (Ministry of Health, 2013) state that a quality health education message should be simple, clear, be limited to a number of concepts and should reflect the learning style of the audience. But available research data (Kamau, 2014) noted that the postnatal care education that was provided was not sufficient enough to address the needs of parents during the immediate period after child delivery. Women receive insufficient information which was not standardized.

A study done in Bangladesh on knowledge of essential newborn care showed that women did not receive quality health education. Over 50 percent women were not knowledgeable on breathing difficulty, distended abdomen and diarrhea as sign of danger for babies. The rest of them had little awareness about the signs of sepsis, its cause and management (Majumder et al., 2018). This showed majority of the women were not aware of the general danger signs of newborn, cord care. Despite the fact that postnatal education to women was considered crucial, evidence demonstrating

quality of postnatal education among postpartum women upon discharge in Kenya was lacking.

Despite the health messages shared from the researcher's experience and anecdotal reports, women still seemed dissatisfied from the health messages and would still come back to one provider or another to seek clarity of an issue. This suboptimal health information could predispose women to neonatal and maternal death and complications.

Therefore, this research sought to evaluate quality of health education messages by assessing knowledge of women regarding postnatal care, determining the timing of health messages and assessing the mode of delivery of health messages at KNH. In addition, the research also sought to determine the simplicity of language used to share health messages.

1.4 Justification of the Study

The suitable time for offering postnatal advice is at the hospital. This initial encounter is an essential chance to draw in first time mothers about health wellness messages. Kenya's Ministry of health advocates that health care workers taking care of a woman at birth is mandated to share health messages on postnatal care and ensure postnatal women come for follow up visits (Rotich et al.,2017). Therefore, during postnatal hospital stay, healthcare providers must ensure postnatal women understand how to safeguard their health and that of their baby by giving quality health education. So far there was no study that had determined whether the postnatal care (PNC) education provided to postnatal women was quality in that it was sufficient, simple, acceptable and delivered appropriately upon discharge from Kenyatta National Hospital.

The Goals for sustainable development (SDGs) number 3 advocate for significant decrease in mother and child deaths and sexual and reproductive health services to be accessible globally by 2030. Interventions like sharing quality health education messages on postnatal care to women are crucial to improve services, boost health, and accomplish future goals in decreasing deaths. Universal Health Coverage (UHC) policy also emphasizes the need for the public to obtain all crucial health services, from health prevention to health promotion (WHO,2022). Sharing quality health promotion messages is therefore a basic right for the postnatal women.

Therefore, by conducting this study research at KNH, it is expected that the results may contribute to the development of a model framework, which would guide the innovation of other strategies that enhance dispensation of PNC education amongst postnatal mothers in various maternal healthcare units across the country. KNH is the biggest healthcare facility in Kenya, with the highest number of childbirths in the country, thus being the perfect place for the purpose of this study. This would help put in place guidelines on delivery of postnatal information, which would enable the Ministry of Health to recognize areas that require action. Establishing the quality of health education messages among postnatal women would also help in coming up with informed measures that would ensure the women had a better ability to continue with PNC while at home.

1.5 Research Questions

1. What is the level of knowledge on postnatal care among women in postnatal ward at KNH?
2. What is the timing of messages delivered to postnatal women at KNH, postnatal wards?

3. What is the mode of delivering health messages to postnatal women at KNH, postnatal wards?
4. What is the simplicity of the language used to give health messages to postnatal women at KNH, postnatal wards?

1.6 Objectives of Research

1.6.1 Primary Objective

To evaluate the quality of health education messages among postnatal women in Kenyatta National Hospital, postnatal wards.

1.6.2 Secondary Objectives

1. To assess the level of knowledge of women on postnatal care, in Kenyatta National Hospital, postnatal wards.
2. To determine the timing of the health messages given to postnatal women in Kenyatta National Hospital, postnatal wards.
3. To assess the mode of delivering health messages to postnatal women in Kenyatta National Hospital, postnatal wards.
4. To determine the simplicity of language used in sharing health messages to postnatal women in postnatal wards at KNH.

1.7 Expected Benefits of the Study

The study provides an understanding of the quality of health education messages given to post-natal women. It may likewise illuminate the policy makers and different partners on the need to guarantee adequate resources were available to achieve quality health education messages.

Postnatal women benefit in that, they'll receive sufficient information on postnatal care. Quality health education on postnatal care may positively affect their subsequent knowledge of and practices about their care and that of their babies.

Lack of quality health education has been attributed to increased maternal and neonatal mortality worldwide. If quality health education on postnatal care was achieved it would help in reducing this mortality.

The hospital management and nurse midwife would be able to rate on the quality on health education and post-natal care that they offered to the women and seek to address the gaps identified.

Study findings could also be used by policy makers to improve on the guidelines and standard operating procedures regarding quality of health education messages given to postnatal women in the post-natal wards at Kenyatta National Hospital. This would help in reduction of complications and deaths hence improving outcomes of both the mother and the child.

1.8 Theoretical Model

1.8.1 Theoretical Model Narration

In this research study, the theoretical model was adopted from the Donabedian framework for assessment of healthcare quality. The model was developed in 1966 by Avedis Donabedian, Michigan university researcher and physician and has undergone several revisions since then.

It's an adaptable model that could be applied in different health settings. It could likewise be applied in the improvement of designs and cycles in a health setting.

The model divides factors in impacting qualities into structures, processes and outcomes (Donabedian, 1988). Donabedian believes that these three components of the model interact. He defined structure as facility setting, administrative systems through which care takes place. The structure in this study is KNH postnatal wards.

The process components measure the transactions that occur in patient care. Process measures things done to and for the patient while offering care. This study focuses on process attribute which includes sharing health education messages that mention all components of post-natal care, are timely, simple to understand and using appropriate methods of teaching.

As per Donabedian model, the outcome is the ideal result or a definitive objective of care. An enhancement in the client's information is incorporated so that the patient is fulfilled with health messages shared on postnatal care. Inadequate knowledge on postnatal care could result to morbidity or mortality. The outcome in this study was quality health education messages imparted to postnatal women in postnatal wards.

1.8.2 Donabedian's theoretical model figure

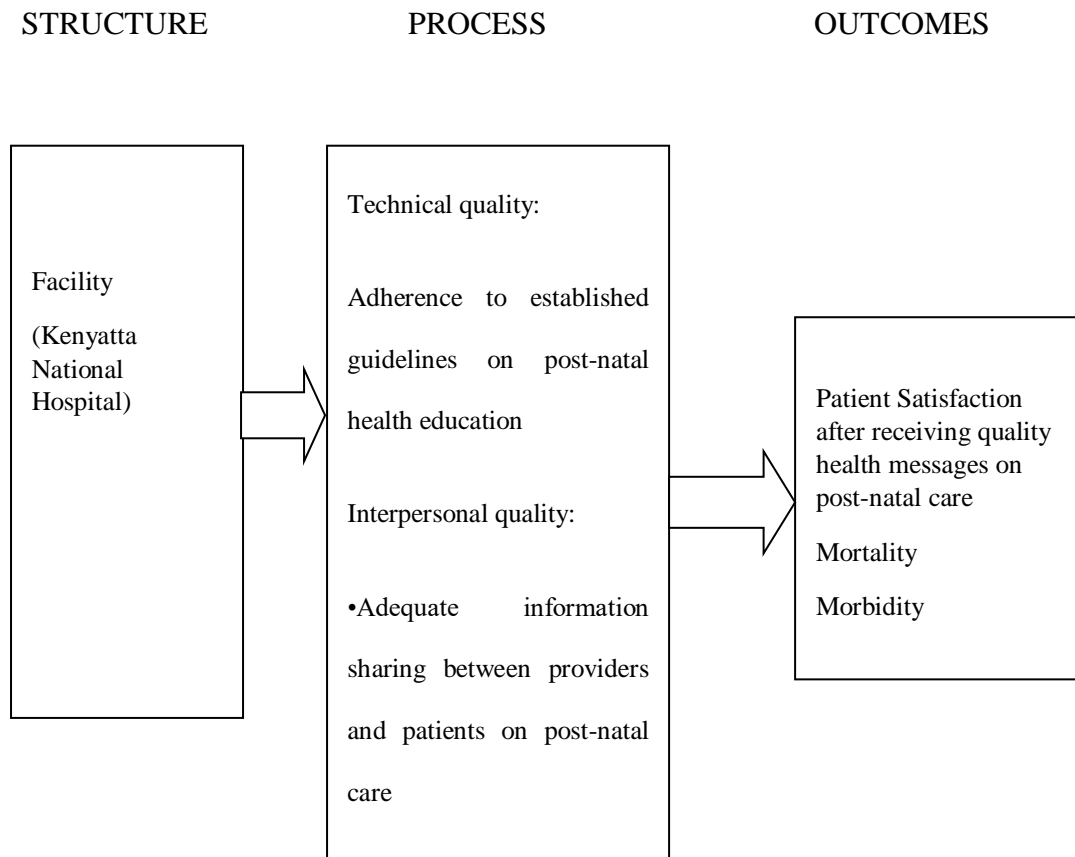


Figure 1.1: Donabedian Model

1.9 Conceptual Framework

1.9.1 Conceptual framework narration

Quality of health education messages on postnatal care was determined by the following sets of independent variables;

- The patient's demographic characteristics which were age, marital status, education levels, religion, occupation, duration of stay. Obstetrics characteristics like parity, mode of delivery, sex of baby.

- Level of maternal knowledge on health messages specific to post-natal care like exclusive breastfeeding, care of the cord, identification of danger signs, maternal nutrition, personal hygiene, family planning, post-natal follow up, infant immunizations.
- Timing of health messages, that is, contact time with health providers and length of hospital stay.
- Mode of delivering health messages such as one on one lectures, group lectures, educational booklets, charts, and demonstrations.
- Simplicity of language; whether language used to deliver the message was simple or complicated

The following variables were not studied but they had influence on the independent variable and the outcome. They were confounding variables such as policy guidelines, standards operating procedures, health worker patient ratio, length of hospital stay, health providers' characteristics.

The dependent variable which was also the outcome was quality health education on postnatal care.

1.9.2 Conceptual framework figure

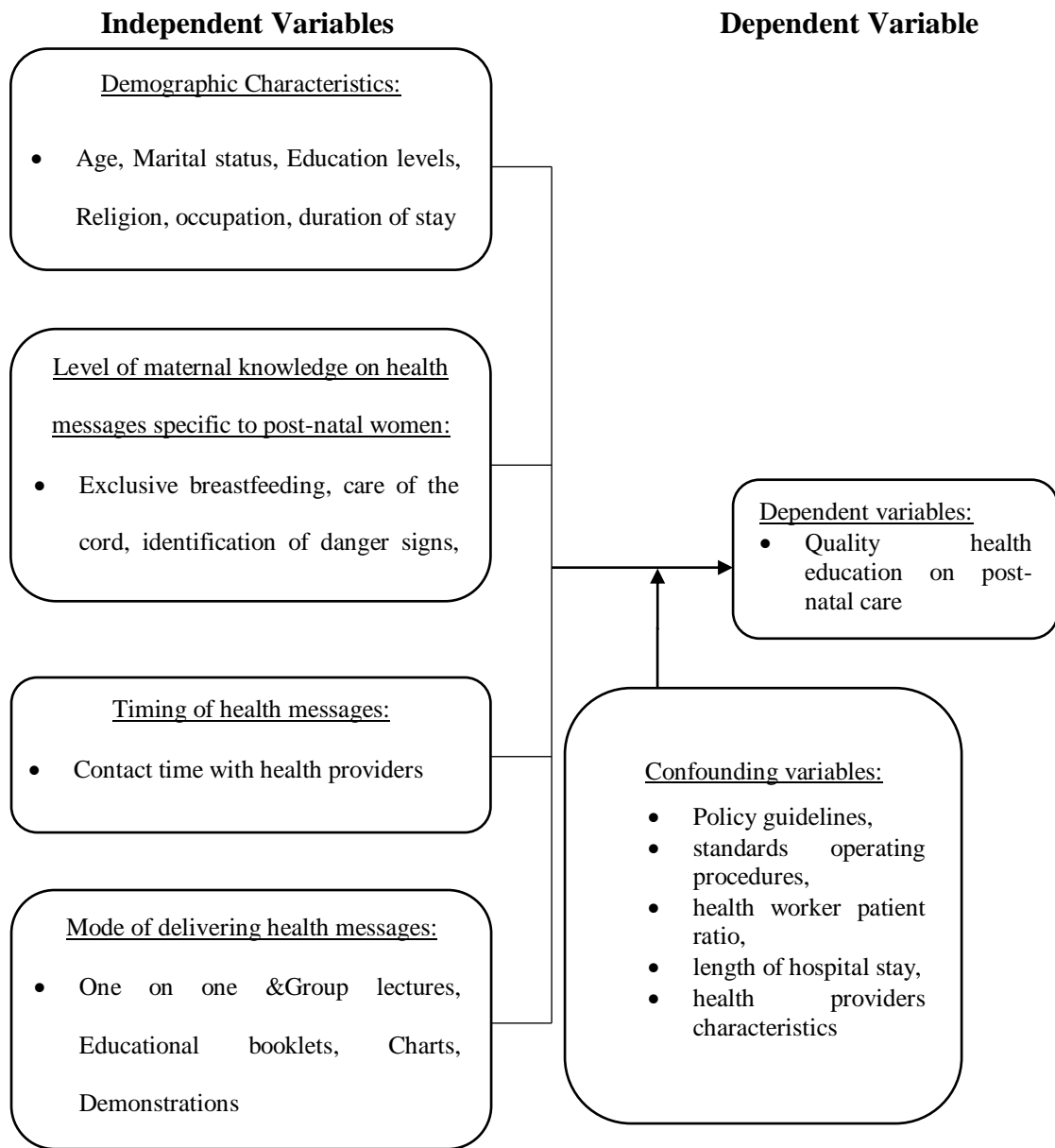


Figure 1.2: Conceptual framework

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter is about literature on other research studies done on the quality of health education messages given to postnatal women. The literature sources include key journal articles from Google scholar, Hinari and PubMed, WHO publications, the Kenya Demographic and Health Survey (KDHS) publications. The key words used in the search were, quality, postnatal, health messages, health information, postnatal care guidelines.

2.2 Health Education

A logical approach to health wellness that health education shared by health providers while in the clinic or hospital will bring about a change in health behavior is still an essential part of primary healthcare actions. Health education is vital in that it addresses disease prevention, health promotion, and quality of life. It can make important contributions to promote and improve the health of individuals, communities and society.

2.3 Guidelines Recommended for Health Information on Postnatal Care

Designated postpartum care begins soon after the delivery of a baby, stretching out for around a month and a half. Components of designated postpartum care for women are: health promotion utilizing wellbeing information and guiding (for example on nourishment and recommencement of sexual activities), individual cleanliness and hand washing, cord care, breast care, work outs, care of the perineum, unsafe practices, maternal sustenance, prevention of mother to child transmission of HIV

(PMTCT), recognition of danger signs and treatment of complications, readiness for complications, emergency preparedness, advice on birth spacing and sexual transmitted infections/urinary tract infections (UTI). Health messages on infant care include providing necessary care to the infant, counselling on breastfeeding, recognition of warning signs, their remedy and immunizations (Ministry of health, 2012).

2.4 Knowledge on Health Messages Specific to Postnatal Women

Health education messages after childbirth take on many forms around the world. Birth takes place in the hospital or at home and much of the information about care of the woman and her baby is given by close relatives like mother, sister, grandmother, aunt, and other extended relatives. This kind of information is relied upon by almost all women, including those giving birth in hospitals.

Giving women information on their health and that of their newborns allay anxiety, especially for first time moms. Absence of information on the practical parts of infant care can greatly affect their psychological wellbeing (Malouf et al., 2019). Nurses and midwives assume a pivotal part in giving commonsense post pregnancy data that addresses parents' abilities in nurturing and individual requirements (Gaboury et al., 2017).

Nurses empower the postnatal mother with knowledge on danger signs by giving advices on health issues during the patients stay in the postnatal wards for early identification and prevention of complications (W.H.O, 2016). However, in Nepal, 44.4% of postnatal women were satisfied with information provided about danger signs for the mother while only 2.6% were satisfied with information on danger signs

of the infant while on delivery of information concerning outcome findings of health assessments, 85.4% of postnatal women felt satisfied (Panth et al., 2018). Some women reported dissatisfaction with the health information given by the nurses during the health talks, moreover, they felt that the information given was not what they needed, the need to assess the information needs of the women is key to satisfaction with information given in the postnatal wards (Gaboury et al., 2017).

Giving the baby only breast milk is advocated for all infants in the first six months of life irrespective of their Human Immunodeficiency Virus(HIV) exposure status, as such all women should be advised on the importance of breastfeeding exclusively during the immediate postnatal care. Research done in Swaziland (Dlamini et al., 2017) pointed out that 58.1% of the HIV positive women were given health talks by midwives on breastfeeding their babies exclusively. These results show that midwives are not giving quality infant feeding health information to HIV women; who may decide to supplement breast milk with other replacement feeds. The consequences of mixed feeding increase mother to child transmission of HIV (MTCT). 39.5% of the women were given information on exclusive replacement feeding. In Egypt, about 41% of respondents were slightly pleased with the nursing care provided during the postnatal period, while 5% were very pleased; however, 36% of the women mentioned having no satisfaction with advice on postnatal exercise, birth spacing and return visits. 38% of the respondents were not satisfied with the teaching on signs and symptoms on neonatal danger signs while 33% were not satisfied on advice given regarding immunizations and weaning of the baby (Battawi et al., 2017).

Information support helps build the knowledge of the postnatal women, provided through good communication when giving instructions and sharing information

concerning mother and baby condition, moreover information through counselling and health talks is seen as critical determinant of good postnatal care according to the studies done in Ghana, Malawi and Iran (Srivastava et al., 2015). Poor dissemination of information on postnatal care and poor adherence to prescriptions and treatments in Iran was associated to low satisfaction. In addition, most women reported dissatisfaction with care given during the postpartum period due to lack of support from midwives on breastfeeding, little time allocated on training on breastfeeding and unwilling midwives to answer questions posed by postnatal women (Mirzaei et al. 2015).

In Kenya, health education messages are provided by health care workers for instance, midwives, doctors, physiotherapist and nutritionists. The details and importance placed on this education differs. Professional associations sometimes provide practice guidelines, which describe optimal content and timing of educational sessions (Simpson, 2001). In these cases, a great deal of emphasis may be placed on the physical care of the infant (versus maternal self-care or psychological-emotional aspects of family care). There is great variation in the actual information offered, at what point during the course of the postnatal period it is offered, and the educational methods used.

Some women may have learned about postpartum and newborn care in antenatal classes. Mothers who had attended prenatal classes may have found it difficult to assimilate information regarding the postpartum period, given the sheer amount of information they are given antenatally (Bryanton et al., 2013). Thus, education provided during postpartum can be a time for reinforcing knowledge gained and offering further anticipatory guidance (Simpson 2001).

2.5 Significance of Education Postnatally

The changeover of women to parenthood comes with considerable deal of change and experience, of which many are often well prepared. The transition might seem exciting to women but can be a moment of stress and crisis for many. During the time, adjustments should be made in all aspects; physical, psychological, and social. It is during this period that mother and infant morbidity and mortality risk is at its highest. Research estimates indicate that in Africa alone, around 800,000 infants and 100,000 women die during the first week after birth every year (Amolo et al., 2017). They also estimate that in Kenya, 50% to 70% of life-threatening diseases come within the first week after birth (Amolo et al., 2017).

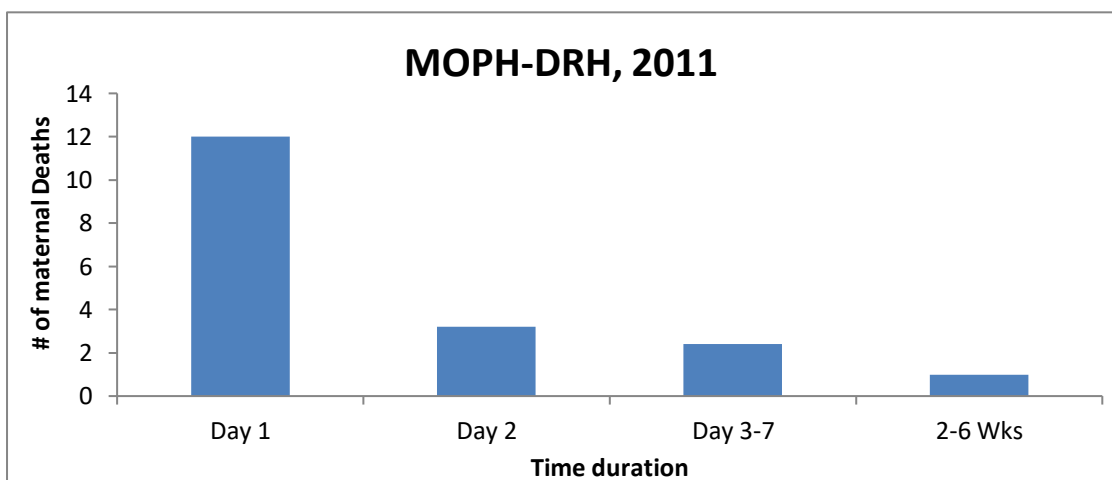


Figure 2.1: Proportion of maternal deaths table adopted from MOPH-DRH, 2011

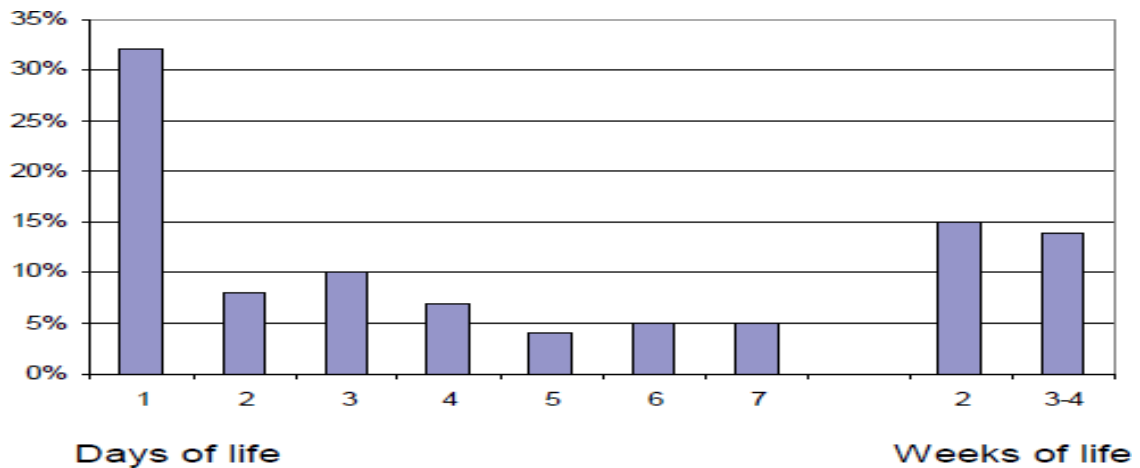


Figure 2.2: Proportion of newborn deaths during postnatal period in Kenya. Adopted from (MOPHS-DRH, 2011)

In order to minimize some of the contributing factors to these deaths and prevent morbidity, it is important quality postnatal care extend out of the hospital setting. Considering the fact that the next clinic visit comes six weeks after discharge, the postnatal woman plays a critical role in administering PNC during this period. For the mother to be able to effectively provide this much needed care, she is supposed to be properly educated on every essential element of PNC (Amolo et al., 2017). Therefore, it is imperative that health stakeholders identify and address what postnatal women need to be educated about.

The major identified areas that mothers in postpartum period should be educated upon include; physical well-being of the mother and the child, care of self and the baby, exclusive breast feeding and awareness of predisposing illness among others. However, despite the needs being identified, there is little information women in postpartum (PP) period are exposed to. Mothers in PP period allege that the information they receive is inadequate, suggesting that they need to be more informed on childcare, self-care, emotional issues, psychological adjustments among other areas (Vural, 2017). Scholars emphasize on the need to make this a standard practice

rather dispensing it only when asked for. Acquisition of new skills by mothers in PP makes them competent and confident in their parenting duties.

The education and support women get during PP period has a significant impact on the practices the mothers pursue post discharge, hence having a direct implication on the survival and well-being of the mother and infant (Aksu et al., 2011). Research conducted in Australia established that the most important goal of PNC is to ensure mothers go home well prepared and confident of taking care of themselves and the newborn (Cormick et al., 2012). The findings are similar to research done in Shanghai, China, where women stressed the importance of being educated about their babies (Cormick et al., 2012). Both women and healthcare providers agree that PNC education is essential and thus a priority during hospital-based PNC.

2.6 Factors that Impede Delivery of Quality Postnatal Education

Various issues hinder the provision of optimal postnatal education, the most notable one being reduced hospital stay. Apparently, a shorter hospital stay affects the way healthcare givers dispense their care during PP period (Suet al., 2007). Postpartum discharge is of great concern for a reduced hospital stay, more so the physical recovery of the postnatal woman after birth and her learning trajectory. A study was conducted in 2009 to identify mothers' readiness upon discharge at a facility in Midwest, USA, established that only 38% were ready for discharge at the time their postpartum hospital stay came to an end (Di Florio et al., 2017). Other issues identified to affect effective delivery of PNC consists of unavailability of standardized information that is basic, scarcity of staff, facility capability and organizational issues among others.

2.7 Forms of Communicating Health Messages

In low-income countries, health messages for first time women are often shared by health care workers. It can be hospital- or community-based and can be taught using different forms of teaching-learning methods. Health messages can be directed towards groups or individuals and can be shared through the phone, through print media, Digital Video Disc (DVD) or face to face (Bryanton et al., 2013). Teaching-learning methods can also include self-learning programs, didactic presentations, videos, and group discussions.

Materials for health education are not easy to understand, and access to health information is made even more difficult by use of medical jargon that can devastate even the most literate client (Wagner et al., 2016).

2.8 Timing of Health Messages

Recommendations from World Health Organization require that all women get a minimum of three postnatal visits after birth - initial contact should be between 48 and 72 hours, the second contact between days 7 and 14 and the third contact at six weeks (WHO, 2015). When women come for these visits, health messages on postnatal care should be shared. Women are relied upon to show knowledge and trust in their capacity to give sufficient care to themselves and their infants preceding release out of hospital. While at the hospital, information given to first time mothers about taking care of oneself and infant care alleviates worries and lift levels of certainty (Buchko et al., 2016).

Maternity nurses at 'Our Level III regional perinatal center', a community and teaching hospital in United States, were worried about satisfying first time mothers

with the necessary education because of their limited stay in the hospital. Midwives account their worries to inadequate time that was needed to share large amount of information with the first-time mothers and their relatives on how to take care of the baby (Buchko et al., 2016). The same study at ‘Our Level III regional perinatal center’ however noted most postpartum women received most of the health messages on the day they were being discharged, and no particular time was allocated for particular topics. Devastating outcomes for the infant and family may result when new mothers do not understand newborn care issues prior to discharge.

2.9 Simplicity of Language Used

Immense information shared when a woman is discharged, her potential to comprehend is influenced by aspects like inadequate sleep, emotional changes, culture, physical changes, medication side effects and low health learnedness (Chugh et al. 2009; Roman et al., 2017).

The information from midwives 42% of women said the information from the midwives was comprehensive and exhaustive. However, 30 % of the respondents felt they were not given enough information while 28% felt the information was incomplete or in a confusing language (Kowalewska et al., 2014). Information given in an easy-to-understand language is found necessary for women to understand instructions given by the health care providers. At the Pumwani Maternity Hospital 35.4% of the postnatal women understood the instructions given to them postnatally while 45% did not understand the instructions given (Nyongesa et al., 2014).

A survey conducted in Sweden, making analysis of the critical views expressed by mothers, noted that out of the 2783 total number of women interviewed during the

survey, 150 women expressed negative sentiments about hospital-based postpartum care (PPC); pointing to a lack of opportunity to rest and recover, difficulty in being given individualized information and breastfeeding support, and lack of necessary symptom management (Fogel, 2017).

CHAPTER THREE: METHODS AND MATERIALS

3.1 Introduction

This section gives details of the study design, study setting, study population, sample selection methods, sample size and the data collection tool including validity and reliability, data analysis and ethical considerations.

3.2 Research Design

The study was descriptive cross-sectional applying quantitative methods of research. A cross-sectional study which was descriptive was applied so as to evaluate quality of health education messages.

3.3 Setting of the Study

The study was conducted at Kenyatta National Hospital which is a teaching hospital. It is also a tertiary referral hospital for the Ministry of Health (MOH) with total bed capacity of 1800 though patient numbers sometimes rises to 3000. It's located 3.5 kilometers west from the Kenyan city and neighbors the Kibera slums. The Kenyatta National Hospital admits approximately 9794 postnatal women in the postnatal wards per year. Most of the women admitted in KNH are referred from the neighboring hospitals and clinics with complications during labor and delivery or during the postnatal period.

The study was conducted in the Kenyatta National Hospital reproductive health department, postnatal wards, located on the ground and first floor of the hospital, they include, Ground Floor B (GFB), Ground Floor A (GFA) and First Floor A (1A), all offering immediate postnatal care to women after vaginal birth, caesarian section,

breech and vacuum modes of delivery. Each of the three wards is headed by assistant chief nurse (ACN) and is the ward in charge. Each postnatal ward has approximately 20 nurses working on three shift duties, which are day shift (D) starting from 7.30 am to 5.30 pm, night shift (N) which starts at 5.30 pm to 8 am. The Assistant Chief Nurse works on a day (E) shift which starts 7.30 am to 4.30 pm. The overlap of time between shifts is meant for handing over between shifts. The ward capacity of each postnatal ward is 34-44 beds, consists of four rooms, which accommodates six beds and sometimes eight beds, and two side rooms meant for isolation accommodating two beds each. However, due to congestion in the wards, sometimes one bed is shared between two patients, sometimes mattresses are placed on the floor to help relieve the congestion. The women who have undergone caesarian section and are within 24 hours are admitted in one room for close observations after which they are regarded as out of danger are moved to other rooms where they sometimes share the beds. Those women who birth vaginally and have no complications are admitted in one room waiting for discharge after 12- 24 hours of stay. Women who birth vaginally and have no complications are discharged after 24 hours. Women who deliver by caesarian section and have no complications are discharged after 72 hours. Women with complications post-delivery stay a bit longer in the hospital for observation and treatment.

3.4 Study Population

The population investigated was women hospitalized in postnatal unit of Kenyatta National and Referral Hospital. The average number of postnatal women seen per day was 150.

3.5 Inclusion and Exclusion Criteria

3.5.1 Inclusion Criteria

- All postnatal women regardless of age
- Postnatal women who consented to participate in the study
- Postnatal women with full term neonate to ensure uniform information was gathered
- Postnatal women who had birthed through SVD and by caesarian section
- Postnatal women who had roomed in with their babies in general postnatal wards, and are discharged

3.5.2 Exclusion Criteria

- Postnatal women who refused to consent to participate in the study
- Postnatal women unable to give information due to poor health
- Postnatal women admitted in the postnatal wards and their babies were in the newborn unit

3.6 Sample Size Determination

$$n = \frac{Z^2 pq}{d^2}$$

$$n = \frac{1.96^2 xp(1-p)}{d^2}$$

The number of participants studied was calculated using the Fisher et al. (2003)

n = desired sample size

z = standard normal deviation which is equal to 1.96 corresponding to 95% confidence Interval.

P = prevalence of the issue under study

d = degree of accuracy desired for the study set at 0.96 substituting the figures in the above formula

$$n = 1.96^2 \times 0.5 \times 0.5 / 0.05^2$$

$$n = 384$$

Target population was less than 10,000, the sample size was adjusted using the formula

$$nf = n / 1 + (n/N)$$

Where:

nf = desired sample size (when the sample was below 10,000)

n = sample size (when population was more than 10,000) calculated 384

N = average number of women who delivered in KNH in a month (864)

Therefore $nf = n / 1 + (n/N)$

$$nf = 118$$

The sample size was 118 postnatal women

3.7 Screening Process and Recruitment Strategies

A face-to-face recruitment strategy at the health care provider setting was used. The researcher used the ward registers and trailing chart lists to identify eligible participants. A list of all postnatal women was written down and their file registration numbers.

3.8 Sampling Technique

A simple random sample was obtained. A list of all eligible postnatal women was written down and their file registration numbers. Then a code number was assigned against each file registration number in the sampling frame. The researcher then used a random number generator tool to select the participants. This process continued until the sample size of 118 postnatal women was obtained.

3.9 Data Collection

A semi-structured questionnaire having both open and closed ended questions was administered by the researcher so as to collect data. An informed written consent was obtained from the participants; they were given liberty to opt out if uncomfortable in answering the questions. For the under 18s, consent was sought from the guardian or husband if they were married. An assent form was given to them. Data was collected at the bedside of the patient. To ensure privacy the patient's bed was screened with hospital screen curtains. Questionnaires were filled at exit, in the morning. This was because clearance was done in the afternoon and we did not want to cause the women undue pressure.

3.10 Pre-Testing the Tools

Pretesting was done at the Pumwani maternity hospital postnatal wards. A population similar to the study area at the Kenyatta National Hospital was used to conduct the pre-test for clarity and feasibility. Of the questionnaires administered 10% were used for pretesting. Adjustment to the pre testing tools was worked upon as needed after pretesting.

3.11 Research Assistants

The research assistants were Bachelor of Science nurses doing internship at the hospital. They were selected because of their previous knowledge in postnatal care. They also had good interpersonal skills and could be able to collect data effectively. The research assistants were then familiarized with the study questionnaires. They assisted the researcher to collect data and answer questions that the participants could ask that were related to the research. The research assistants were also helpful in areas where the participant wished to have somebody else ask her questions other than the researcher herself and in situation where the researcher was unwell.

3.12 Data Storage and Management

Filled questionnaires were secured and were accessible to principal investigator and research personnel. Soft copy of the data was backed up and stored in hard drives which were protected with passwords. To ensure completeness, questionnaires were edited in the field and tallied at the end of every day. The Statistical Package for Social Sciences (SPSS) was used to sort, clean and analyze the collected data.

3.13 Data Analysis and Presentation

Statistical Package for Social Sciences (SPSS) version 23.0 was used to analyze data. Descriptive statistics involved finding the means, modes and medians between the variables. Quantitative data was edited, cleaned, numerically coded to facilitate analysis. However, inferential statistics in form of Pearson's multivariate correlation analysis at a significance level of 0.05(or 95% confidence level) were used. The correlation analysis was done to determine how independent variables relate to the dependent variable. Data was demonstrated in form of tables and figures.

3.14 Reliability and Validity

The research tool was tested for reliability and validity. This was done by conducting a pilot study and pretesting at the Pumwani maternity hospital postnatal wards, a population similar to the study area at the Kenyatta National Hospital. Pre testing the questionnaires helped reduce measurement errors, determine if participants were interpreting the questions correctly. Any errors noted while pretesting were rectified by the researcher before embarking on the main study.

3.15 Covid-19 Prevention Measures

Covid-19 precautions were maintained by the researcher, research assistants and respondents. Use of alcohol-based hand sanitizers, hand washing before collection of data and after, physical distancing between participants and researcher were maintained. Face masks was used during data collection. Participants were taken temperature before starting data collection.

3.16 Ethical Considerations

Approval of the research was sought from UON-KNH Ethical and Research Committee. Permission was also obtained from the research and programme unit KNH and from the Head of Department (HOD) reproductive health department. A copy of approval letter was presented to the Senior Assistant Chief Nurse (SACN) in charge of the Reproductive Health Department (RH). A copy of the approval was also presented to all the Assistant Chief Nurses in charge (ACN) of the postnatal wards GFA, GFB and 1A. Informed consent was obtained prior to initiating the research activities of collecting data. Before obtaining the consent, the researcher gave information about the study in a language that the respondent could understand. The researcher also provided adequate opportunity for the participant to consider all options before agreeing to participate. The principal investigator and her research assistants obtained the consent at the study site because they were qualified and trained to explain the research and assess participant comprehension. After verbal explanation, the respondents then gave their voluntary and informed written consent before participating in the research. The consent forms were provided in both English and Swahili languages. If there was a participant who did not understand English or Kiswahili, a qualified interpreter who was not a family member, was sought to facilitate the consent discussion. Any information obtained from the respondents was confidential and only used for the intent of this research. The participants were compensated for their time, effort and value brought to the study by giving them airtime credit worth 50 Kenya shillings. No names were captured on the questionnaires; instead, codes were used for identification. Consent forms and data collection tools were stored in a safe cabinet which was lockable, and accessible to the principal investigator and study supervisors. Back up of soft data was stored in a

flash disk and protected under passwords to maintain security of electronic data. Hard copies of collected data were safeguarded, and were destroyed after 10 years by burning and the soft copy data was stored in the repository.

3.16.1 Potential Risks and Benefits of the Study

The study provides an understanding of the quality of health education messages given to postnatal women. It also informs the policymakers and other stakeholders on the need to ensure adequate resources were available to achieve quality health education messages.

The postnatal women would benefit in that, they receive sufficient information on postnatal care. Quality health education on postnatal care may positively affect their subsequent knowledge of and practices about their care and that of their babies. Lack of quality health education has been attributed to increased maternal and neonatal mortality worldwide. If quality health education on postnatal care was achieved, it would help in reducing these mortalities. The hospital management and the nurse midwife were able to rate on the quality of health education on postnatal care that they offered to the women and sought to address the gaps identified.

Study findings could be used by policymakers to improve on the guidelines and standard operating procedures regarding quality of health education messages given to postnatal women in postnatal wards, Kenyatta National Hospital. This would help in reduction of complications and deaths hence improving outcomes of both the mother and child.

The risk that encountered in this research study was psychological harm. Stress and feelings of guilt or embarrassment arose from realizing maybe there was a lot they

had to learn on postnatal care. They felt inadequate or not ready to take care of their newborns because of inadequate knowledge. This risk was minimized by reassuring the women and allowing them to seek clarification in areas they seemed incompetent.

3.16.2 Significance of the Study

The Sustainable Development Goals (SDGs) number 3 calls for major reductions in maternal, neonatal, and child mortality and universal access to sexual and reproductive health services by 2030. Interventions like sharing quality health education messages on postnatal care to women was essential to enhance services, improve health, and achieve long-term goals in mortality reduction. Universal Health Coverage (UHC) policy also emphasizes the need for individuals and communities receive the full spectrum of essential, quality health services, from health promotion to prevention (WHO, 2022). Sharing quality health promotion messages is therefore a basic right for the postnatal women.

By conducting this study research at KNH, it is expected that the results would contribute to the development of a model framework, which would guide the innovation of other strategies that enhance dispensation of postnatal care education amongst postnatal women in various maternal healthcare units across the country. KNH is the biggest healthcare facility in Kenya, with the highest number of childbirths in the country, thus being the perfect place for the purpose of this study. This would help establish a level of guideline utilization in delivery of maternal postnatal education, which would enable the Ministry of Health (MoH) to identify areas that needed intervention. Establishing the quality of health education messages among postnatal women would help in coming up with informed measures that would ensure the women had a better ability to continue with postnatal care while at home.

3.17 Study Limitations and Delimitations

Target population: The sample selected for the study was specifically postnatal women in postnatal wards at KNH. The results obtained in this study may therefore not be applicable to postnatal women outside this organization.

Whilst there were postnatal women in other units in the hospital, this study was limited to postnatal women in general wards of obstetric department. This study did not cover midwives' views and perceptions on quality of health education messages.

Information bias: The research was limited to only the information postnatal women received from healthcare providers (health education messages), yet the women could be having information from other sources worth exploring.

Responder bias: Respondents may not give honest answers for fear of victimization. This was mitigated by informing them that truthful answers would help improve the quality of health education messages given to postnatal women. Postnatal women could also be in a hurry to go home and this would influence how they responded to the questions. This was mitigated by proper timing of discharge to prevent any distractions.

3.18 Data Dissemination Plan

Results of the study shall be shared with, KNH, relevant policy, UoN/KNH Ethics Review Committee, academic and clinical persons of interest. This would lead to increased awareness of the research and, therefore, maximize the impact that the research can have in improving the health outcomes of the patients that would benefit from it. The findings would also be presented to the college of health sciences,

department of nursing during the thesis defense, after which copies of the thesis would be disseminated in the UoN library and KNH resource center. Feedback would also be shared with the obstetrics and gynecology department quality assurance committee of Kenyatta National Hospital, staffs working in postnatal wards and postnatal women in the wards, in order for these stakeholders to make more informed decisions that ultimately lead to improved patient outcome. Findings would be presented in conferences and publication in peer reviewed journal.

CHAPTER FOUR: RESULTS

4.1 Introduction

This chapter presents the study results as set out in the research methodology. The results were presented on the quality of health education messages among postnatal women at Kenyatta National Hospital's postnatal wards. The chapter begins with highlighting the response rate and then provides results on the respondents' demographic characteristics before outlining the findings based on the research objectives.

4.1.1 Response Rate

The study targeted 118 postnatal women at KNH's postnatal wards as respondents. From the interviews conducted, the researcher was able to obtain adequate responses from 105 of the respondents translating into a response rate of 89%. The remaining 13 respondents were excluded from the final analysis on account of providing incomplete data. This response rate was, however, considered sufficient and representative and conforms to Mugenda and Mugenda (2009) stipulation that a response rate of 50% is adequate for analysis and reporting, a rate of 60% is good while a response rate of 70% and over is excellent.

4.2 Demographic Characteristics of the Respondents

The study sought to establish the demographic profile of the study participants. The demographic attributes considered were age, education level, marital status, place of residence, occupation, mode of birth, their obstetric score and reason for choosing

KNH as their birth facility. Results on the respondents' demographic characteristics were as presented in the subsequent sub-sections.

4.2.1 Age Distribution of the Respondents

Regarding the respondents' age, slightly over half (52.4%, n = 55) of the respondents were aged 30 - 39 years while 41.9% (n = 44) were aged 18 - 29 years as depicted in Figure 4.1.

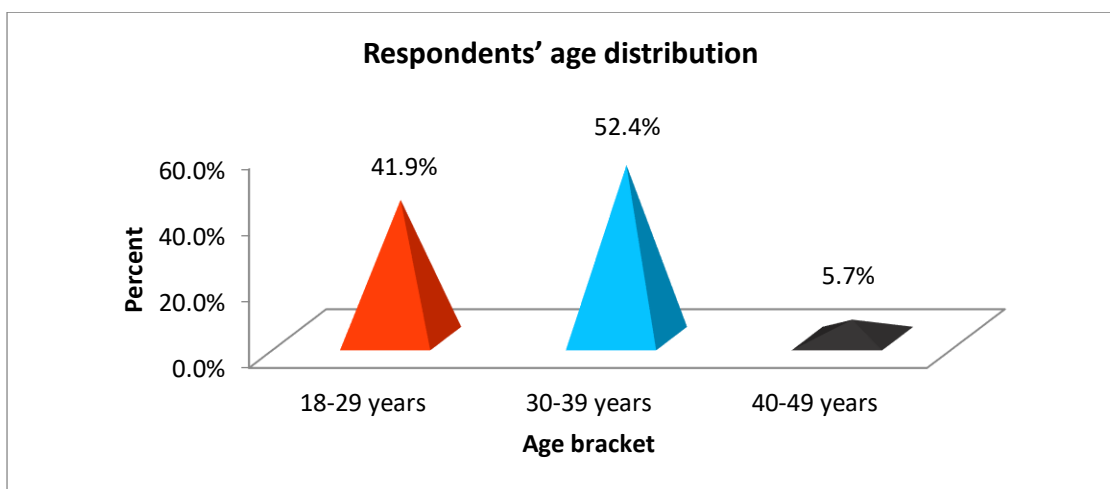


Figure 4.1: Age distribution of the respondents

4.2.2 Respondents' Education Level

Regarding the respondents' education level, most of the respondents had either tertiary education (45.7%, n = 48) or secondary education (40%, n = 42). Results areas shown in Figure 4.2.

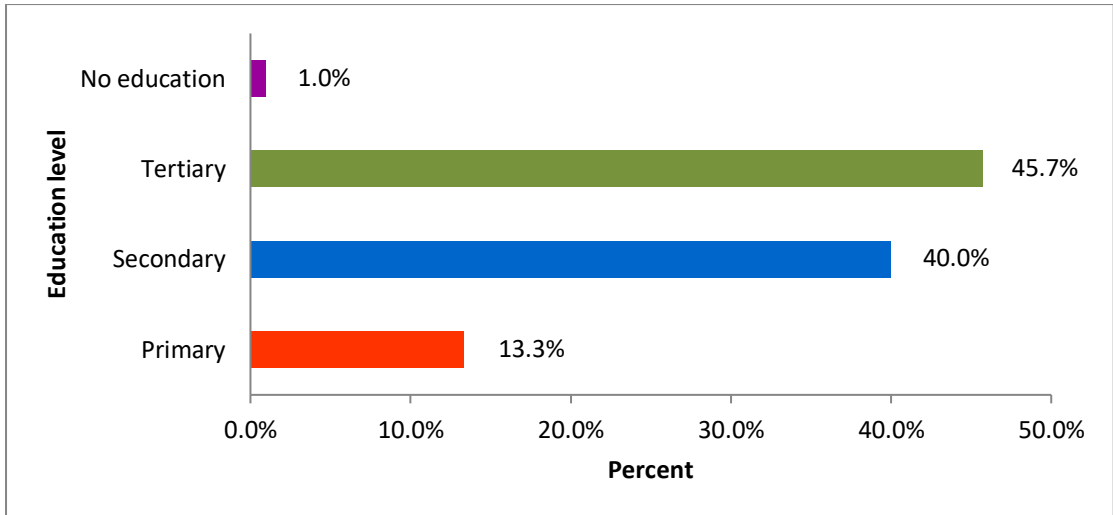


Figure 4.2: Respondents' education level

4.2.3 Respondents' Marital Status

On the respondents' marital status, Figure 4.3 illustrates that most (80%, $n = 84$) of the respondents were married while the remaining 20% ($n = 21$) were single.

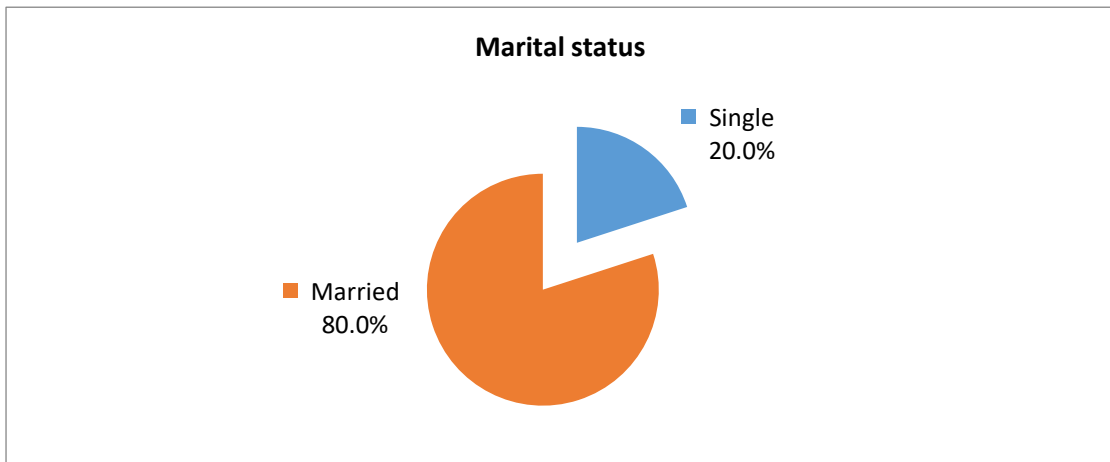


Figure 4.3: Respondents' marital status

4.2.4 Respondents' Place of Residence

Regarding the respondents' place of residence, most (93.3%, $n = 98$) of the respondents indicated that they resided in urban areas, denoting that the largest

proportion of the study respondents were urban dwellers. Table 4.1 depicts the findings.

Table 4.1: Respondents' place of residence

		Frequency(n)	Percent (%)
Place of residence	Urban	98	93.3
	Rural	7	6.7
Total		105	100.0

4.2.5 The Respondents' Occupation

As to the respondents' occupation, 28.6% (n = 30) of the respondents were self-employed, 21.9% (n = 23) were unemployed; 20% (n = 21) were employed in private institutions and 19% (n = 20) were housewives, indicating that the study participants came from diverse occupations. Findings are as shown in Table 4.2.

Table 4.2: The respondents' occupation

Kinds of occupation	Frequency (n)	Percent (%)
Government employee	7	6.7
Private institution employee	21	20.0
Self employed	30	28.6
Unemployed	23	21.9
Student	4	3.8
Housewife	20	19.0
Total	105	100.0

4.2.6 Respondents' Mode of Birth

Regarding the respondents' mode of birth, most (67.6%, n = 71) of the respondents had normal birth while 32.4% (n = 34) delivered through caesarean section, denoting that normal birth was the most prevalent mode of birth among the study respondents.

Figure 4.4 illustrates the findings.

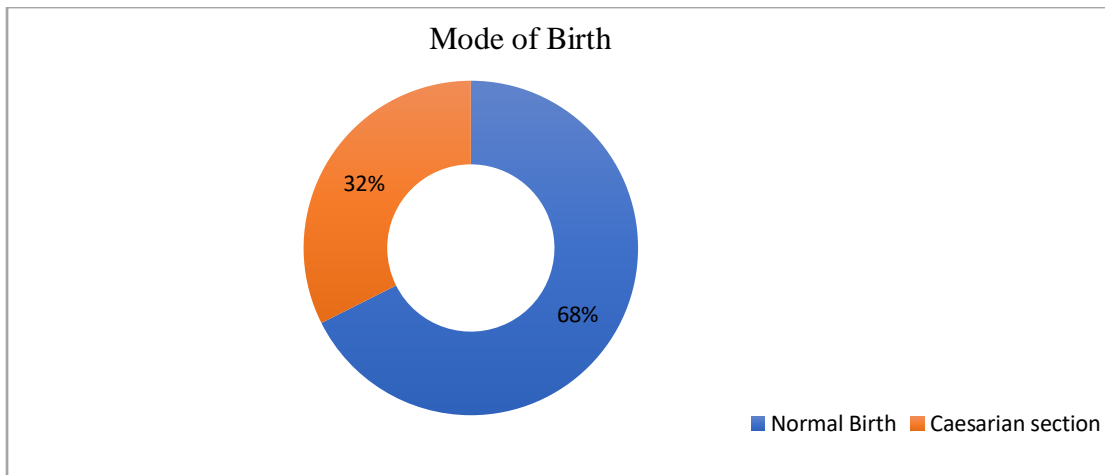


Figure 4.4: Respondents' mode of delivery

4.2.7 Respondents' Obstetric Score

Results in Table 4.3 indicate that most (67.6%, n = 71) of the respondents had 2-4 children while 29.5% (n = 31) had one child. The results also show that most (81%, n = 85) of the respondents had not had an abortion. Similarly, majority (92.4%, n = 97) of the respondents indicated that they had not experienced a still birth. This denoted that a larger proportion of the respondents had had live births with most having 2 - 4 children. Further, abortions and still births were not prevalent among the study respondents.

Table 4.3: Respondents' obstetric score

		Frequency(n)	Percent (%)
Number of living children	One	31	29.5
	2 - 4 children	71	67.6
	More than 4 children	1	1.0
	None	2	1.9
	Total	105	100.0
Number of abortions	None	85	81.0
	1 – 3	19	18.1
	More than 3	1	1.0
	Total	105	100.0
Number of still births	None	97	92.4
	1 – 3	8	7.6
	Total	105	100.0

4.2.8 Respondents' Reason for Choosing KNH as the birth Facility

The respondents were asked the reason why they chose KNH as their birth facility. Results in Table 4.4 indicate that most (62.9%, n = 66) of the respondents sought obstetric care services at KNH on a referral basis while 24.8% (n = 26) chose KNH as their birth facility on account of the hospital having good health care providers including pediatricians, obstetricians, midwives, physicians among others.

Table 4.4: Respondents' reason for choosing KNH as the delivery facility

	Frequency (n)	Percent (%)
Referral from another hospital/clinic	66	62.9
Modern facilities	3	2.9
Convenience	10	9.5
Availability of good HCPs	26	24.8
Total	105	100.0

4.3 Level of Knowledge on Postnatal Care

According to the findings, shown in Table 4.5, most of the respondents reported that they had been informed on various postnatal care aspects. These included how to position their baby during and after feeding, and how to burp the baby after breastfeeding as cited by 98.1% (n=103) of the respondents. On the importance of exclusive breastfeeding 95.2% (n=100) of the respondents were informed. Knowledge on nutrition in the postnatal period as cited by 85.7% (n=90) of the respondents. Also, personal hygiene during the postnatal period as cited by 84.8% (n=89) of the respondents. In addition, postnatal women were informed on postnatal exercises as cited by 78.1% (n=82) of the respondents. Information given on perineal hygiene as cited by 77.1% (n=81) of the respondents. Information on immunization was cited by 74.3% (n=78) of the respondents. Knowledge on vaginal bleeding after birth and how to detect excessive bleeding during the postnatal period as cited by 69.5% (n=50) of the respondents. Also, on family planning methods and importance of postnatal follow up visits as cited by 66.7% (n=70) of the respondents. Finally, on how to take care of the breasts and minor breast problems in the postnatal period and its management as cited by 55.2% (n=58) of the respondents.

However, gaps in knowledge on postnatal care were noted among the respondents on the following postnatal care aspects on cord care as cited by 52.4% (n=55) of the respondents; regarding sleep and rest in the postnatal period as cited by 59% (n=62) of the respondents; on when they should resume sexual activity as cited by 85.7% (n=90) of the respondents; on how to detect signs and symptoms of infection as cited by 57.1% (n=60) of the respondents; on how to detect signs and symptoms of neonatal danger signs as cited by 52.4% (n=55) of the respondents and on emptying

the bladder every 30 minutes and its importance as cited by 59% (n=62) of the respondents.

Table 4.5: Assessment of respondents' knowledge on postnatal care (n=105)

	Knowledge on postnatal care statements	Yes		No	
		Freq. (n)	%	Freq. (n)	%
a.	Informed on cord care	50	47.6	55	52.4
b.	Provided explanations on how to take care of the breasts and minor breast problems in the postnatal period and its management	58	55.2	47	44.8
c.	Educated about immunization	78	74.3	27	25.7
d.	Provided information regarding nutrition in the postnatal period	90	85.7	15	14.3
e.	Provided information regarding sleep and rest in the postnatal period	43	41.0	62	59.0
f.	Provided information on when you should resume sexual activity	15	14.3	90	85.7
g.	Provided information regarding personal hygiene during the postnatal period	89	84.8	16	15.2
h.	Informed about perineal hygiene	81	77.1	24	22.9
i.	Taught on vaginal bleeding after birth and how to detect excessive bleeding during the postnatal period	73	69.5	32	30.5
j.	Advised on postnatal exercises	82	78.1	23	21.9
k.	Informed on family planning methods and importance of postnatal follow up visits	70	66.7	35	33.3
l.	Informed on how to detect signs and symptoms of infection	45	42.9	60	57.1
m.	Taught on the importance of exclusive breastfeeding	100	95.2	5	4.8
n.	Taught on how to position your baby during and after feeding, and how to burp baby after breastfeeding	103	98.1	2	1.9
o.	Taught on how to detect signs and symptoms of neonatal danger signs	50	47.6	55	52.4
p.	Informed on emptying the bladder every 30 minutes and its importance	43	41.0	62	59.0

4.4 Timing of the Health Messages Given to the Postnatal Women

To determine the timing of the health messages given to postnatal women in Kenyatta National Hospital's postnatal wards, respondents were queried on when they received postnatal care related health messages from the health care providers. According to the findings, most (72.4%, n = 76) of the respondents indicated that they received health messages on postnatal care immediately after birth with the remaining indicating that they received the health messages on postnatal care at the point of discharge or in the postnatal wards. The findings are as illustrated in Figure 4.5.

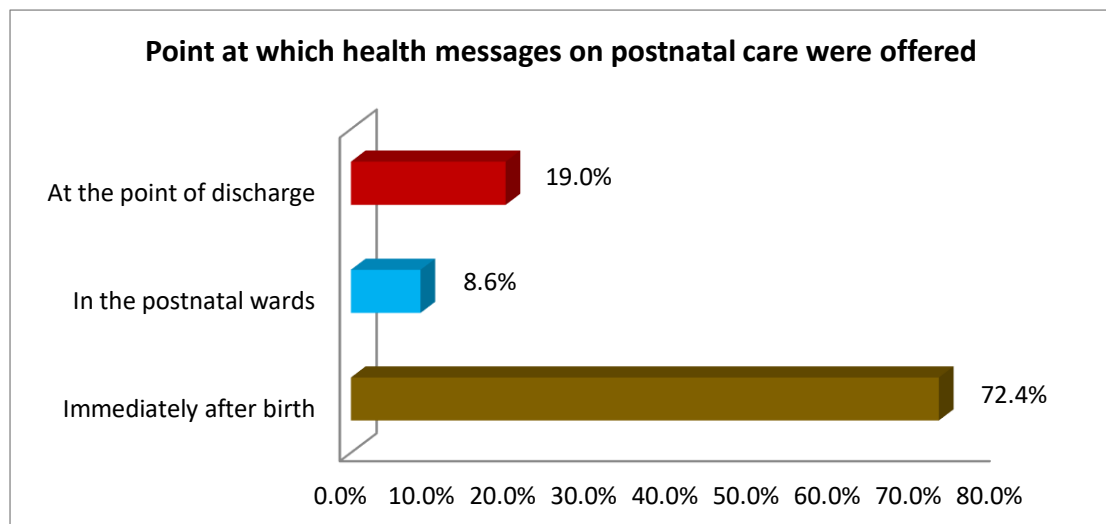


Figure 4.5: Timing of the health messages given to the postnatal women

4.5 Mode of Delivery of health messages

As to who offered the various postnatal care related health messages to the respondents, Table 4.6 illustrates that nurses/midwives, doctors, nutritionists and physiotherapists constituted the main health care personnel who delivered various health messages on postnatal care to postnatal women in KNH's postnatal wards.

The findings illustrate that nurses/midwives were the main source of postnatal care related health messages in relation to cord care, immunization, sleep and rest, personal hygiene, neonatal danger signs and perineal care. Midwives were the leading source of postnatal care related health messages in relation to family planning and mother danger signs. Nutritionists were the main source of postnatal care related health messages in relation to nutrition and breastfeeding while physiotherapists were the leading source of postnatal care related health messages in relation to postnatal exercise as well as sleep and rest. However, a considerable proportion of the respondents also indicated as having not had any source of information for these postnatal care related health messages. This denoted that nurses/midwives in collaboration with other Health Care Providers including doctors, nutritionists and physiotherapists were the sources of information for health messages on postnatal care for postnatal women at KNH.

Table 4.6: Health care personnel who offered the postnatal care related health messages to the women

Health messages components	Person who offered the health message	Frequency	Percentage (%)
a. Cord care	Nurse/midwife	62	59
	Self	3	2.9
	Others	6	5.7
	None	34	32.4
	Total	105	100.0
b. Nutrition	Nurse/midwife	23	21.9
	Self	75	71.4
	Others	5	4.8
	None	2	1.9
	Total	105	100.0
c. Breastfeeding	Nurse/midwife	37	35.2
	Self	63	60
	Others	2	1.9
	None	3	2.9
	Total	105	100.0
d. Immunization	Nurse/midwife	84	80
	Others	4	3.8
	None	17	16.2
	Total	105	100.0
e. Postnatal exercises	Nurse/midwife	29	27.6
	Self	52	49.5
	Others	2	1.9
	None	22	21
	Total	105	100.0
f. Sleep and rest	Nurse/midwife	34	32.4
	Self	16	15.2
	Others	4	3.8
	None	51	48.6
	Total	105	100.0
g. Personal hygiene	Nurse/midwife	75	71.4
	Self	20	19.0
	Others	2	1.9
	None	8	7.6
	Total	105	100.0
h. Neonatal danger signs	Nurse/midwife	51	48.6
	Self	14	13.3
	Others	6	5.7
	None	34	32.4
	Total	105	100.0
i. Family planning	Nurse/midwife	31	29.5
	Self	42	40.0
	Others	4	3.8
	None	28	26.9
	Total	105	100.0
j. Mother danger signs	Nurse/midwife	39	37.1
	Self	41	39.0
	Others	2	1.9
	None	23	21.9
	Total	105	100.0
k. Perineal Care	Nurse/midwife	75	71.4
	Self	3	2.9
	Others	10	9.5
	None	17	16.2
	Total	105	100.0

The study also sought to establish whether the health messages on postnatal care were offered to the respondents individually, in groups or both.

Table 4.7 illustrates that the health messages on postnatal care were offered largely in groups as cited by 60% (n = 63) of the respondents. However, 23.8% (n = 25) of the respondents said the health messages were offered both individually and in groups while 16.2% (n = 17) indicated that the health messages were offered to them individually. Further, most (88.6%, n = 93) of the respondents indicated that the methods used were appropriate. This indicates that the postnatal care - related health messages were often offered to the postnatal women either individually, in groups or using both of these two methods.

Table 4.7: Mode of sharing health messages

		Frequency	Percent
Manner in which the health messages were offered	Individually	17	16.2
	Group	63	60.0
	Both	25	23.8
	Total	105	100.0
Appropriateness of the methods used	Yes	93	88.6
	No	12	11.4
	Total	105	100.0

The study also sought to establish how the health messages were communicated to the postnatal women. From the results, most (52.4%, n = 55) of the respondents indicated that the health messages were communicated to them via demonstrations, though the health messages were also communicated to the postnatal women through lectures, booklets and charts. Further, majority (98.1%, n = 103) of the respondents were

unanimous that the communication methods used to provide the health messages to the postnatal women were appropriate. The findings are as presented in Table 4.8.

Table 4.8: Forms of communicating health messages

		Frequency	Percent
Forms of communication used	Charts	9	8.6
	Booklets	18	17.1
	Demonstrations	55	52.4
	Lectures	23	21.9
	Total	105	100.0
Appropriateness of communication methods used	Yes	103	98.1
	No	2	1.9
	Total	105	100.0

4.6 Simplicity of Language used in Sharing Health Messages to Postnatal Women

The last objective of the study sought to determine the simplicity of language used in sharing health messages to postnatal women in postnatal wards at KNH.

The respondents were requested to indicate the language in which the health messages were shared. From the results, most (55.2%, n = 58) of the respondents indicated that the health messages relating to postnatal care were shared to them in both English and Kiswahili languages; 43.8% (n = 46) said that the health messages relating to postnatal care were shared to them in Kiswahili language while only 1% (n = 1) indicated that the health messages relating to postnatal care were shared to them in English language. It was thus evident that the health messages relating to postnatal care were shared with the postnatal women using either Kiswahili language or both English and Kiswahili languages. Figure 4.6 contains the findings.

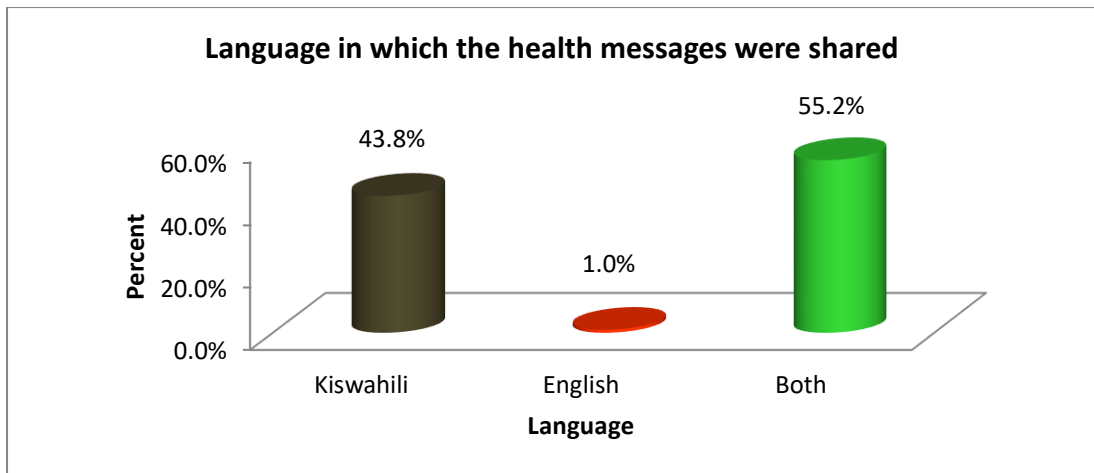


Figure 4.6: Language in which the health messages were shared with the postnatal women

The respondents were also asked whether they were able to understand the health messages in the language used. From the findings, all (100%, n = 105) of the respondents unanimously agreed that they were able to understand the health messages in the language used. Further, almost all (98.1%, n = 103) of the respondents shared the view that there was nothing confusing or hard to understand in the health information provided. This depicted that health messages on postnatal care were provided in simplified manner using languages that the postnatal women were able to understand. This was as depicted in Table 4.9.

Table 4.9: Simplicity of language used to convey the health messages

		Frequency	Percent
Whether able to understand the health messages in the language used	Yes	105	100.0
	No	0	0.0
	Total	105	100.0
Health information found confusing or hard to understand	Nothing	103	98.1
	A little	2	1.9
	Total	105	100.0

4.7 Association of Respondents' Demographic Characteristics with the Outcome Variable

The study sought to evaluate the association between the respondents' demographic characteristics and the quality of health education messages among postnatal women at KNH's postnatal wards. This was done using Pearson's correlation analysis at 95% confidence interval.

From the findings shown in Table 4.10, the respondents' demographic characteristics established to have a statistically significant positive association with the outcome variable (quality of health education messages offered to the postnatal women) included their age ($r = 0.472$, $p < 0.05$); education level ($r = 0.714$, $p < 0.05$); occupation ($r = 0.490$, $p < 0.05$) and their obstetric score ($r = 0.604$, $p < 0.05$). According to the findings, the quality of health education messages among postnatal women at KNH's postnatal wards improved with the women's increasing age, increasing level of education, being in employment and with increasing parity. However, no statistically significant association was observed between the respondents' marital status, place of residence as well as delivery mode and the quality of health education messages among the study participants as depicted by Pearson's correlation coefficient p values > 0.05 . The findings are as depicted in Table 4.10.

Table 4.10: Association of respondents' demographic characteristics with the quality of health education messages among them

Demographic variables	Pearson's correlation analysis		Set significance level
	correlation coefficient (<i>r</i>)	p value	
Age	0.472	0.027*	0.05
Education level	0.714	0.000*	0.05
Marital status	0.093	0.274	0.05
Place of residence	0.165	0.339	0.05
Occupation	0.490	0.016*	0.05
Delivery mode	0.227	0.188	0.05
Obstetric score	0.604	0.009*	0.05

Dependent variable: Quality of health education messages among postnatal women

* Statistically significant at 0.05 significance level

4.8 Results on Study Hypotheses Testing

The study tested the null hypothesis that timing of the health messages, mode of delivery of health messages and simplicity of language used in sharing the health messages had no significant influence on the quality of health education messages among postnatal women at Kenyatta National Hospital's postnatal wards. The predictor variables included timing of the health messages, mode of delivery of health messages and simplicity of language used in sharing the health messages while the outcome variable was the quality of health education messages among postnatal women.

The hypothesis was assessed using Pearson's multivariate correlation analysis at 95% confidence level. A p value of < 0.05 was considered as being statistically significant. The decision criterion was therefore to reject the null hypothesis for p-values of $<$

0.05 and failing to reject the null hypothesis for p-values of ≥ 0.05 . The results on the hypothesis test were as summarized in Table 4.11.

From the findings shown in Table 4.11, the positive Pearson's multivariate correlation coefficient (r) values of the predictor variables (timing of the health messages, mode of delivery of health messages and simplicity of language used in sharing the health messages) indicated that the three predictor variables had a positive influence on the quality of health education messages among postnatal women at Kenyatta National Hospital's postnatal wards. Further, Pearson's correlation coefficient p-values of 0.013 for timing of the health messages, 0.001 for mode of delivery of health messages and 0.000 for simplicity of language used to convey the health messages showed that the association between the three predictor variables and the outcome variable (quality of health education messages among postnatal women) were significant.

Given that the three predictor variables, at 95% confidence level, yielded Pearson's correlation coefficient p-values of < 0.05 , the null hypothesis was rejected. Consequently, the alternate hypothesis (H_1) were accepted that timing of the health messages, mode of delivery of health messages and simplicity of language used in sharing the health messages had significant influence on the quality of health education messages among postnatal women at Kenyatta National Hospital's postnatal wards.

Table 4.11: Influence of the predictor variables on the outcome variable

Predictor variables	Pearson's correlation analysis			Decision
	correlation coefficient	p value	Set significance level	
	(r)	value	level	
Timing of the health messages [X ₁]	0.575	0.013*	0.05	Reject H ₀ and hence accept its alternate hypothesis
Mode of delivery of health messages [X ₂]	0.631	0.001*	0.05	
Simplicity of language used to convey the health messages [X ₃]	0.689	0.000*	0.05	

Dependent variable: Quality of health education messages among postnatal women

* Statistically significant at 0.05 significance level

CHAPTER FIVE: DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents discussion of findings, conclusions and recommendations of the study in line with the study objectives. The study evaluated the quality of health education messages among postnatal women at Kenyatta National Hospital's postnatal wards.

5.2 Discussion of Findings

The findings were discussed under the following sub-headings: demographic characteristics of the respondents, level of knowledge on postnatal care among the women, timing of the health messages given to the postnatal women, health messages mode of delivery to the postnatal women and simplicity of language used in sharing health messages to postnatal women.

5.2.1 Demographic Characteristics of the Respondents

On age, most of the respondents in the postnatal wards of KNH were aged 18 - 39 years. In addition, a statistically significant positive association was established between the women's age and quality of health education messages among them as denoted by r value of 0.472 and $p < 0.05$. This denoted that increased quality of health education messages among the postnatal women at KNH's postnatal wards correlated with the women's increasing age, hence denoting that women's maturity, age-wise, had a positive association with the quality of health education messages offered to them. Similar findings were reported in studies by Aksu et al. (2011) and Amolo et al.

(2017) in which the study participants were relatively young postnatal women and the women's age found to significantly correlate with the quality of postnatal care related health education among them. Similar views were shared by Dlamini et al. (2017) and Malouf et al. (2019) in which women's age was cited as being associated with the quality of postnatal care related health education among the women.

On level of education, most of the respondents had Secondary or Tertiary education. This depicted that most of the study participants had a sound education background. In addition, a statistically significant positive association was established between the women's education level and quality of health education messages among them as denoted by r value of 0.714 and $p < 0.05$. This denoted that increased quality of health education messages among the postnatal women at KNH's postnatal wards related with the women's sound education level status. Bryanton et al. (2013), Dlamini et al. (2017) and Majumder et al. (2018) shared similar sentiments that postnatal women's education level influenced the quality of postnatal care education they experienced with better quality of postnatal care health education noted among postnatal women with a sound education background compared to those with low education background.

On marital status, most of the respondents were married. However, no statistically significant association was established between the women's marital status and the quality of health education messages among them as denoted by r value of 0.093 and $p > 0.05$. This denoted that the quality of health education messages among the postnatal women at KNH's postnatal wards was not related to their marital status. Similar observations were made by Wandera et al. (2014) and Amolo et al. (2017)

who found no statistically significant association between postnatal women's marital status and the quality of health education messages among them.

Regarding the place of residence, most of the respondents in the postnatal wards of KNH were urban dwellers. However, no statistically significant association was established between the women's place of residence and the quality of health education messages among them as denoted by r value of 0.165 and $p > 0.05$. This denoted that the quality of health education messages among the postnatal women at KNH's postnatal wards was not related to their place of residence. Similar findings were also reported by Kowalewska et al. (2014), Sarkar et al. (2014) and Owen et al. (2020) who found no association between the quality of health education messages among postnatal women and their place of residence. In contrast, studies by Fogel (2017) and Malouf et al. (2019) observed higher quality of health education messages among postnatal women who resided in urban settings relative to those who resided in rural settings.

On occupation, it was evident that the respondents were from diverse occupations either working in government or private institutions, in self-employment, as housewives, students or even being unemployed. In addition, a statistically significant positive association was established between the women's occupation and quality of health education messages among them as denoted by r value of 0.490 and $p < 0.05$. This denoted that the quality of health education messages among the postnatal women at KNH's postnatal wards correlated with their occupational status. In studies by Kamau (2014) and Malouf et al. (2019), the women's occupational status was also cited as a significant predictor of the quality of health education messages among them with enhanced quality of postnatal care health education observed among

working women compared to their non-working counterparts. In contrast, in studies by Aksu et al. (2011), Gabuory et al. (2017) and Jones et al. (2020) the association between women's occupational status and the quality of health education messages among them was found not to be statistically significant.

On mode of birth, most of the respondents had normal or caesarean section births though caesarean section births were more prevalent. However, no statistically significant association was established between the women's birth mode and quality of health education messages among them as denoted by r value of 0.227 and $p > 0.05$. This showed that women's mode of birth, had no significant association with the quality of health education messages offered to them. This agreed with the findings of Khresheh et al. (2011) and Dlamini et al. (2017) who also found no significant association between postnatal women's mode of birth and the quality of health education messages among them, sentiments also shared by Fogel (2017). who averred that the mode of birth did not affect the quality of health education messages among postnatal women.

On the obstetric score, most of the respondents had 1 - 4 children with incidences of abortions and still births being quite low. In addition, a statistically significant positive association was established between the women's parity and quality of health education messages among them as denoted by r value of 0.604 and $p < 0.05$. This denoted that increased quality of health education messages among the postnatal women at KNH's postnatal wards correlated with the women's increasing parity. Similarly, in studies by Battawi and Hafiz (2017) and Majumder et al. (2018), postnatal women's parity was identified as being significantly correlated with the quality of health education messages among them. Similar observations were also

reported by Khresheh et al. (2011) and Malouf et al. (2019) who also argued that the quality of health education messages among postnatal women was influenced by their parity.

5.2.2 Level of Knowledge on Postnatal Care among the Women

The study findings revealed that most of the respondents were fairly knowledgeable on most of the postnatal care aspects. This was given that they concurred that they had been informed on various postnatal care aspects which included how to position their baby during and after feeding, and how to burp the baby after breastfeeding; on the importance of exclusive breastfeeding; on nutrition in the postnatal period; on personal hygiene during the postnatal period; on postnatal exercises; about perineal hygiene; about immunization; on vaginal bleeding after birth and how to detect excessive bleeding during the postnatal period; on family planning methods and importance of postnatal follow up visits and on how to take care of the breasts and minor breast problems in the postnatal period and its management. However, gaps in knowledge on postnatal care were noted among the postnatal women on the following postnatal care aspects on cord care; regarding sleep and rest in the postnatal period; on when they should resume sexual activity; on how to detect signs and symptoms of infection; on how to detect signs and symptoms of neonatal danger signs and on emptying the bladder every 30 minutes and its importance.

This collaborated with Malouf et al. (2019) who in an assessment of knowledge of postnatal care among postpartum women did establish that most of the women exhibited fair knowledge of various postnatal care elements especially in areas of correct positioning of the baby during feeding, recommended duration of breastfeeding, importance of exclusive breastfeeding, personal hygiene and on the

neonate's hygiene. Similar observations were made by Gaboury et al. (2017) who in a study of postnatal women's level of awareness and knowledge of postnatal care noted that most of the surveyed women were fairly knowledgeable on postnatal care aspects such as importance of exclusive breastfeeding, recommended period of exclusive breastfeeding, how to position the baby during breastfeeding and on significance of child immunization.

Fair levels of knowledge and awareness about postnatal care among postpartum women were also reported in studies by Majumder et al. (2018) and Amolo et al. (2017) with surveyed women responding accurately on postnatal care aspects touching on exclusive breastfeeding, appropriate positioning of the baby during and after breastfeeding, on importance of immunization, importance of postnatal care visits and on family planning. They attributed this to the women's participation in in-hospital deliveries and attendance of postnatal care clinics.

In contrast, studies by Kamau (2014), Sarkar et al. (2014) and Mohammed et al. (2016) in review of postnatal women's knowledge of postnatal care reported low levels of knowledge on postnatal care among the surveyed participants with gaps noted in areas such as family planning, exclusive breastfeeding, maternal and neonate's danger signs, kangaroo mother care and correct positioning of the infant during breastfeeding. Similarly, inadequacies in levels of knowledge on postnatal care among postnatal women were also reported in studies by Wandera et al. (2014) and Owen et al. (2020).

5.2.3 Timing of the Health Messages Given to the Postnatal Women

According to the study findings, most of the respondents indicated that they received health messages on immediately after birth while the remaining indicated that they received the health messages on postnatal care at the point of discharge or in the postnatal wards. This denoted that most of the postnatal women in KNH's postnatal wards received information on postnatal care immediately after birth. Further, a statistically significant positive association was established between the timing of the health messages given to the postnatal women and the quality of health education messages among them.

The findings aligned with the recommendations provided by the WHO and other organizations such as the American College of Obstetricians and Gynecologists (ACOG) that recommend initiation of postnatal care health messages to postnatal women prior to discharge to ensure that postnatal mothers are adequately equipped with appropriate postnatal care knowledge and information before they leave the hospital upon birth. This is based on the appreciation that the first 2 weeks of a neonate's life after birth are critical to their health, general wellbeing and survival (Sines et al., 2007; Sarkar et al., 2014).

The findings were also in collaboration with those of Fogel (2017) and Gaboury et al. (2017) who noted that timely delivery of postnatal care related health messages given to the postnatal women remained one of the major factors that significantly impacted the quality of health education messages on postnatal care among women in the postpartum period. the findings also agreed with those of Dlamini et al. (2017), Majumder et al. (2018) and Owen et al. (2020) who asserted that the quality of health education on postnatal care among postnatal women was enhanced by its timely

delivery particularly when delivered immediately after birth or prior to the postnatal women's discharge from the hospital following birth. Shrestha et al. (2016) and Malouf et al. (2019) also averred that it was important that postnatal care related health education was offered to postpartum mothers prior to their discharge from hospital.

5.2.4 Mode of Delivery of Health Messages

The findings illustrated that nurses/midwives were the main source of postnatal care related health messages in relation to cord care, immunization, sleep and rest, personal hygiene, neonatal danger signs and perineal toilet. Doctors were the leading source of postnatal care related health messages in relation to family planning and mother danger signs. Nutritionists were the main source of postnatal care related health messages in relation to nutrition and breastfeeding while physiotherapists were the leading source of postnatal care related health messages in relation to postnatal exercise as well as sleep and rest. This denoted that nurses/midwives in collaboration with other Health Care Providers (HCP) including doctors, nutritionists and physiotherapists were the sources of information for health messages on postnatal care for postnatal women at KNH. I attribute these findings to the fact that nurses/midwives together with other cadres of HCPs such as physicians, physiotherapists and nutritionists formed the core group of health care workers who provided health services to women seeking delivery services at KNH.

This was in line with findings by Shrestha et al. (2016) who in an empirical investigation on formulation and assessment of neonatal education programs for postpartum mothers in Nepal identified nurses/midwives as being the leading source of information on postnatal care for postnatal mothers, occasionally aided by

nutritionists, physicians and physiotherapists. Similarly, in studies by Bryanton et al. (2013) and Malouf et al. (2019), nurses/midwives as well as physicians, nutritionists and physiotherapists were all found to play an important role with respect to dissemination of postnatal care related health messages to postnatal women with knowledge shared reflecting their respective competencies and expertise. Similarly, Aksu et al. (2011) and Battawi et al. (2017) also reported nurses/midwives as being the primary providers of health education messages on postnatal care to postnatal women, though doctors and other cadres of HCPs such as nutritionists and physiotherapists also had valuable input in administration of postnatal care education to delivering mothers.

The study also established that the postnatal care related health messages were often offered to the postnatal women either individually, in groups or using both of these two methods. Further, most of the respondents indicated that the health messages were communicated to them via demonstrations. However, the health messages on postnatal care were also communicated to the postnatal women at KNH through lectures, booklets and charts. Further, majority of the postnatal women were also unanimous that the communication methods used to provide the health messages to the postnatal women were appropriate. This showed that health care providers at KNH utilized diverse methods to communicate health messages on postnatal care to the postnatal women.

The findings agreed with those of Amolo et al. (2017) and Dlamini et al. (2017) who in empirical studies on essential newborn care practices among postnatal mothers in Kenya and Swaziland also identified practical demonstrations as the leading form in which the postnatal care related health messages were delivered to postnatal women

in the hospital. This was however complemented by other delivery modes including lectures, charts, brochures and booklets. Similarly, Rudman and Waldenström (2007) and Khresheh et al. (2011) also identified use of practical demonstrations as being the leading form in which postnatal care related health messages were delivered to postnatal women in healthcare settings, though this complemented with other content delivery modes including booklets, flyers, lectures and charts. Similar observations on the use of practical demonstrations coupled with the use of other information delivery methods such as lectures, charts, brochures and booklets were also cited to be the main postnatal care health messages delivery methods in studies by Wandera et al. (2014) and Majumder et al. (2018).

The study also established that a statistically significant positive association existed between the mode of delivery of health messages and the quality of health education messages among postnatal women as denoted by a Pearson's correlation coefficient of 0.631 and $p < 0.05$. This implied that the manner and methods utilized in delivery of health messages relating to postnatal care were instrumental in enhancing the quality of health education messages among the postnatal women and hence their appropriateness was paramount. Similar views were expressed by Panth and Kafle (2018) and Shrestha et al. (2016) who argued that the quality of postnatal care related health messages among postnatal women was significantly influenced by the mode of delivery of such health education messages, sentiments also echoed by Çinar and Öztürk (2014) and Owen et al. (2020). It was thus evident that health messages modes of delivery were critical in enhancing the quality of health education messages among postnatal women.

5.2.5 Simplicity of Language used in Sharing Health Messages to Postnatal Women

From the results, it was evident that the health messages relating to postnatal care were shared with the postnatal women using either Kiswahili language or both English and Kiswahili languages. From the findings, all of the postnatal women unanimously agreed that they were able to understand the health messages in the language used. Further, almost all of the participating postnatal women also shared the view that there was nothing confusing or hard to understand in the health information provided. This depicted that health messages on postnatal care were provided in simplified manner using languages that the postnatal women were able to understand. A statistically significant positive relationship was also established between simplicity of language used to convey the health messages and the quality of health education messages among postnatal women as denoted by Pearson's correlation coefficient of 0.689 and $p < 0.05$, implying that simplicity of language used to convey the health messages was instrumental in enhancing the quality of health education messages among postnatal women through enabling their easier and clear understanding of the various postnatal care aspects.

The findings collaborated with Malouf et al. (2019) and Owen et al. (2020) who also observed that the quality of health education messages in postnatal care settings was enhanced through delivery of postnatal care related health messages to postnatal women in languages that they could understand well. Similar observations were made by Wandera et al. (2014) and Jones et al. (2020) who argued that delivery of health education messages on postnatal care was enhanced through use of simple language that the postnatal mothers could easily understand. Battawi et al. (2017), Kowalewska

et al. (2014) and Majumder et al. (2018) concurred that simplicity of language used in sharing health messages to postnatal women was instrumental in enhancing the quality of health education messages on postnatal care offered to postnatal women. These studies unanimously agreed that simplicity of language used to convey health messages on postnatal care was an important attribute with significant effects on understanding of postnatal care education among postnatal women.

5.3 Conclusions

Based on the findings of the study, the researcher drew the following conclusions:

The postnatal women in KNH's postnatal wards were fairly knowledgeable on most of the postnatal care aspects though gaps in knowledge were also evident in certain postnatal care aspects.

Most of the postnatal women in KNH's postnatal wards received information on postnatal care immediately afterbirth and prior to their discharge as is recommended.

Nurses/midwives together with doctors, nutritionists and physiotherapists constituted the health care personnel who delivered health messages on postnatal care to postnatal women in KNH's postnatal wards. Health messages on postnatal care were communicated to the postnatal women using demonstrations, lectures, charts and booklets either individually, in groups or both methods.

Health messages relating to postnatal care were shared with the postnatal women in languages that the women understood which was either in Kiswahili language or both English and Kiswahili languages.

5.4 Recommendations

5.4.1 Action Recommendations

There is need for greater emphasis on postnatal care health education among postnatal women at KNH's postnatal wards to address gaps noted in their knowledge on postnatal care particularly in areas of cord care and maternal and neonatal danger signs.

Nurses/midwives working in KNH's obstetric wards need to strive to initiate postnatal care health education among postnatal women prior to the women's discharge from hospital to avoid delays in timing of these crucial health messages and to ensure that the postnatal women are adequately informed on essential postnatal care aspects before their discharge.

Efforts need to be made by the nurses and other health care team members working in obstetric wards at KNH to integrate the various methods/modes of delivery of health messages on postnatal care in ways that ensure effective and quality postnatal care education to the postnatal women.

Nurses and other health care team members working in obstetric wards at KNH need to also ensure that health messages relating to postnatal care are offered, at all times, in languages easily understood by the postnatal women.

5.4.2 Recommendations for Further Studies

Since the current study evaluated the quality of health education messages among postnatal women at Kenyatta National Hospital's postnatal wards; a wider study involving other Level 5 and Level 4 hospitals in the country is recommended. This

would facilitate a broader comparison and generalization of the study findings. Further, an investigation of the effects of postnatal care health education on health seeking behaviors among postnatal women at KNH's postnatal wards would equally be illuminating.

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APPENDICES

Appendix I: Approval Letter by KNH-UoN Ethics



UNIVERSITY OF NAIROBI
FACULTY OF HEALTH SCIENCES
P O BOX 19676 Code 00202
Telegrams: varsity
Tel:(254-020) 2726300 Ext 44355

KNH-UON ERC
Email: uonknh_erc@uonbi.ac.ke
Website: <http://www.erc.uonbi.ac.ke>
Facebook: <https://www.facebook.com/uonknh.erc>
Twitter: @UONKNH_ERC https://twitter.com/UONKNH_ERC



KENYATTA NATIONAL HOSPITAL
P O BOX 20723 Code 00202
Tel: 726300-9
Fax: 725272
Telegrams: MEDSUP, Nairobi

Ref: KNH-ERC/A/295

Tessa Muyaku Shitandi
Reg. No. H56/39035/2021
Dept. of Nursing Sciences
Faculty of Health Sciences
University of Nairobi

28th July, 2022



Dear Tessa,

RESEARCH PROPOSAL: EVALUATING QUALITY OF HEALTH EDUCATION MESSAGES AMONG POSTNATAL WOMEN AT KENYATTA NATIONAL HOSPITAL, POSTNATAL WARDS (P199/03/2022)

This is to inform you that KNH-UoN ERC has reviewed and approved your above research proposal. Your application approval number is P199/03/2022. The approval period is 28th July 2022 – 27th July 2023.


This approval is subject to compliance with the following requirements;

- i. Only approved documents including (informed consents, study instruments, MTA) will be used.
- ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by KNH-UoN ERC.
- iii. Death and life threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to KNH-UoN ERC 72 hours of notification.
- iv. Any changes, anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to KNH-UoN ERC within 72 hours.
- v. Clearance for export of biological specimens must be obtained from relevant institutions.
- vi. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal.
- vii. Submission of an executive summary report within 90 days upon completion of the study to KNH-UoN ERC.

Protect to discover

Prior to commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology and Innovation (NACOSTI) <https://research-portal.nacosti.go.ke> and also obtain other clearances needed.


Yours sincerely,


DR. BEATRICE K.M. AMUGUNE
SECRETARY, KNH-UoN ERC

c.c. The Dean, Faculty of Health Sciences, UoN
The Senior Director, CS, KNH
The Chairperson, KNH- UoN ERC
The Assistant Director, Health Information Dept., KNH
The Chair, Dept. of Nursing Sciences, UoN
Supervisors: Dr. Joyce Jebet Cheptum, Dept. of Nursing Sciences, UoN
Dr. Emmah Matheka, Dept. of Nursing Sciences, UoN

Protect to discover

Appendix II: Authorization Letter for Data Collection

 KENYATTA NATIONAL HOSPITAL
P.O. BOX 20723, 00202 Nairobi

Tel.: 2726300/2726450/2726550
Fax: 2725272
Email: knhadmin@knh.or.ke

OFFICE OF HEAD OF DEPARTMENT, OBSTETRICS & GYNAECOLOGY
EXT.43370

KNH/HOD-OBS&GYN/07/VOL.11/ Date: 4th August, 2022

Tessa Muyaku Shitandi
Reg. No.H56/39035/2021
Dept. of Nursing
Faculty of Health Science
University of Nairobi

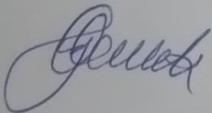
Dear Fabius,

**RE: RESEARCH PROPOSAL: EVALUATING QUALITY OF HEALTH EDUCATION MESSAGES
AMONG POSTNATAL WOMEN AT KENYATTA NATIONAL HOSPITAL ,POSTNATAL
WARD (P199/03/2022)**

This is to inform you that the department has given you permission to conduct the above study which has been approved by ERC.

Liaise with SACN, In-Charge ^{GFA/GFB/IA} Clinic 18 and Health Information (HI) to facilitate your study.


You will be expected to disseminate your results to the department upon completion of your study.



Dr. Maureen Owiti
HOD-OBSTETRICS & GYNAECOLOGY

Cc.

- SACN
- In-charge Clinic 18
- HOD-Health Information

Vision: A World Class Patient-Centered Specialized Hospital  KNH: ISO 9001:2015 Certified

Appendix III: Research Permit from NACOSTI


REPUBLIC OF KENYA


NATIONAL COMMISSION FOR
SCIENCE, TECHNOLOGY & INNOVATION

Ref No: **971765** Date of Issue: **20/September/2022**

RESEARCH LICENSE



This is to Certify that Ms.. TESSA Muyaku SHITANDI of University of Nairobi, has been licensed to conduct research in Nairobi on the topic: EVALUATING QUALITY OF HEALTH EDUCATION MESSAGES AMONG POSTNATAL WOMEN AT KENYATTA NATIONAL HOSPITAL, POSTNATAL WARDS for the period ending : 20/September/2023.

License No: **NACOSTI/P/22/20100**

971765
Applicant Identification Number


Director General
NATIONAL COMMISSION FOR
SCIENCE, TECHNOLOGY &
INNOVATION

Verification QR Code



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Scan the QR Code using QR scanner application.**

THE SCIENCE, TECHNOLOGY AND INNOVATION ACT, 2013

The Grant of Research Licenses is Guided by the Science, Technology and Innovation (Research Licensing) Regulations, 2014

CONDITIONS

1. The License is valid for the proposed research, location and specified period
2. The License any rights thereunder are non-transferable
3. The Licensee shall inform the relevant County Director of Education, County Commissioner and County Governor before commencement of the research
4. Excavation, filming and collection of specimens are subject to further necessary clearance from relevant Government Agencies
5. The License does not give authority to transfer research materials
6. NACOSTI may monitor and evaluate the licensed research project
7. The Licensee shall submit one hard copy and upload a soft copy of their final report (thesis) within one year of completion of the research
8. NACOSTI reserves the right to modify the conditions of the License including cancellation without prior notice

National Commission for Science, Technology and Innovation
off Waiyaki Way, Upper Kabete,
P. O. Box 30623, 00100 Nairobi, KENYA
Land line: 020 4007000, 020 2241349, 020 3310571, 020 8001077
Mobile: 0713 788 787 / 0735 404 245
E-mail: dg@nacosti.go.ke / registry@nacosti.go.ke
Website: www.nacosti.go.ke

Appendix IV: Participant Information and Consent Form

FOR ENROLLMENT IN THE STUDY

Title of Study: Evaluate quality of health education messages among postnatal women in postnatal wards, KNH

Principal Investigator\and institutional affiliation: Tessa Muyaku Shitandi.
University of Nairobi

Co-Investigators and institutional affiliation:

Dr. Joyce Jebet; University of Nairobi

Dr. Emmah Matheka; University of Nairobi

Introduction:

I would like to tell you about a study being conducted by the above listed researchers. The purpose of this consent form is to give you the information you will need to help you decide whether or not to be a participant in the study. Feel free to ask any questions about the purpose of the research, what happens if you participate in the study, the possible risks and benefits, your rights as a volunteer, and anything else about the research or this form that is not clear. When we have answered all your questions to your satisfaction, you may decide to be in the study or not. This process is called 'informed consent'. Once you understand and agree to be in the study, I will request you to sign your name on this form. You should understand the general principles which apply to all participants in medical research: i) Your decision to participate is entirely voluntary ii) You may withdraw from the study at any time without necessarily giving a reason for your withdrawal iii) Refusal to participate in

the research will not affect the services you are entitled to in this health facility or other facilities. We will give you a copy of this form for your records.

May I continue? YES / NO

This study has approval by The Kenyatta National Hospital-University of Nairobi Ethics and

Research Committee protocol No. _____

What Is This Study About?

The study aims to find out whether the mothers who deliver at KNH are given quality health education messages on postnatal care by the health care providers in the postnatal wards. The researchers listed above are interviewing postnatal women. The purpose of the interview is to find out the health education messages they have received from the health care providers at the facility. Participants in this research study will be asked questions about health education messages received in the postnatal ward at KNH. There will be approximately 118 participants in this study randomly chosen. We are asking for your consent to consider participating in this study.

WHAT WILL HAPPEN IF YOU DECIDE TO BE IN THIS RESEARCH STUDY?

If you agree to participate in this study, the following things will happen:

Study procedure

I, the principal investigator together with my research assistants will interview you in a private area where you feel comfortable. You will be required to answer the questions asked in the questionnaire. The research assistants will help in making any clarifications regarding the questions. The completion of this questionnaire will take approximately 10 minutes of your time. In case you feel uncomfortable to continue answering the questions, you will be at liberty to discontinue at any point.

We will ask for a telephone number where we can contact you if necessary. If you agree to provide your contact information, it will be used only by people working for this study and will never be shared with others. The reasons why we may need to contact you include: sharing airtime with you.

ARE THERE ANY RISKS, HARMS DISCOMFORTS ASSOCIATED WITH THIS STUDY?

This research has the potential to introduce psychological risk. Stress and feelings of guilt or embarrassment may arise from realizing maybe there is a lot you have to learn on postnatal care. You may feel inadequate or not ready to take care of your newborn because of inadequate knowledge. Effort will always be put in place to minimize the risks. This risk will be minimized by allowing you to ask questions and seek clarification in areas you need assistance. Another potential risk of being in the study is loss of privacy. We will keep everything you tell us as confidential as possible. We will use a code number to identify you in a password-protected computer database and will keep all of our paper records in a locked file cabinet. Also, answering questions in the interview may be uncomfortable for you. If there are any questions

you do not want to answer, you can skip them. You have the right to refuse the interview or any questions asked during the interview. All study staff are professionals with special training in these examinations/interviews. In case of an injury, illness or complications related to this study, contact the study staff right away at the number provided at the end of this document. The study staff will refer you when necessary.

ARE THERE ANY BENEFITS BEING IN THIS STUDY?

The information you provide will help us better understand the kind of health messages on postnatal care given to you. Whether it's of quality or not. This information is a contribution to science and will go a long way in reducing complications and deaths hence improving outcomes of both the mother and child. Another benefit is that women will be able to participate in a designed educational program that communicates health education messages that will equip the postnatal women. The hospital management will also be able to develop a flyer or small booklet that women can refer to when discharged. This will positively empower women to take care of themselves and their newborns and know how to interpret danger signs.

Compensation: There will be no direct compensation to participants however outcomes will be used to improve on quality of services. **You may benefit by receiving free airtime for your effort and time in participating in the study.**

WILL BEING IN THIS STUDY COST YOU ANYTHING?

Being in this study will not cost you anything.

WHAT IF YOU HAVE QUESTIONS IN FUTURE?

If you have further questions or concerns about participating in this study, please call or send a text message to the study staff at the number provided at the bottom of this page.

Tessa Muyaku Shitandi

Mobile number 0725945868

Email; tessashitandi@gmail.com

You may also contact

The Supervisors:

Email; jjcheptum@gmail.com

Email; emmahmatheka@yahoo.com

The chairperson:

Kenyatta National Hospital- university of Nairobi Ethics and Research Committee

Po Box 19676 Code 00202

Tel: (254-020)-2726300 Ext 44355

Email: uonknherc@uonbi.ac.ke

The study staff will pay you back for your charges to these numbers if the call is for study-related communication.

WHAT ARE YOUR OTHER CHOICES?

Your decision to participate in research is voluntary. You are free to decline participation in the study and you can withdraw from the study at any time without injustice or loss of any benefits.

CONSENT FORM (STATEMENT OF CONSENT)

Participant's statement

I have read this consent form or had the information read to me. I have had the chance to discuss this research study with a study counselor. I have had my questions answered in a language that I understand. The risks and benefits have been explained to me. I understand that my participation in this study is voluntary and that I may choose to withdraw any time. I freely agree to participate in this research study.

I understand that all efforts will be made to keep information regarding my personal identity confidential.

By signing this consent form, I have not given up any of the legal rights that I have as a participant in a research study.

I agree to participate in this research study: Yes No

I agree to provide contact information for follow-up: Yes No

Participant printed name: _____

Participant signature / Thumb stamp _____ Date _____

Researcher's statement

I, the undersigned, have fully explained the relevant details of this research study to the participant named above and believe that the participant has understood and has willingly and freely given his/her consent.

Researcher's Name: _____ Date: _____

Signature _____

Role in the study: _____ [i.e., study staff who explained informed consent form.]

For more information contact _____ at
_____ from _____ to

Witness Printed Name (If witness is necessary, A witness is a person mutually acceptable to both the researcher and participant)

Name _____ Contact information

Signature /Thumb stamp: _____ Date; _____

Appendix V: Fomu ya Taarifa na Ridhaa ya Mshiriki

KWA KUJIANDIKISHA KATIKA MAFUNZO

Kichwa cha Utafiti: Tathmini ubora wa jumbe za elimu ya afya miongoni mwa wanawake waliojifungua katika wadi za baada ya kuzaa, KNH

Mpelelezi Mkuu\na uhusiano wa kitaasisi: TESSA MUYAKU SHITANDI. CHUO KIKUU CHA NAIROBI

Wachunguzi-wenza na uhusiano wa kitaasisi:

Dkt. JOYCE JBET; CHUO KIKUU CHA NAIROBI

Dkt. EMMAH MATHEKA; CHUO KIKUU CHA NAIROBI

Utangulizi:

Ningependa kukuambia kuhusu utafiti unaofanywa na watafiti walioorodheshwa hapo juu. Madhumuni ya fomu hii ya idhini ni kukupa taarifa utakayohitaji ili kukusaidia kuamua kama kuwa mshiriki au la katika utafiti. Jisikie huru kuuliza maswali yoyote kuhusu madhumuni ya utafiti, nini kitatokea ukishiriki katika utafiti, hatari na manufaa yanayoweza kutokea, haki zako kama mtu wa kujitolea, na jambo lingine lolote kuhusu utafiti au fomu hii ambalo haliko wazi. Wakati tumejibu maswali yako yote kwa kuridhika kwako, unaweza kuamua kuwa katika utafiti au la. Utaratibu huu unaitwa 'kibali cha taarifa'. Ukishaelewa na kukubali kuwa katika utafiti, nitakuomba utie sahihi jina lako kwenye fomu hii. Unapaswa kuelewa kanuni za jumla zinazotumika kwa washiriki wote katika utafiti wa matibabu: i) Uamuzi wako wa kushiriki ni wa hiari kabisa ii) Unaweza kujiondoa kwenye utafiti wakati wowote bila ya kueleza sababu ya kujiondoa iii) Kukataa kushiriki katika utafiti hakutaathiri

huduma unazostahili kupata katika kituo hiki cha afya au vifaa vingine. Tutakupa nakala ya fomu hii kwa rekodi zako.

Naweza kuendelea? NDIO LA

Utafiti huu umeidhinishwa na Hospitali ya Kitaifa ya Kenyatta-Chuo Kikuu cha Maadili cha Nairobi na Itifaki ya Kamati ya Utafiti Nambari. _____

SOMO HILI LINAHUSU NINI?

Utafiti huo unalenga kubaini ikiwa kina mama wanaojifungua katika KNH wanapewa ujumbe wa elimu bora ya afya kuhusu utunzaji baada ya kuzaa na wahudumu wa afya katika wadi za baada ya kuzaa. Watafiti walioorodheshwa hapo juu wanawahoji wanawake baada ya kuzaa. Madhumuni yamahojiano ni kujua ujumbe wa elimu ya afya ambao wamepokea kutoka kwa watoa huduma za afya katika kituo hicho. Washiriki katika utafiti huu wataulizwa maswalikuhusu jumbe za elimu ya afya zilizopokelewa katika wadi ya baada ya kuzaa huko KNH. Kutakuwa na takriban washiriki 118 katika utafiti huu waliochaguliwa bila mpangilio. Tunaomba idhini yako ili kuzingatia kushiriki katika utafiti huu.

NINI KITAENDELEA UKIAMUA KUWA KATIKA UTAFITI HUU?

Ukikubali kushiriki katika utafiti huu, mambo yafuatayo yatafanyika:

Utaratibu wa kusoma

Mimi, mpelelezi mkuu pamoja na wasaidizi wangu wa utafiti nitakuhoji katika eneo la faragha ambapo unahisi vizuri. Utahitajika kujibu maswali yaliyoulizwa kwenye dodoso. Wasaidizi wa utafiti watasaidia katika kutoa ufafanuzi wowote kuhusu maswali. Ukamilishaji wa dodoso hili utachukua takriban dakika 10 za muda wako.

Iwapo utajisikia vibaya kuendelea kujibu maswali, utakuwa huru kuacha kuendelea wakati wowote.

Tutaomba nambari ya simu ambapo tunaweza kuwasiliana nawe ikibidi. Ukikubali kutoa maelezo yako ya mawasiliano, yatatumiwa na watu wanaofanya kazi katika utafiti huu pekee na kamwe hayatashirikiwa na wengine. Sababu ambazo tunaweza kuhitaji kuwasiliana nawe ni pamoja na: kushiriki muda wa maongezi nawe.

JE, KUNA HATARI, MADHARA YOYOTE YANAYOHUSISHWA NA UTAFITI HUU?

Utafiti huu una uwezo wa kuanzisha hatari ya kisaikolojia. Mkazo na hisia za hatia au aibu zinaweza kutokea kwa kutambua labda kuna mengi unapaswa kujifunza juu ya utunzaji wa baada ya kuzaa. Huenda ukahisi hufai au hauko tayari kumtunza mtoto wako mchanga kwa sababu ya ujuzi usiofaa. Juhudi zitawekwa kila wakati ili kupunguza hatari. Hatari hii itapunguzwa kwa kukuruhusu kuuliza maswali na kutafuta ufafanuzi katika maeneo unayohitaji usaidizi. Hatari nyingine inayoweza kutokea ya kuwa katika utafiti ni kupoteza faragha. Tutaweka kila kitu unachotuambia kama siri iwezekanavyo. Tutatumia nambari ya msimbo kukutambua katika hifadhidata ya kompyuta iliyolindwa na nenosiri na tutaweka rekodi zetu zote za karatasi kwenye kabati ya faili iliyofungwa. Pia, kujibu maswali katika mahojiano kunaweza kuwa na wasiwasi kwako. Ikiwa kuna maswali yoyote ambayo hutaki kujibu, unaweza kuyaruka. Una haki ya kukataa mahojiano au maswali yoyote yaliyoulizwa wakati wa mahojiano. Wafanyakazi wote wa utafiti ni wataalamu walio na mafunzo maalum katika mitihani/mahojiano haya. Katika kesi ya jeraha, ugonjwa au matatizo yanayohusiana na utafiti huu, wasiliana na wafanyikazi wa utafiti mara

moja kwa nambari iliyotolewa mwishoni mwa waraka huu. Wafanyakazi wa utafiti watakuelekeza inapohitajika.

JE, KUNA FAIDA YOYOTE KUWA KATIKA UTAFITI HUU?

Taarifa utakazotoa zitatusaidia kuelewa vyema aina ya jumbe za afya kuhusu utunzaji wa baada ya kuzaa unaopewa. Ikiwa ni ya ubora au la. Taarifa hizi ni mchango kwa sayansi na zitasaidia sana katika kupunguza matatizo na vifo hivyo kuboresha matokeo ya mama na mtoto. Faida nyingine ni kwamba wanawake wataweza kushiriki katika mpango wa elimu uliobuniwa ambao unawasilisha ujumbe wa elimu ya afya ambao utawawezesha wanawake wajawazito. Uongozi wa hospitali pia utaweza kutengeneza kipeperushi au kijitabu kidogo ambacho wanawake wanaweza kurejelea wanapoachiliwa. Hii itawawezesha wanawake kujitunza wao wenyewe na watoto wao wachanga na kujua jinsi ya kutafsiri ishara za hatari. Unaweza kufaidika kwa kupokea muda wa maongezi bila malipo kwa juhudi na wakati wako wa kushiriki katika utafiti.

JE, KUWA KATIKA SOMO HILI LITAKUGHARIMU LOLOTE?

Kuwa katika utafiti huu hakutakugarimu chochote.

VIPI IKIWA UNA MASWALI BAADAYE?

Ikiwa una maswali zaidi au wasiwasi kuhusu kushiriki katika utafiti huu, tafadhali piga simu au tuma ujumbe mfupi wa maandishi kwa wafanyikazi wa utafiti kupitia nambari iliyotolewa chini ya ukurasa huu.

Tessa Muyaku Shitandi

Nambari ya simu 0725945868

Barua pepe;tessashitandi@gmail.com

Unaweza pia kuwasiliana na;

Wasimamizi:

Barua pepe;jjcheptum@gmail.com

Barua pepe;Emmahmatheka@yahoo.com

Mwenyekiti:

Hospitali ya Kitaifa ya Kenyatta- Chuo Kikuu cha Nairobi Kamati ya Maadili na Utafiti

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Simu: (254-020)-2726300 Ext 44355

Barua pepe: uonknherc@uonbi.ac.ke

Wafanyikazi wa utafiti watakurudishia malipo yako kwa nambari hizi ikiwa simu ni ya mawasiliano yanayohusiana na masomo.

UCHAGUZI WAKO MENGINE NI GANI?

Uamuzi wako wa kushiriki katika utafiti ni wa hiari. Uko huru kukataa kushiriki katika

utafiti na unaweza kujiondoa kwenye utafiti wakati wowote bila dhuluma au hasara ya manufaa yoyote.

FOMU YA RIDHAA (TAARIFA YA RIDHAA)

Kauli ya mshiriki

Nimesoma fomu hii ya idhini au nimesomewa maelezo. Nimepata nafasi ya kujadili utafiti huu na mshauri wa utafiti. Nimejibiwa maswali yangu kwa lugha ambayo mimi kuelewa. Hatari na faida zimeelezwa kwangu. Ninaelewa kuwa ushiriki wangu katika utafiti huu ni wa hiari na kwamba ninaweza kuchagua kujiondoa wakati wowote. Ninakubali kwa uhuru kushiriki katika utafiti huu.

Ninaelewa kuwa juhudi zote zitafanywa ili kuweka taarifa kuhusu utambulisho wangu wa kibinafsi siri.

Kwa kutia saina fomu hii ya idhini, sijaacha haki zozote za kisheria nilizo nazo kama mshiriki katika utafiti wa utafiti.

Ninakubali kushiriki katika utafiti huu: Ndiyo Hapana

Ninakubali kutoa maelezo ya mawasiliano kwa ufuatiliaji: Ndiyo Hapana

Jina lililochapishwa la mshiriki: _____

Sahihi ya mshiriki / mhuri ya kidole gumba
_____ Tarehe _____

Kauli ya mtafiti

Mimi, niliyetia sahihi chini, nimeeleza kikamilifu maelezo muhimu ya utafiti huu kwa mshiriki aliyetajwa hapo juu na ninaamini kuwa mshiriki ameelewa na ametoa ridhaa yake kwa hiari na kwa uhuru.

Jina la Mtafiti: _____ Tarehe: _____

Sahihi _____

Jukumu katika utafiti: _____ [yaani,
wafanyikazi wa utafiti ambao walielezea fomu ya idhini iliyothibitishwa.]

Kwa habari zaidi wasiliana na _____ kwa
_____ kutoka _____ hadi _____

Jina Lililochapishwa na Shahidi (Ikiwa shahidi ni muhimu, Shahidi ni mtu
anayekubalika kwa wote wawili mtafiti na mshiriki)

Jina _____ Maelezo ya mawasiliano _____

Sahihi/Muhuri wa kidole gumba: _____ Tarehe; _____

Appendix VI: Minor Assent Form

Project Title: Evaluating quality of health education messages among postnatal women in postnatal wards, KNH

Investigator(s): Tessa Muyaku Shitandi

We are doing a research study about health education messages given to you that concerns you and your baby after birth.

Permission has been granted to undertake this study by the Kenyatta National Hospital-University of Nairobi Ethics and Research Committee (KNH-UoN ERC Protocol No. _____)

This research study is a way to learn more about the kind of messages provided to you by the health care workers.

If you decide that you want to be part of this study, I, the principal investigator together with my research assistants will interview you in a private area where you feel comfortable. You will be required to answer the questions asked in the questionnaire. The research assistants will help in making any clarifications regarding the questions. The completion of this questionnaire will take approximately 10 minutes of your time. In case you feel uncomfortable to continue answering the questions, you will be at liberty to discontinue at any point.

There are some things about this study you should know. This research has the potential to introduce stress and feelings of guilt or embarrassment may arise from realizing maybe there is a lot you need to learn on postnatal care and yet you are not aware. You may feel inadequate or not ready to take care of your newborn because of

inadequate knowledge. But we will be minimizing this risk by allowing you to ask questions and seek clarification in areas you need assistance.

Everyone who takes part in this study will benefit by getting airtime worth 50 Kenya shillings.

When we are finished with this study, we will write a report about what was learned. This report will not include your name or that you were in the study.

You do not have to be in this study if you do not want to be. If you decide to stop after we begin, that's okay too. Your parents/husband know about the study too.

If you decide you want to be in this study, please sign your name.

I, _____, want to be in this research study.

Signature/Thumb stamp

Date

Appendix VII: Fomu Ndogo ya Ridhaa

Kichwa cha Mradi: Kutathmini ubora wa jumbe za elimu ya afya miongoni mwa wanawake baada ya kuzaa katika wadi za baada ya kuzaa, KNH

Wachunguzi: Tessa Muyaku Shitandi

Tunafanya utafiti kuhusu ujumbe wa elimu ya afya unaotolewa unaokuhusu wewe na mtoto wako baada ya kuzaliwa.

Ruhusa imetolewa kufanya utafiti huu na Hospitali ya Kitaifa ya Kenyatta-Kamati ya Maadili na Utafiti ya Chuo Kikuu cha Nairobi (KNH-UoN Itifaki ya ERC Na. _____)

Utafiti huu ni njia ya kujifunza zaidi kuhusu aina ya ujumbe unaotolewa kwako na wahudumu wa afya.

Ukiamua kuwa ungependa kuwa sehemu ya utafiti huu, Mimi, mpelelezi mkuu pamoja na wasaidizi wangu wa utafiti nitakuhoji katika eneo la faragha ambapo unahisi vizuri. Utahitajika kujibu maswali yaliyolizwa kwenye dodoso. Wasaidizi wa utafiti watasaidia katika kutoa ufafanuzi wowote kuhusu maswali. Ukamilishaji wa dodoso hili utachukua takriban dakika 10 za muda wako. Iwapo utajisikia vibaya kuendelea kujibu maswali, utakuwa huru kuacha kuendelea wakati wowote.

Kuna baadhi ya mambo kuhusu utafiti huu unapaswa kujua. Utafiti huu una uwezo wa kuanzisha mfidhaiko na hisia za hatia au aibu zinaweza kutokea kwa kutambua labda kuna mengi unahitaji kujifunza kuhusu utunzaji baada ya kuzaa na bado hujui. Huenda ukahisi hufai au hauko tayari kumtunza mtoto wako mchanga kwa sababu ya

ujuzi usiofaa. Lakini tutapunguza hatari hii kwa kukuruhusu kuuliza maswali na kutafuta ufafanuzi katika maeneo unayohitaji usaidizi.

Kila mtu atakayeshiriki katika utafiti huu atafaidika kwa kupata muda wa maongezi wenye thamani ya shilingi 50 za Kenya.

Tukimaliza na somo hili, tutaandika ripoti kuhusu kile tulichojifunza. Ripoti hii haitajumuisha jina lako au kwamba ulikuwa kwenye utafiti.

Si lazima uwe katika utafiti huu ikiwa hutaki kuwa. Ukiamua kuacha baada ya sisi kuanza, hiyo ni sawa pia. Wazazi/mume wako wanajua kuhusu utafiti pia.

Ukiamua ungependa kuwa katika utafiti huu, tafadhali saini jina lako.

Mimi, _____, nataka kuwa katika utafiti huu.

Tarehe ya Sahihi

Dole/gumba

Appendix VIII: Questionnaire

Title: *Evaluating Quality of Health Education Messages among Postnatal mothers at Kenyatta National Hospital, Postnatal Wards.*

Serial no.....

Date.....

INSTRUCTIONS

- Please follow the instructions below
- Please tick in the appropriate response in the space provided
- Do not indicate your name anywhere in the questionnaire.

SECTION A: SOCIODEMOGRAPHIC VARIABLES

1. Age in years.....

2. What is your highest level of education?

Primary

Secondary

College

University

None

3. What is your marital status?

Single

Married

Divorced

Separated

4. Residence

Urban

Rural

5. What is your occupation?

Government employee

- Private institution employee
- Self employed
- Unemployed
- Student
- Others (Specify).....

6. What is your mode of delivery?

- Normal Delivery
- Assisted vacuum delivery
- Caesarian section

7. Obstetric score

- Number of deliveries
- Living children
- Abortions
- Still births

8. Reason for choosing the hospital

- Referral from another hospital/clinic
- Modern facilities
- Convenience
- Availability of good health care personnel
- Any other, please specify

SECTION B: KNOWLEDGE ON POSTNATAL CARE MESSAGES

9. Please tick in the appropriate response on knowledge of postnatal care messages shared in the hospital

	ITEM	Was this information shared Yes/No

a.	Were you given information on cord care?	
b.	Were you explained to on how to take care of the breasts and minor breast problems in the postnatal period and its management	
c.	Were you educated about immunization?	
d.	Were you informed regarding nutrition in the postnatal period	
e.	Were you informed regarding sleep and rest in the postnatal period	
f.	Were you informed when you should resume sexual activity	
g.	Were you given information regarding personal hygiene during the postnatal period	
h.	Were you informed about perineal hygiene?	
i.	Were you taught on vaginal bleeding after birth and how to detect excessive bleeding during the postnatal period	
j.	Were you advised on postnatal exercises?	
k.	Were you informed on family planning methods and importance of postnatal follow up visits	
l.	Were you informed on how to detect signs and symptoms of infection	
m.	Were you taught on the importance of exclusive Breastfeeding	
n.	Were you taught on how to position your baby during and after feeding, and how to burp baby after breastfeeding	
o.	Were you taught on how to detect signs and symptoms of neonatal danger signs	
p.	Were you informed on emptying the bladder every 30	

	minutes and its importance	
--	----------------------------	--

SECTION C: TIMING OF HEALTH MESSAGES GIVEN TO POSTNATAL WOMEN

10. At what point were you offered health messages on postnatal care?

At the point of discharge

In the postnatal wards

Immediately after birth

SECTION D: MODE OF DELIVERING HEALTH MESSAGE

Please tick in the appropriate response.

11 a). Who offered the following health messages to you?

	Health Message	Nurse/ Midwife	Doctor	Nutritionist	Physiotherapist	Others, specify
a	Cord Care					
b	Nutrition					
c	Breastfeeding					
d	Immunization					
e	Postnatal exercise					
f	Sleep and rest					
g	Personal hygiene					
h	Neonatal danger signs					
i	Family planning					

j	Mother danger signs					
k	Perineal Care					

11.b) Was the health message offered individually, group or both?

Individually

Group

Both

c) Was the above method appropriate for you?

Yes

No

d) If no, what method would have been suitable for you?

Specify.....

12 a) How were the messages communicated to you? Through

Charts

Booklets

Demonstrations

Brochures/flyers

Lectures

Others, specify

b) Was this method of communication appropriate for you?

Yes

No

c) If no, what would have been appropriate for you?

Specify.....

SECTION E: SIMPLICITY OF LANGUAGE

13. In what language was the health message shared to you?

English

Kiswahili

Others, specify.....

14a) Were you able to understand the health message in the language used?

Yes

No

b) If No, what language would have been suitable for you?

Specify.....

15. Was there anything in the health information that you found confusing or hard to understand? Tick all that apply.

Nothing

Confused in general

Message full of medical terms

Too much information presented

Message didn't relate to me

Others, specify.....

Appendix IX: Study Budget

ACTIVITY	ITEM	QUANTITY	UNIT COST (KSH)	TOTAL Cost (Ksh)
Research Proposal	Stationery	2 reams photocopy papers	700each	1400
Tool pre-testing and Data collection	Printing and typing questionnaires and check lists	60pages	30 per page	1800
	Photocopying	200 pages	10 per page	2000
	Research assistants	Daily allowances	1000/ day for 14 days	14000
	Biro pens	1 dozen	250	250
	Stapler and staples	3 staplers & 3 packets of staples	300 @70 each x3	900
	Pencils	1 packet	250 each	250
	Rubbers	12	20 each	240
	Folders	3 folders	@200 each	600
	Flash disks	2	1500 each	3000
	Field books	4 pieces	60 each	240
	Ethics and Research committee fee	2000	2000	2000
Consultancy	Data statistician	50,000	50,000	50,000
	Data management	4000	14 days	56000

Thesis and Reports	Printing	3 drafts(240 pages)	10 each	2400
	Photocopy	240 pages	5 each	1200
	Corrections, printing and photocopies	250 pages	@ 10 each @5 each	2500 1250 = 3750
	Printing, 3 drafts	70 pages 1 draft 240 pages	@ 10 each	2400
	Photocopying	240 pages x 2 = 480 pages	@ 5 each	2400
	Binding	6 copies	@1000	6000
	Dissemination of data	2000	2000	2000
	Contingencies	30,000	30,000	30,000
Other Expenses	Airtime	50.00	120	6000
GRAND TOTAL				188,850

Funder: Kenyatta National Hospital

Appendix X: Work Plan

Activities	2022						
	Jan	Feb	Mar	Apr	May	Jun - Oct	Nov
Problem identification, research proposal writing, submission to supervisor							
Research proposal submission to ERC							
Action on ethics and Research recommendations							
Recruitment and training of research assistants and pretesting of study tools							
Data collection and Data analysis							
Thesis report writing							
Dissemination of data							