

**KNOWLEDGE AND PERCEPTION OF NURSES TOWARDS POST  
ABORTION CARE PRACTICES IN TIER THREE HEALTH FACILITIES  
IN NAIROBI COUNTY-KENYA**


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## DECLARATION


This Thesis is my original work and has not been presented for a degree in any other University or any other award.

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## **DEDICATION**

This thesis is dedicated to my children Shirleen, Bianca, Tobi and my sister Mehetabel, who have been very instrumental in the realization of this great goal.

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This journey would not be a success without the overwhelming support I received.

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## DEFINITION OF OPERATIONAL TERMS

<b>Attitude</b>	a settled way of thinking or feeling about something.
<b>Care</b>	The practice of what is necessary for the health, welfare, maintenance, and protection of someone or something.
<b>Diagnosis</b>	an estimation of the probability of the presence of a particular disease in view of all diagnostic information (patient history, physical examination and test results) in order to decide whether treatment should be initiated or not
<b>Health:</b>	A state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.
<b>Knowledge</b>	A belief that is true and justified
<b>Perception</b>	The way in which something is regarded, understood, or interpreted.
<b>Post-Abortal Care:</b>	Is the physical, medical, social and psychological care and support given to a person after an abortion
<b>Reproductive health:</b>	A state of complete physical, mental and social well-being and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and to its functions and processes
<b>Sexual health:</b>	A state of physical, mental and social well-being in relation to sexuality. It requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences, free of coercion, discrimination and violence.

**Spontaneous Abortion:** (miscarriage). This refers to naturally occurring termination of pregnancy without medical or other intervention.

**Unsafe abortion:** As a procedure for terminating a pregnancy performed by persons lacking the necessary skills or in an environment not in conformity with minimal medical standards, or both.

**ABBREVIATIONS AND ACRONYMS**

<b>BEmONC</b>	:	Basic emergency new-born and obstetric care
<b>D&amp;C</b>	:	Dilatation and Curettage
<b>CEmONC</b>	:	Comprehensive emergency new-born and obstetric care
<b>EVA</b>	:	Electrical Vacuum Evacuation
<b>KNBS</b>	:	Kenya National Bureau of Statistics
<b>MDG</b>	:	Millennium Development Goals
<b>MH</b>	:	Maternal Health
<b>MNH</b>	:	Maternal and Neonatal Health
<b>MMR</b>	:	Maternal Mortality Rate
<b>MOH</b>	:	Ministry of Health
<b>MVA</b>	:	Manual Vacuum Evacuation
<b>PAC</b>	:	Post Abortion Care
<b>RH</b>	:	Reproductive Health
<b>RMNCAH</b>	:	Reproductive, Maternal, New-born, Child and Adolescent Health
<b>UNFPA</b>	:	United Nations Population Fund
<b>WHO</b>	:	World Health Organization

## ABSTRACT

One of the proximal indicators of a prosperous country is the well-being of women. Fifty percent of women who have unsafe abortion need medical attention. Despite this abortion remains a sensitive issue politically and religiously. This is aggravated by restrictive policies and limited resources especially among the frontline health care workers. Unsafe abortion is one of the six pillars of maternal and new-born care. Despite this, many women continue to suffer due to delay in accessing quality. The purpose of this study was to establish knowledge and perception of nurses towards post abortion care practices in tier three healthcare facilities in Nairobi County – Kenya. Specifically, the study objectives were to establish post abortion care practices among nurses, to describe influence of knowledge on involvement in post abortion care among nurses and to determine the perception of nurses towards post abortion care practices in tier three healthcare facilities at Nairobi County. A descriptive-cross-sectional survey was adopted both quantitative and qualitative methods were used to collect data among 242 nurses sampled from 616 nurses working in tier three hospitals within Nairobi County. Data was collected through stratified and simple random sampling then cleaned and analyzed using computer software SPSS version 24. The study applied both descriptive and inferential statistics to analyze data and test hypothesis. Data was summarized using descriptive statistics while for hypothesis testing the study applied inferential statistics. Most 69% of the respondents were female 42.1% aged between 51-60 years and had above 15 years of experience. Diploma was the highest academic qualification with 69.7% reporting this. The study-established majority 55% had no pre-service training on post abortion and post abortion care practice was low. The nurses' knowledge was average at 51.2% and had a very strong positive correlation  $r=0.918$ . The nurses' perception towards post abortion care practice was positive as indicated by composite mean of 2.81 and very strong positive correlation at  $r = 0.957$ . A significant association was declared when  $p$ -value was less than 0.05 and the null hypothesis was rejected. The  $p$ -value for  $H_{01}$  and  $H_{02}$  were 0.00. The study established a significant association between nurses' knowledge and post abortion care practices in tier three health facilities in Nairobi County. This means an increase in knowledge would lead to better post abortion care practices. It was therefore recommended that post abortion care should be incorporated as a core competency in pre-service training and the county government should consider continuous professional development for the serving nurses. This will strengthen the unsafe abortion pillar in maternal health; reduce morbidity and mortality due to unsafe abortion. Longitudinal studies should be carried out and should involve post abortion clients as well as other health care professionals.

## CHAPTER ONE: INTRODUCTION

### 1.1 Background to the study

More than ninety-nine percent of maternal deaths due to unsafe abortion occur in the developing world while reproductive health starts with conception, reproductive ill health starts with infection (Basavanthappa, 2010). In Kenya, unsafe abortion is one of the six pillars considered essential for the wellbeing of the mother and the child health (MOH, 2010).

After 1994, International conference on population and development post abortion care was introduced within the health systems to improve access and reduce complications associated with unsafe abortion (IPAS, 2016). Though reproductive health is a proximal indicator to sustainable development goals, in developing countries 830 women die daily of pregnancy related causes. This sets a big challenge towards reduction of maternal mortality to 70/100,000 lives by 2030 (Guttmacher, 2017).

Currently twenty two million unsafe abortion occur worldwide and one in every four pregnancies ends up in abortion (WHO, 2017). Despite this in some African there is limited access to contraceptives and abortion is still taboo. This is complicated, largely due to cultural beliefs that limit women's access to essential contraceptives (WHO, 2012). About a fifth of all pregnancies in these countries are terminated through illegal and risky means. About 21,000 women are admitted with abortion related complications annually (CRR, 2015).

A third of the women treated are usually in their second trimester. Only 16% of the health delivery institutions can perform the manual vacuum aspiration procedure, which uses suction to empty the uterus and is the preferred method recommended by

the World Health Organization (WHO, 2014). Lack of post abortion care is debilitating and sometimes-fatal as such post-abortion care is an essential healthcare services that seek to respond to the reproductive healthcare needs of women.

About 47, 000 deaths from unsafe abortions occur globally; with over 99% of these deaths occurring in the developing countries of sub-Saharan Africa, Central and Southeast Asia, and Latin America and the Caribbean (WHO, 2012). However, there is still an evident gap on how different countries respond to the healthcare needs of women who require post-abortion care (CRR, 2015). The practice of post abortion care in developing countries like Kenya still faces many challenges, such as financial constraints, health workforce shortage and beliefs against the practice of abortion.

Post abortion care is part of reproductive services that seek to reduce maternal morbidity and mortality. It is an essential service in Nairobi county where maternal mortality ratio is estimated to 706/100,000 live births. It is stated that 1% of these death is due to unsafe abortion (Ziraba, 2015). This makes Nairobi one of the fifteen counties with the highest maternal mortality in Kenya (UNFPA, 2016). According to Ministry of Health (2009) clinical guideline, nurses in tier three hospitals are supposed to provide post abortion care. However, according to the first confidential enquiry on maternal deaths in Kenya unsafe abortion contribute up to ninety percent of all the maternal deaths (MOH, 2017). Hence there is need to establish the knowledge and perception of nurses towards post abortion care as they are the majority frontline health care workers (Nairobi City County, 2017).

## **1.2 Problem Statement**

Between the year 2010 to 2014 ninety-seven percent of unsafe abortion occurred in developing countries (Ganatra B, 2017). In Kenya 75% of clients seeking post abortion care have moderate to severe complications (MOH, 2018). Several studies conducted from 1994 to 2014 including a pilot project in Kenya established the safety effectiveness and acceptability of nurses as providers of comprehensive post abortion care. Post abortion care include complete evacuation using manual vacuum aspiration (Douglas Jackson-Smith., 2016). Despite this, it takes nurse and other health care workers average of 7.4 hours to manage a post abortion care client in Kenya (MOH, 2018). In order to contribute to the global and national effort to reduce maternal mortality and morbidity due to unsafe abortion, the researcher felt the need to establish practice, knowledge and perception of nurses towards post abortion care in their three health facilities in Nairobi County- Kenya.

## **1.3 Justification**

Post abortion care is an essential service that according to World Health Organisation guidelines should take 3-10 minutes and can be performed as an outpatient service. However, there is evidence that nurses' especially in developing countries may not be well-prepared (WHO, 2015). In its reproductive health framework, the Kenya government seek to reduce maternal mortality and has identified research areas on factors contributing to non-adherence to standards operating process like the post-abortion care guidelines by health care providers both in public and private sectors (GOK, 2016). The Kenya Maternal and Newborn health model recognizes post abortion care services as one of its six pillars and one of the strategies to improve maternal and newborn survival. The other five include pre-

conceptual care, family planning, focused antenatal care, essential obstetric care, essential newborn care and targeted post-natal care

One of the essential competences that midwives should have is provision of individualized and culturally sensitive abortion related care services (ICM, 2010). Establishing their knowledge and perception therefore, will the Ministry of Health effort to contribute increase post abortion care services and improve the quality of care (MOH, 2017).

#### **1.4 Research Questions and Hypothesis**

##### **Research Questions**

- i. What are the post abortion care practices among nurses working at tier three health facilities at Nairobi County?
- ii. What is the influence of knowledge on nurses' involvement in post abortion care at tier three health facilities in Nairobi County?
- iii. What is the nurses' perception towards post abortion care in tier three health facilities at Nairobi County?

##### **Hypothesis**

This is a tentative proposition and in their study, null hypothesis was adopted as they conform to qualities of detachment and objectivity and are more exact (Basavanthappa, 2010).

The following hypothesis gave the researcher direction duly data collection process:-

- i) There is no significant association between nurses knowledge and post abortion care practice in tier three health facilities in Nairobi County.
- ii) There is no significant association between nurses perception and post abortion care practices among nurses in tier three health facilities within Nairobi County.

### **1.5 Objectives (Main and Specific)**

The purpose of this study was to establish knowledge and perception of nurses towards post abortion care practices in tier three healthcare facilities in Nairobi County – Kenya. Specifically the study objectives were

1. To establish post abortion care practices among nurses in tier three healthcare facilities in Nairobi County
2. To describe influence of knowledge on involvement in post abortion care among nurses in tier three healthcare facilities in Nairobi County
3. To determine the perception of nurses towards post abortion care practices in tier three healthcare facilities at Nairobi County.

### **1.6 Delimitation and Limitations**

The location of the study was only in tier three health facilities within Nairobi County, which may have affected the generalization of study findings. The study was a descriptive cross-sectional though a longitudinal study may have provided a longer period to study the respondents. The study targeted only nurses though other health care provide post abortion care and relied on self-administered questionnaire and key informant questionnaire and key informant interviews though interviewer administered or focused group discussion could have also been applied. Abortion is a sensitive topic and respondent may not be willing to express their beliefs and attitudes. Nurses in tier three have work load which is high and they were supposed to full-in the questionnaire whole on duty and this led to time constraints as there are many distractions. Resources were limited and respondents were not financially rewarded or use of technology to collect data was comprised. Most of the literature

accused focused on post abortion care within the last ten years though post abortion care is an older practice and this could be a strong limitation.

### **Delimitation**

Nairobi County is the most populous county in the country where almost 10% of the population lives and have 10% of all the health facilities. Though there may be there underlying factors such as legal, religious, political, social and cultural factors the study targeted the professional respectively of nurse to establish knowledge and perception. The study was mainly based on work experience of the nurses to deduct perception. Questionnaire can collect a large amount of data within a short period and abortion being a sensitive topic self-administered questionnaires gives the respondent a sense of comfort to honestly express their opinion.

### **1.7 Assumption**

Though abortion is illegal in Kenya, given the professional responsibility the study assumed that the respondents were truthful. However, given abortion stigma is still very high the study assumes that the non-respondents were out of fear of being reprimanded by the employer especially due to withdrawal of standards and guidelines on unsafe abortion. The researcher provided ethical approvals from the university, NACOSTI and County government as well as assurance that the information given will be confidential and where expressed all possible identifiers were to be excluded.

### **1.8 Conceptual and Theoretical Framework**

Conceptual and theoretical framework a lifeline to a study as they help the leaders ascertain the academic position of the researcher's assertions or hypothesis (Hussein, 2018).

### **Theoretical framework**

This is a guide for a research based on existing theory that is recalled to the hypothesis. It's the foundation upon which a research is constructed (Grant 2014). This study dwelt on quality improvement and Donabedian "Structure- process- outcome framework was adopted, though developed in 1966 by Avedis Donabedian and still provides a framework for assessing quality of care in health care to date. In this study, post abortion care provide the structure whole knowledge and perception related to the process with anticipated quality post-abortion care as the ultimate outcome.

The framework was used as it allows the researcher and policy makers to conceptualize on what needs to be done for women to access quality post abortion care. The researcher assertions were to achieve quality post abortion care nurses perception ought to be positive and have high level of knowledge which would increase access to effective and efficient post-abortion care.

### **Conceptual framework**

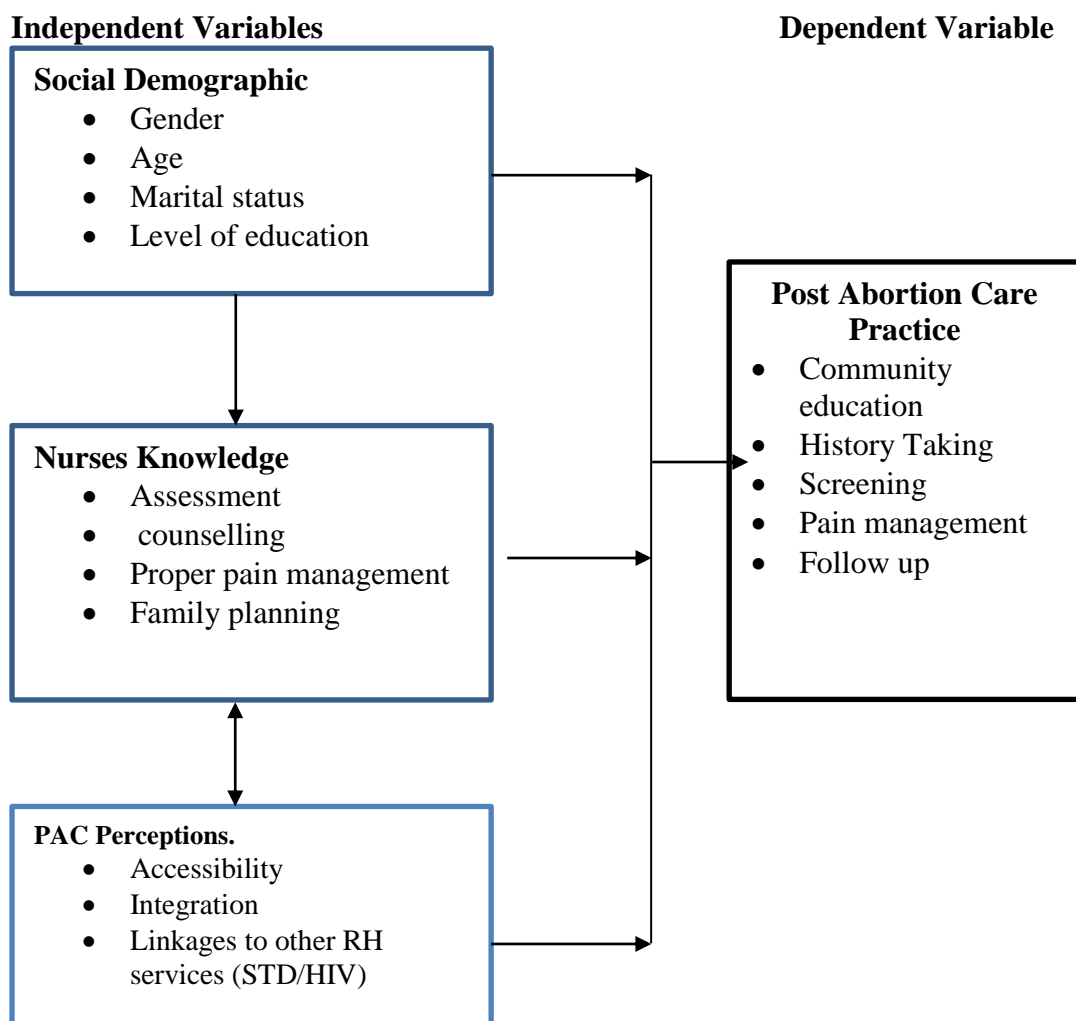
This is the structure that the research felt would best explain the natural progression of post abortion care. It gives a statistical perspective and describes the relationship between knowledge, perception and post abortion care practices through a visual display (Grant, 2014). In this study the conceptual framework assisted the researcher to understand how social demographic, knowledge and perception of the nurses influenced the post abortion care practices in tier three health facilities in Nairobi City County.

The social structure of a society affects changes in the size, composition and distribution of population. It depends upon variables like age, sex marital status, education level where morbidity and mortality by unsafe abortion will affect the

bread winners' ratio. Knowledge is the familiarity, awareness or understanding of someone or something, facts, skills or objects. Theoretical and practical understanding of PAC while Perception is the process of selecting, organizing and interpreting information.

The researcher developed the conceptual framework as shown in Figure 1.1 to show the relationship between variables and as an approach to answering the study questions.

### Conceptual Framework



**Figure 1.1 Conceptual Framework**

Adapted and modified from (Cronin, 2000).

### **1.9 Significance and anticipated output**

Unsafe abortion is a complex issue involving legal, religious, gender, rights as well as public health dimensions, the Kenya government appreciates this fact and acknowledges the need for a wider stakeholder's involvement. Therefore, the findings of this study will go a long way in providing reference and baseline data in formulation of strategies to provide quality, post abortion care, reduce unsafe abortion morbidity and mortality. The finding will also serve as a reference for future studies. This will contribute to women's health and well-being

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1 Introduction**

This section is about related studies on post abortion care practices, nurses' knowledge and perception towards post abortion care. The studies were electronically searched in various databases, others from journals, reports and books. The searches were related to studies relevant to study questions.

This chapter reviews previous related studies on nurse's perception in the practice of Post abortion care. Emphasis was made to review studies relevant to the research questions that this study sought to address. Electronic databases were used to search for empirical literature from relevant journals, reports and books. The basis for literature review was nurses' perception to provide post abortion care.

### **2.2 Relevant Themes**

#### **2.2.1 Post Abortion Care**

Post abortion care is an integrated service delivery model that includes both maternal and family planning interventions that are both curative and preventive. Globally, approximately 50% of women who have an abortion require medical care (WHO, 2014). Twenty-two million unsafe abortions are estimated to take place annually resulting to 47,000 deaths. Effect of maternal, mortality goes beyond the worm death, as it is devastating to her infants, children, family and entire community (WHO, 2015).

Post abortion care aims to reduce mortality and morbidity through the evacuation of the uterus, infection management, dealing with physical, psychological and family planning needs. However the capacity of primary-level and referral health facilities to provide post abortion care is low (Onikepe Owolabi, 2018). The provision of

good-quality post-abortion care is essential to reduce abortion related health outcomes. In Kenya, women have exclusive right to reproductive health that is protected under international and national Laws (GOK, 2016).

The risk of having unintended pregnancy and having and induced abortion is the same and restrictions only increase the risk of unsafe abortion (WHO, 2012). Though unsafe abortion account for 12% of maternal death, compared to other direct causes of maternal death, it has recorded little improvement since 1990 (Bhutta, 2016).

Post abortion care management depends on the woman's condition, and on the skills of available healthcare professional and equipment available. Provision of quality post abortion care requires competent health professionals with prerequisite knowledge and skills to support emotional aspect of post-abortion care clients (WHO, 2015).

Post abortion care entails prevention of unintended pregnancies appropriate and timely care to avert complications due to a complete or unsafe abortion. Pain management, post abortion contraceptive and counselling to prevent unwanted pregnancy as well as referrals where onsite services are not available (Better Health Channel, 2017).

Delay in realizing the need to seek post abortion care, making the decision access to care and inappropriate attitudes by health care providers has been identified in several studies. In Mozambique, the average waiting time is 3.7 hours while in Kenya is 7.4 hours (Bhutta, 2016). The abortion related complications in Kenya is higher than the rest of Africa by 30% about 2600 women in Kenya die annually due to unsafe abortion (CRR, 2015). Seventy percent of women seeking post abortion care in Kenya has moderate to severe complications hence the cost of managing

these clients is substantial (MOH, 2018). In line with the world health organization, definition of reproductive health Kenya government has put strategies to enhance reproductive status of Kenyans through improved quality efficient and effective care at all levels (GOK, 2016). According to the Kenya Constitution, every Kenyan has the right to the highest quality attainable standard of health including reproductive health care services (GOK, 2010).

Non-physicians if trained can safely and effectively provide quality post abortion care as demonstrated in a pilot project in Kenya (Prime 2000). Nurse form the bulk of health care workers in Kenya representing 53% of the entire workforce hence can play a critical role in reducing maternal morbidity and mortality due to unsafe abortion (MOH, 2017). A Study also conducted in Uganda established midwives can effectively diagnose and manage 1st trimester incomplete abortion using misoprostol (Cleve, 2019). Inadequately trained personnel and lack of equipment affect the provision of quality post abortion care in all levels of health care leading to negative health outcomes (Awan, 2014). As part of improving access to post abortion care in Uganda midwives were identified as providers, but though the task sharing was taking place midwives lacked the relevant skills for the provision of post abortion care and were at times forced to provide services beyond their scope of practice (Mandira Paul, 2014).

### **2.2.2 Nurses Knowledge**

Knowledge plays a critical role in healthcare and according to Hunt (2003), knowledge can be defined as a belief that it is true and justified hence measured solely on correctness of the answer. Nurses require prerequisite knowledge to make

rapid decision that and critical and informed in ever changing health care landscape (Basavanthappa, 2010).

Knowledge is not static, it dynamic and changeable. The patterns of knowing within nursing discipline reflects knowledge progress and maturity as it has been acknowledged theoretical knowledge is directly related with the nurses' ability to perform in the clinical setting. The taught theory should enable students what to expect in their nursing practice and highly educated nurses provide high quality care (Ria den Hertog, 2021).

Nursing Knowledge is the means by which the whole purpose of caring for patients is achieved, it is that unique body of knowledge that classifies nursing as a profession (Hall, 2005). Nursing knowledge is discerned in three distinct moments through acquisition of a set of descriptive rules, development of dualist explanatory theories and the production of critical/integrative understanding. According to (Stefanos Mantzoukas, 2008) there are five discrete types of nurses knowledge used in practice (personal practice knowledge, theoretical knowledge, procedural knowledge, ward cultural knowledge and reflexive knowledge)

Though nurses can provide post-abortion care there are opportunities in nursing that makes them full that cannot fully participate in practice especially in end of life care, however, they have limited choice in post abortion one which is an emergency service. Nurses in developing countries of South Asia and Sub-Saharan African are aware of post abortion care guidelines and are trained to transfer knowledge to practice (Loi, 2015). Practice experiences or knowledge by acquaintances influences outcomes in patient care, patient safety and satisfies client expectations. However there is still disparity between knowledge and its influence on practice as established

in a study in Nigeria where care givers perception on PAC was found varsity (Adinma, 2010).

### **2.2.3 Nurses Perception**

Nursing provided holistic and autonomous came in collaboration with other health care professionals (ICN, 2012). In Kenya, the nursing council of Kenya sets the scope of practice which encompasses provision of post abortion care by nurses (NCK, 2012). Though nurses have a professional moral and ethical responsibility to provide post abortion care, they are the product of tradition and culture of their communities, which may affect their perception toward abortion care (Singh, 2009). People's values and attitudes are shaped by experience and interaction with different people. Many service providers including trained nurses are unable to openly defend the need to provide abortion services to save women lives? Thus may women prefer to seek post abortion care after procure constant abortion elsewhere (CRR, 2015). The constitution of Kenya (2010) gives trained health profession the option which is a judgment made by an expert (Cambridge University Press, 2016). Despite this access to post abortion care is still exclusive of Ksh 4.943 which is expensive (MOH, 2018).

### **2.3 Summary of Literature review isolating gaps to be addressed.**

Forty two million abortion are procured globally every years making abortion second to normal delivery. Out of this, 82% are unsafe and majority (95%) occur in developing countries (WHO, 2014). Negative attitude of service providers has been identified as a major barrier to reproductive health access by young people (MOH, 2015). In Kenya eight hundred and forty four abortions are procured daily and constitute to half of all the gynecological admissions and 1% dies (CRR, 2015).

The Kenya government states that no woman should suffer or die of preventable cause are especially related to pregnancy (GOK, 2016). However the withdrawal by ministry of health the standard and guidelines on management of unsafe abortion in 2013 may have brought confusion in a county experience in case in the number of most abortion clients (CRR, 2015). These gaps in reviewed literature are what the study aimed at addressing by established knowledge and perception of nurses towards cost abortion and practices in their three health factories in Nairobi County.

## **CHAPTER THREE MATERIALS AND METHODS**

### **3.1 Introduction**

This sections describes the methodology adopted , the research design , target population , variables , sampling , techniques data collection , tools and methods ethical consideration and data analysis production

### **3.2 Research design**

Qualitative and quantitative methods were adopted as structure and strategy to collect data that answers to the research questions and for variance control (Basavanthappa, 2010). It was a non-experiment; study that sought to trace relationship between nurses' knowledge perception and posit abortion care practices self-administered questionnaires were used to describe the specific characteristic of nurse. The study was undertaken in April 2019 and only nurses who met the eligibility criteria were included in the study.

### **3.3 Research Variables**

The study adopted the two major types of variable independent variables that manipulate and the independent variable that is manipulated. Independent variables are characteristics that manipulate to identify a particular factor. In this study, Post Abortion, Nurses and Nurses Perceptions towards post abortion care practices were selected as the independent variables.

Dependent Variables are second type of variables that are measured using the independent variables. In this study post abortion care nursing practice which entails history Taking ,Screening, Management of PAC client and Follow up was identified as dependent variable. This was used to test the asses influence of knowledge and perception among nurses working in tier three health facilities.

### **3.4 Location of the study**

Nairobi County is the capital city of Kenya and has seventeen constituencies with a population of about 3.2 million. Has most of the health facilities in Kenya with about 10% of all the health facilities in the country located with the county. It has four tier three hospitals at 31% of maternal deaths in the country attributed to unsafe abortion (Ziraba, 2015).

The county is composed of 17 Parliamentary constituencies with a population of about, 3,138,369 persons making it the most populous county in Kenya. However about 22% of residents live below the poverty line. Though is the smallest county it has well-established infrastructure including health facilities. About 31% of all the maternal deaths within the county are attributed to improperly managed spontaneous or induced abortion (Ziraba, 2015) . The county has forty-five hospitals 141 health centres, 200 dispensaries and over 550 clinics. Nurses are the majority of the 3695 county health workforce. Commodity security for contraception is a challenge and majority are poor raising the number of unmet needs of family planning (Nairobi City County, 2017) The County is served by four Tier 3 health facilities (Pumwani, Mbagathi, Mutuuini and Mama Lucy County Referral Hospitals. Nairobi County was selected, has the highest population in Kenya and has high maternal mortality above the national average, there is challenge in practice of contraceptive and high rate of unsafe abortions.

### **3.5 Study Population**

Nurses form the majority of the county 3695 health workforce and unmet needs of family planning terminal a big challenge (NCC, 2017). The four tier three

(Mutuuini, Pumwani, Mbagathi and Mama Lucy Kibaki) hospitals are supposed to offer post abortion case services working at the time of the study.

**Table 3.1 Target Population**

	<b>Tier 3 Level Facility</b>	<b>No. of Nurses</b>	<b>Percentage</b>
1	Pumwani	168	27
2	Mama Lucy Kibaki	192	31
3	Mbagathi	172	28
4	Mutuuini	84	14
	<b>Total</b>	<b>616</b>	<b>100</b>

**Source, Author (2019).**

### **3.6 Sampling techniques and sample size**

#### **3.6.1 Sampling Techniques**

A sample size was calculated to represent the entire population (Basavanthappa, 2010). 3.6.1 Sampling technique

The study adopted stratified random sampling to get the proportionate sample from each facility. Simple random sampling was used to collect data from, the nurses using a random table with 616 numbers until a sample size of 242 was achieved. This was after; the researcher used stratified sampling to get a fair distribution of the respondents in the various hospitals. As indicated in table 3.1 the different hospitals in which the nurses worked acted as strata.

#### **3.6.2. Sample Size**

Determination of the proper sample size is crucial in any study in which a sample has to be taken. This is because the size of the sample is the one of the most important determinants of the accuracy of research results (Basavanthappa, 2010). In

this study, Yamane & Taro (Yamane, 1967) provides a simplified formula to calculate the sample size calculation on the simplified formula.

$$\text{Therefore } n = N/1+N (e)^2$$

Where n is the desired sample size and N is the target population and e is the level of significance at 95% confidence interval. Thus  $n = 616/1+616(0.05)^2 = 242$

**Table 3.2: Sample size determination**

Facility	Percentage	Proportionate sample	Sample + 10%
Pumwani	27	65	72
Mama Lucy	31	75	83
Kibaki			
Mbagathi	28	68	75
Mutuuini	14	34	37
<b>Total</b>	<b>100</b>	<b>242</b>	<b>267</b>

**Source, Author (2019)**

All qualified nurses working in tier three health facilities and sentenced to the study were included Nurses on night off official duties outside the duty station during the time of the study to decline to consent were excluded. This was to ensure a homogenous group of respondents. If a population is not heterogeneous, a small group can represent them (Basavanthappa, 2010).

### 3.7 Data collection tools/instruments

Structural self-administer questionnaire were used as self-report scales are efficiency since each response can be given value. The questionnaire are widely used in data collection and in this study each questionnaire had 83 closed question to facilitate the generation of date sufficient t to test hypothesis. Detailed self-report scales,

which included a rating scale to allow the respondents, place their perceptions and a Likert scale to measure the attitude, were designed. Self-report scales are efficient as each response can be given a value and the responses for the entire scale can then be totaled to obtain a single score (Basavanthappa, 2010).

The questionnaire had four main sections: one for socio-demographic characteristics, the other one for knowledge and the third part was on perception while the last part was on post-abortion care practices. The key informant guide was to triangulate the data collected using questionnaires. Nursing services managers were selected for the key informant interviews as they hold crucial information related to the study.

Key informant interviews were applied to enable the researcher have a deeper context of the quantitative data furnished by nurses as this method is superior since it permits probing to rationales used in answering questions. However, it is costly and certain sensitive questions like those of post-abortion care are well answered anonymously through self-administered questionnaires.

Beyond the documents utilized for the literature review, further reading was done to give more insight into the study and allow comparison to other jurisdictions specifically in regards to nurses' knowledge and perception towards Post-abortion care. Books, journals, theses, government policies and guidelines were used to gather background information to this study and were continuously used throughout the entire period of the study.

### **3.8 Pre testing**

This was conducted in Kiambu level four hospital used 10% (24) of the sample size and existed the researcher to check of the ability of the data collection tools.

### **3.8.1 Validity**

Validity is essential to ensure how good the tool measures the collected data (Ngechu, 2002). To ensure validity of the data collection tools, they were subjected to pre-testing and expert review from the supervisors and corrections were incorporated before data collection.

### **3.8.2 Reliability**

Reliability was retested using Cronbach Alpha and coefficient for the items was 0.975 was considered sufficient.

### **3.9 Data Collection Technique**

Data collection techniques should be both systematic and objective influences and everyone involved in the collection must do it in a similar way hence the reason to adopt the questionnaire. The tool was used to collect socio –demographic, knowledge and perception, which helped in, operationalization of the variables and defining the real issues in the facilities as new information's on possible solutions. An opinionnaire for recording were dropped then picked later. It is more suited in situations where the target population is geographically concentrated like in this study. The researcher and research assistants explained the purpose of the study to the response with . According to Dillman (2014) personal interactions provide basis to stimulate norms of reciprocity and exchange that increase chances for a respondent to accept and complete a survey (Dillman., 2014).

For the key informants personal interviews were arranged with nursing service managers where a structured interview was conducted. The same set of questions were presented to all the four respondents as this assist in coding the data with a

greater precision being achieved. Results are easily comparable and the interview is guarded from extraneous conversations that are not related to the study.

### **3.10 Data analysis**

This involved data sorting cleaning and coding in order to arrive at a meaningful interpretation. Only fully filled questionnaire were processed for analysis. Descriptive statistics were applied to summarize the data using tables, bar charts means and standard deviation while inferential statistics were used to test hypothesis. Emerging themes were used to analyze the qualitative data and presented using direct quotes and in verbatim.

Alternative hypothesis if there is significant association between nurses knowledge and post abortion care and there is significant association between nurse's perception and post abortion care were formulated. The study applied chi-square tests structure the p-value was set as 0.05 with 95% confidence interval; as parameters to reflect the null hypothesis. Linear association used Pearson coefficient where  $r=1$  was considered perfect positive correlation and  $r=-1$  as perfect negative correlation

### **3.11 Logical and ethical consideration**

The researcher obtained ethical clearance from, graduate school at Kenya University REF: P57/20433/10, Kenyatta University Research and Ethical Committee PKU/357/1331, NACOSTI research Permit No Ref. No NACOSTI/P/18/5883/4997 and Nairobi County Government research authorization REF: GL/NC/141/VOL.VI/103 upon fulfilment of the pre-requisite requirements and statutory fees. Prior to data collection, the researcher recruited and trained four-research assistants.

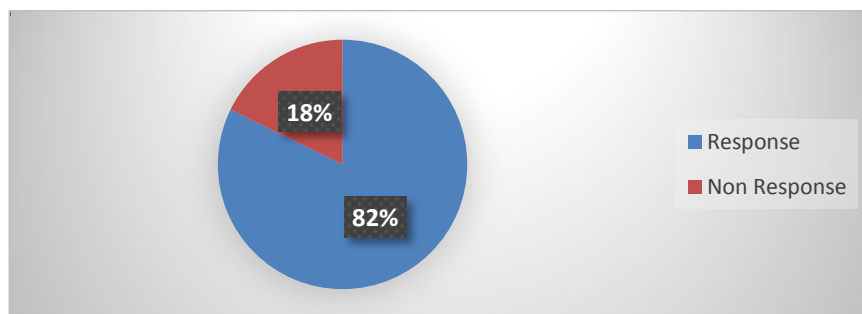
## CHAPTER FOUR : RESULTS

### 4.1 Introduction

This chapter presents study findings and discussions. It is arranged according to study objectives which focused on post-abortion care practices, knowledge and perception among nurses working in their three health facilities. To check if there was any association among the stated variables the null hypothesis was tested using test statistics.

### 4.2 Response Rate

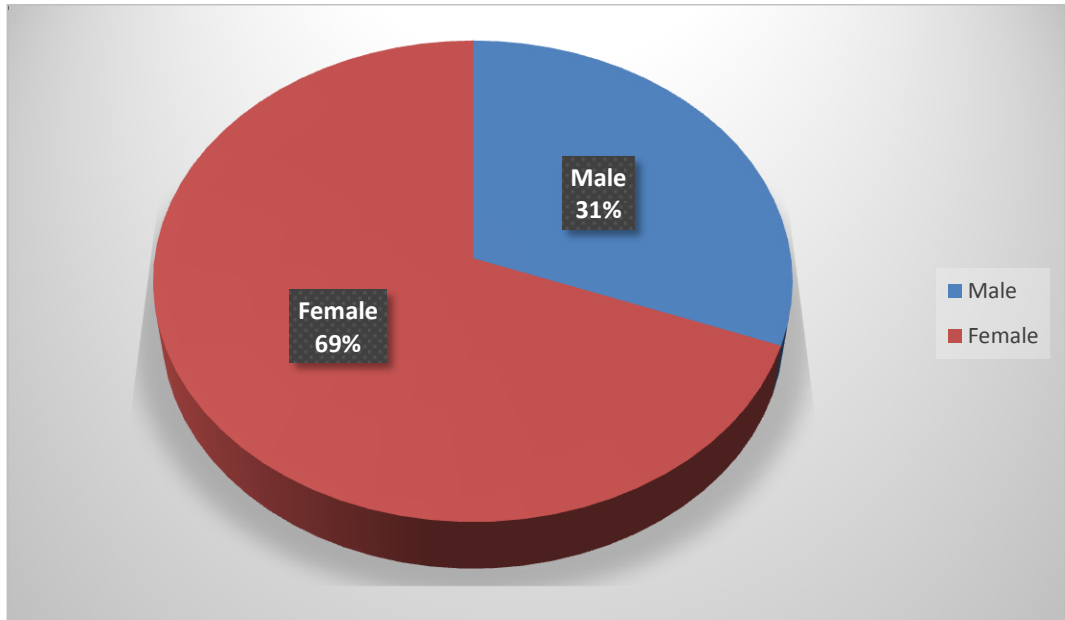
A total of 267 questionnaires were distributed and as shown in table 4.1 a hundred and ninety-nine of the target 242 were returned posting a 82% response rate. This was considered sufficient as Mugenda and Mugenda (2003) stated that a response rate of at least 50% is sufficient for data collection. Four responses were incomplete and were not included in further analysis. A 100% response rate was not achieved and the researcher attributes this to the data collection technique of drop and pick as some of the respondents were not available during the pick time.



**Figure 4.1 Response Rate**

### 4.3 Socio-demographic data of the respondents.

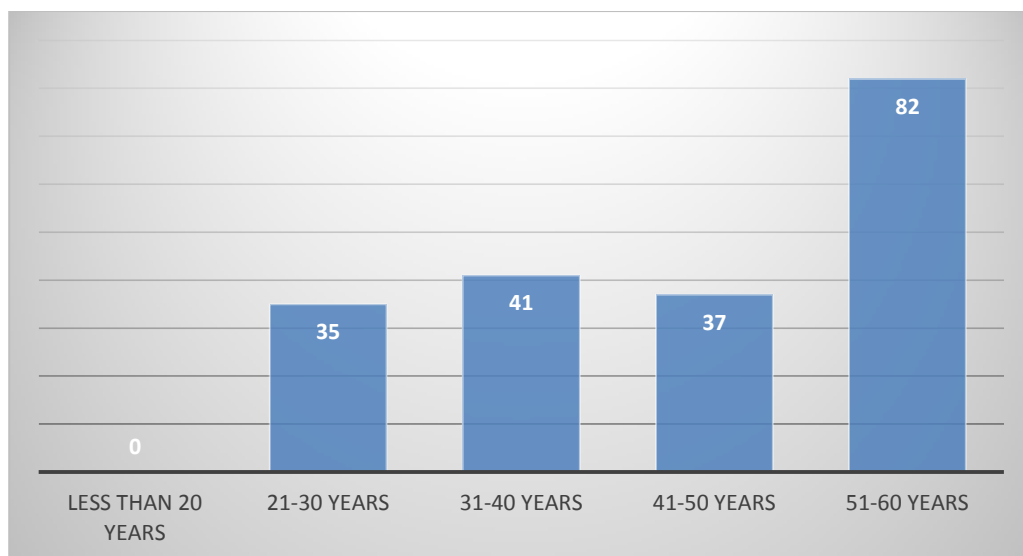
The researcher sought to establish the socio-demographic data of the nurses. As shown in Figure 4.2 Majority (69.2%) were females and only 30.8% were males



**Figure 4.2 Gender of the Respondents (n=195)**

**Source: Author (2019)**

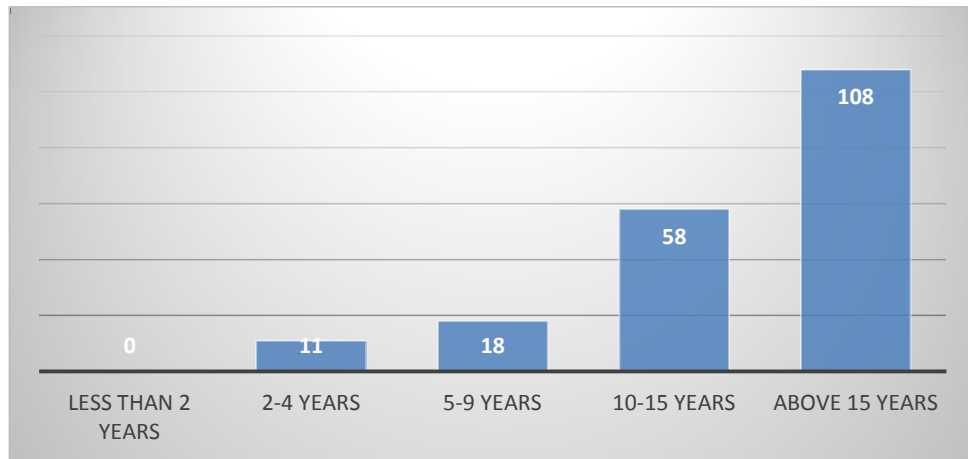
Further under the socio-demographic 42% of the respondents were aged between 51 and 60 years, 19% between 41 and 50 years, 17.9% between 21 and 30 years while 21% were between 31 and 40 years.



**Figure 4.3 Age of the Respondents (n=195)**

**Source: Author (2019)**

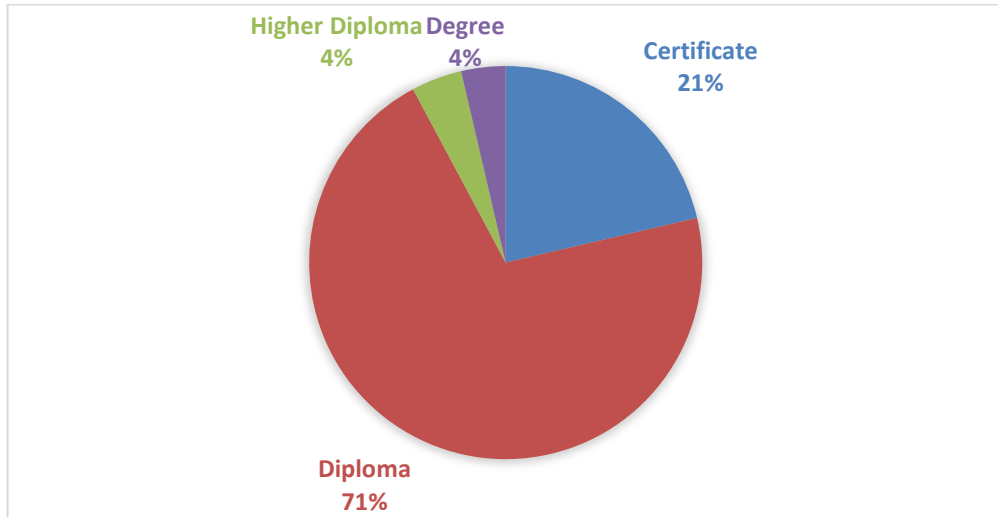
On duration of work of the respondents, majority of them (55.4%) had been employed as nurses for a duration of over 15 years. 5.6% of them had been employed as nurses for a duration of between 2 to 4 years, 29.7% of them had been employed as nurses for a duration of between 10 to 15 years and 9.2% of them had been employed as nurses for a duration of between 5 to 9 years



**Figure 4.4 Work experience of the Respondents (n=195)**

**Source: Author (2019)**

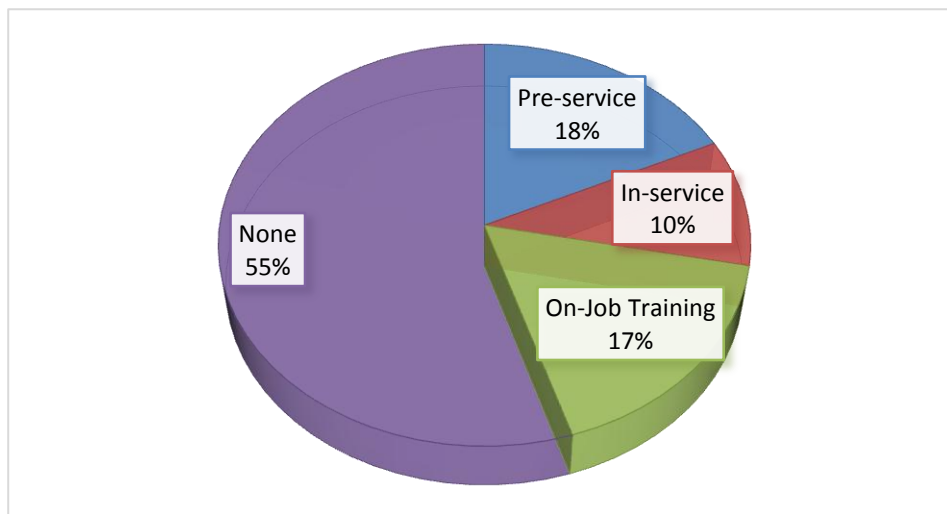
On education the researcher sought to establish the highest level of academic qualification, majority of them (71%) had diploma, 4% of them had degrees another 4% had higher diploma, and 21% had certificates as their highest as their highest academic qualification.



**Figure 4.5 Highest Education level of the Respondents (n=195)**

**Source: Author (2019)**

The study sought to establish socio-demographic data of the respondents who took part in this study. Majority (54.9%) of nurses weren't trained on post abortion care, 16.9% had attended on-job training and 10.3% of them attended in service training on post abortion care while 17.9% had attended training on post abortion care during pre-service.



**Figure 4.6 PAC training of the Respondents (n=195)**

**Source: Author (2019)**

#### **4.4 Post Abortion Care Practices**

The study establishes post abortion care practices among nurses in tier three health facilities within Nairobi County-Kenya. Table 4.3 shows various statements on the extent to which nurses participate in post abortion care. Majority of them (60%) indicated it was very low in regards to integrating post abortion care with other reproductive health services. On the extent to which nurses provide guidance and counselling on prevention of unwanted pregnancy to women seeking post abortion care services, majority of them (43.1%) indicated it was low.

On the extent to which nurses offer post abortion care pain relief to women seeking abortion services, forty-two percent indicated it was high. On the extent to which the hospital adheres to infection prevention protocols in regards to post abortion care, majority of them (52.3%) indicated it was high. On the extent to which the hospital applies the current technology in management of post abortion services, majority of them (75.3%) indicated it was very low. On the extent to which nurses are conversant to post abortion laws and guidelines as stipulated in the constitution, majority of them (74.4%) indicated it was very low. On the extent to which the existing policies on referral on unsafe abortion cases are adhered to, majority of them (68.8%) indicated it was high.

**Table 4.1 Post Abortion Care Practices (n=195)**

<b>Statements</b>	<b>L</b>	<b>M</b>	<b>H</b>	<b>Mean</b>	<b>S.Dev</b>
	<b>F (%)</b>	<b>F (%)</b>	<b>F (%)</b>		
To what extent do you integrate post abortion services with other Reproductive Health Services?	117(60)	34(17.4)	44(22.6)	2.32	1.359
To what extent do you provide guidance and counselling on prevention of unintended pregnancies to clients seeking post abortion care services?	84(43.1)	59(30.3)	52(26.6)	2.79	1.359
To what extent do you offer post abortion care pain relief to clients seeking PAC services?	63(32.3)	49(25.1)	83(42.6)	3.20	1.345
To what extent do the hospital adhere to infection prevention protocols on post abortion care practices?	45(23.1)	48(24.6)	102(52.3)	3.40	1.349
To what extent do hospital apply the current technology in management of post abortion services?	147(75.3)	29(14.9)	19(9.8)	1.95	1.071
To what extent are you conversant to post abortion laws and guidelines as stipulated in the constitution?	145(74.4)	17(8.7)	33(16.9)	2.14	1.263
To what extent are the existing policies on referral on unsafe abortion cases adhered?	33(16.9)	28(14.4)	134(68.8)	3.77	1.155
<b>Composite Mean</b>				<b>2.51</b>	

**Source: Author (2019)**

To obtain the means of each statement a composite mean was used and a rating score was adopted where Low was (1.0-1.7), average (1.8-3.3) and high (3.4-5.0). Post abortion care practices in tier three health facilities within Nairobi County is average as the study established a composite mean of 2.51.

The findings from the respondents align with the information from the Key informant interviews. According to all the key informants, post abortion care services are offered in their respective facilities. However, the post abortion care services differed from one facility to another. At Mbagathi and Pumwani tier three hospitals, *screening is done and only very serious emergencies requiring theatre are admitted. The rest of the clients are referred to other facilities.* At Mutuuini Tier, three hospital PAC *clients are assessed and referred to other hospitals.* At Mama Lucy Tier, three hospital PAC clients are offered all the services and only conditions that cannot be managed at the facility are referred or there when there is stock out of PAC commodities like the MVA kits. According to one of the Key informants, *“The County doesn’t allocate budget for post abortion care and they rely on partners”*

#### **4.5 Nurses Knowledge on post abortion care**

The researcher sought to assess nurses’ knowledge on post abortion care practice as an important strategy to reduce maternal mortality in tier three hospitals in Nairobi County. Table 4.3 shows that whether nurses know that unsafe abortion in Kenya is one of the leading causes of maternal mortality, Majority 52.8% of them said it’s false while 47.2% of them said it’s true. In regards to post abortion care being a lifesaving procedure, 62.6% of them said it is true, 37.4% of them said it is false. On as to whether most pregnancies are unwanted, and therefore abortions are preventable, 41.5% of them said it is true, 58.2% of them said it is false. These findings reveal that nurses working in tier three hospitals within Nairobi County have moderate knowledge of emergency obstetric care.

There is technology to make quality PAC services much more accessible, however only 32.8% of nurses said it is true, 67.2% of them said it is false. Death from abortion complications is preventable, 55.9% of Nurses said it is true, 46.1% of them said it's false. On complications from unsafe, 72.8% of them said it is true, 27.2% of them said it is false. The finding reveals that nurses have knowledge on complications arising from unsafe abortion but have limited knowledge on the current management. This shows that nurses mostly attend to PAC clients when complications have already set in.

The researcher sought to know if the nurses were aware that treatment to post abortion sometimes fail and clients require to be retreated and majority 59.5% of nurses said it is true, 40.5% of them said it is false. On nurses are allowed to offer post abortion care under the Kenyan Laws, standards and guidelines, 50.8% of them said it's true, 49.2% of them said it's false. According to World Health Organization, legally restricting abortions reduces the number of abortions that occur in a country, 42.6% of them said it is true, 57.5% of them said it's false. The findings shows nurses have moderate knowledge on the current health outcomes, their scope of practice and laws relating to post abortion care.

A woman needs emergency post abortion care to save her life, a nurse must provide it even if he/she does not wish to, and most (66.7%) of the nurses said it is true, 33.3% of them said it is false. Almost half 49.7% of nurses said it's false that during the 1<sup>st</sup> trimester, Misoprostol can up to 96% evacuate the uterus if a pregnancy fails reducing the need of surgical intervention especially if given virginally or orally. This indicates that though nurses are aware that their code of ethics demands they

provide emergency care without discrimination, they are not up to date with the current management on medical management of post abortion clients.

Majority (61%) of nurses said it is true that unsafe abortion means a procedure of terminating an unwanted pregnancy either by a person lacking the necessary skills or in an environment lacking the minimum medical standards or both. However, a significant 39% of them said it is false. Majority 67.2 % of the nurses were not aware that all the unsafe abortions in Africa mostly occur to women aged 25 years or less, only 32.8% of nurses said it is true. Majority (56.4%) of the nurses were not aware that the current vacuum aspiration was as effective as the outdated sharp curettage in management of incomplete abortion, only 43.6% of nurses said it is true. Further 58.3% representing the majority were not aware that vacuum aspiration is associated with less bleeding compared to sharp curettage only 42.2% were aware of this.

Forty-five percent supported the use of intra uterine device immediately after post abortion with majority 54.8% stating it is not safe. The study shows that though nurses are aware of the cause of unsafe abortion they lack current skills on post abortion care. This implies that nurses require continuous medical education on value clarification and attitude transformation as well as the current management of post abortion care if they are to effectively attend to PAC clients seeking help in Nairobi tier three hospitals.

Majority 54.4% did not support counselling husbands of post abortion clients on follow up, return to fertility though a significant 45.6% supported as it can increase uptake of contraceptives as well as emotional and physical support. Further 55.9%

of the nurses said that women do not want their partners present during counselling but 44.1% said women want their husbands to be present during counselling and be informed about their condition, treatment, follow up care including family planning they intend to use. The researcher conclude that nurses have moderate knowledge on male involvement a critical aspect in reproductive health especially during post abortion period when clients require a lot of support.

Majority (65.6%) want midwives to be trained on comprehensive post abortion care including counselling clients on family planning, STIs/HIV and nutrition. 56.9% of the nurses want post abortion counselling, health education and family planning services to be offered promptly to avoid repeat abortions though 43.1% disagreed. The findings reveal that nurses are aware of the competencies they require and the services the PAC clients deserve.

**Table 4.2 Nurses Knowledge on Post Abortal Care (n=195)**

Statements	True	False
	F (%)	F (%)
Unsafe abortion is among top five leading cause of maternal death in Kenya	92 (47.2)	103 (52.8)
Post abortion care is a lifesaving procedure	122 (62.6)	73 (37.4)
Most pregnancies are unwanted, and therefore abortions, are preventable	81 (41.5)	114 (58.5)
We have the technology to make quality PAC services much more accessible	64 (32.8)	131 (67.2)
Death from abortion complications is preventable	109 (56.5)	84 (43.6)
The following are some complications from unsafe abortion –sepsis, shock, vagina lacerations and uterine perforations.	142 (72.8)	53 (27.2)
Post-abortion complication treatment sometimes fails to cure and the clients requires to be retreated.	116 (59.5)	79 (40.5)
Nurses are allowed to offer post abortion care under the Kenyan Laws, standards and guidelines.	99 (50.8)	96 (49.2)
According to World Health Organization, legally restricting abortions reduces the number of abortions that occur in a country	83 (42.6)	112 (57.5)
If a woman needs emergency post abortion care to save her life, a nurse must provide it even if he/she does not wish to	130 (66.7)	65 (33.3)
Misoprostol can evacuate 1 <sup>st</sup> trimester up to 96% especially when given virginally or orally hence reducing the need for surgical intervention.	98 (50.3)	97 (75.6)
According to World Health Organisation, unsafe abortion is a procedure to terminate unwanted pregnancy conducted in environmental lacking minimum medical standards, by a person lacking necessary skills or both.	119 (61.0)	76 (39.0)
Majority 59% of unsafe abortions mostly occur to women aged 25 years or less.	64 (32.8)	131 (67.2)
Manual Vacuum aspiration foot pump or electric aspirations are as effective as sharp curettage.	85 (43.6)	110 (56.4)
Manual vacuum aspiration is associated with less bleeding than sharp curettage.	90 (46.2)	105 (53.8)
Immediate use of intra uterine device post abortion is safe.	88 (45.1)	107 (54.8)
To increase uptake of family planning, physical, material and emotional support partners to post abortion clients should be counselled on follow up care, return to fertility and family planning.	89 (45.6)	106 (54.4)
Majority of women want their partners to be counselled and be informed about their condition, treatment as well as follow up care and family planning methods they intend to use.	86 (44.1)	109 (55.9)
Midwives should be trained on comprehensive post abortion care including MVA, STIs/HIV and nutrition.	128 (65.6)	67 (34.3)
To avoid repeat abortions post abortion counselling, health education and family planning services should be offered promptly.	111 (56.9)	84 (43.1)
<b>Mean Score</b>	<b>51.21%</b>	

**Source: Author (2019)**

#### 4.6 Post Abortion Care knowledge

The researcher sought to establish the general rating of each statement on nurses' knowledge on post abortion care practice in tier three hospitals in Nairobi County.

This rating scale was based on mean scores adopted as follows disagree (1.0-1.7), uncertain (1.8-3.3) and agree (3.4-5.0). As shown on table 4.3 slightly less than half (42.5%) of nurses agreed that they should provide enabling environment for Post abortion care, On assessment as to whether nurses should provide high quality education on post abortion within the community, only (48.7%) of the nurses agreed. This shows that nurses were uncertain on whether to offer enabling environment and community outreaches on post abortion care.

Nurses should offer high-quality counselling related to post abortion care, majority of them (60%) agreed but only 32.8% agreed that nurses should effectively provide integrated post abortion care. Almost fifty percent (48.2%) agreed that it is appropriate for a patient to request pain medication before pain returns when she is receiving pain medication on 'p.r.n' basis. Majority (54.8%) agreed that nurses should provide immediate post-abortion contraception (including IUDs, implants, DMPA). This implies that nurses are ready to provide post abortion contraception however there is need to update their knowledge on pain management as well as the post abortion care integration with other reproductive health services.

Only 36.9% agreed that nurses should provide other services such as STIs management to post abortion clients, 40.5% disagreed that nurses should offer screening and referral for reproductive tract cancers to post abortion care clients and majority (53.8%) agreed that nurses should provide pre-conception care to Post abortion clients. The findings reveals that nurses have low knowledge on screening of other conditions that post abortion clients they may have but are aware of the need to prevent future pregnancies through pre-conception care.

**Table 4.3 Post Abortion Care knowledge (n=195)**

Statements	Disagree	Uncertain	Agree	Mean	S.Dev
	F (%)	F (%)	F (%)		
Nurses should provide enabling environment for Post abortion care	66 (33.9)	46 (23.6)	83 (42.5)	3.19	1.381
Nurses should offer High quality post abortion education to women and in the community	64 (31.3)	39 (20.0)	95 (48.7)	3.25	1.440
Nurses should offer high-quality counselling related to post abortion care	57 (29.3)	37 (19.0)	117 (60)	3.54	1.273
It is appropriate for the client to request pain medications before the pain returns when she is in pain and receiving analgesic medication on a “p.r.n.” (when necessary) basis,	51 (26.2)	51 (26.2)	93 (47.6)	3.27	1.220
Nurses should Provide immediate post-abortion contraception (including IUDs, implants, DMPA)	42 (21.5)	47 (24.1)	106 (54.4)	3.42	1.205
Nurses should offer screening and referral for reproductive tract infections to post abortion care clients	71 (36.4)	45 (23.1)	79 (40.5)	3.08	1.393
Nurses should provide pre-conception care to Post abortion clients	54 (27.7)	36 (18.5)	105 (53.8)	3.37	1.380
<b>Composite Mean</b>				<b>3.31</b>	

**Source: Author (2019)**

The researcher sought to establish the general rating of respondent’s knowledge on post abortion care practice in tier three hospitals in Nairobi County. Using the means of each statement, a composite mean was obtained and a rating scale was adopted as follows low (1.0-1.7), average (1.8-3.3) and high (3.4-5.0). The study concluded that the nurses on post abortion care in tier three hospitals within Nairobi county was average as indicate by a composite mean of 3.31.

#### **4.7 Association between various components of nurse knowledge on post abortion care and their post abortion care practice.**

This study sought to establish whether there was significant association between various components of respondent's knowledge on post abortion care and their post abortion care practice. From the findings as indicated on Table 4.4, on all the variables, the computed chi square values were greater than their corresponding critical values. Similarly, the P values were smaller than  $<0.05$  level of significance. This clearly showed there was significant association between variables tested. Knowledge on screening, counselling, follow up, history taking and pain management significantly affected post abortion practices such as screening of P.A.C patients, counselling of P.A.C patients, making of follow-ups on P.A.C patients, history taking on P.A.C patients and management of pain on P.A.C patients respectively.

According to the key informants, *“All clients seeking post abortion care are screened by nurses at the outpatient departments”*. At Mutuuini, the Key Informant stated, *“We don't have a gynaecological ward, all PAC clients are referred”* At Mbagathi only those who are very sick are admitted and taken to theatre for examination under anaesthesia. In a month we may admit only one case all the other cases are referred” At Pumwani the Key informant stated *“We used to offer PAC services but they were stopped due to commercialisation. Currently we refer all the clients unless a client is hemodynamically unstable. They are stabilised then referred appropriately.* At Mama Lucy Kibaki the Key Informants stated *“All PAC clients are offered all the services but recently the hospital stopped nurses from performing MVAs. This has led to delays, with higher risk of complications. Nurses*

*offer prescribed pain management to PAC clients who are waiting for MVA and before they are discharged”*

**Table 4:4: Association between various components of nurse knowledge on post abortion care and their post abortion care practice. n=195)**

Knowledge	Practice	Variable	X <sup>2</sup> Statistic
2	1	Screening	X <sup>2</sup> =144.46, DF=16, CV=26.296, P=0.00
3	2	Counselling	X <sup>2</sup> =193.45, DF=16, CV=26.296, P=0.00
5	5	Follow up	X <sup>2</sup> =222.63, DF=20, CV=31.410, P=0.00
4	3	History taking	X <sup>2</sup> =252.31, DF=16, CV=26.296, P=0.00
6	7	Pain management	X <sup>2</sup> =188.36, DF=16, CV=26.296, P=0.00

**Source: Author (2019)**

To determine association between nurses’ knowledge and their practice of post abortion care in tier three hospitals within Nairobi County, Pearson correlation coefficient determined by dividing the covariance by the product of the two variables (Knowledge and post abortion care practice) standard deviations.

**Table 4. 5: Relationship between knowledge and practice**

Independent Variable	Dependent Variable	Karl Pearson Correlation Coefficient	Interpretation
Knowledge <ul style="list-style-type: none"> <li>• Assessment</li> <li>• counselling</li> <li>• Proper pain management</li> <li>• Family planning</li> </ul>	PAC Practice <ul style="list-style-type: none"> <li>• Community education</li> <li>• History Taking</li> <li>• Screening</li> <li>• Pain management</li> <li>• Follow up</li> </ul>	0.918	Very Strong Positive Relationship

**Source: Author, (2019)**

Pearson correlation coefficient of 0.918 between nurses' knowledge and post abortion care practice was also obtained. The study findings show that there was a very strong positive association between nurses' knowledge and post abortion care practice suggesting that improvement in the nurses' knowledge on post abortion care practice will result to improvement in nurses' post abortion care practice

### **Hypothesis Testing**

**H<sub>01</sub>**: There is no significant association between nurses' knowledge and their post abortion care practice in tier three hospitals within Nairobi County.

Null hypothesis was to be rejected if the p-value was equal or less than 0.05 and 95% confidence interval and chi-square value is greater than its corresponding critical value. In this study as presented in Table 4.6, the p-value was less than 0.05; similarly, chi-square value was greater than its corresponding critical value resulting in rejection of the null hypotheses in favour of alternative hypothesis. A conclusion was therefore made that there is significant association between nurse's knowledge and their post abortion care practice in tier three hospitals in Nairobi County.

**Table 4.6: Hypothesis 1 Summary Table (n=195)**

<b>Null Hypothesis</b>	<b>Test</b>	<b>Chi-Square Value</b>	<b>Degrees Of Freedom</b>	<b>Critical Value</b>	<b>P-Value</b>	<b>Decision</b>
<b>Hypothesis 1</b>	Chi-Square Test	2369.736	1980	2084.632	0.00	Reject <b>H<sub>01</sub></b>

**Source: Author (2019)**

### **4.8 Nurses' perception towards Post Abortion Care**

The researcher sought to assess various statements on nurses' perception towards post abortion care practice in tier three hospitals in Nairobi County. Table 4.8 shows

that while 37.0% disagreed almost a similar number 37.4% agreed that Post abortion clients should be treated with full respect for her individual dignity. Majority 57% of the disagreed that nurses are comfortable providing Post Abortion Care services consistent with personal and professional ethics and standards, most 39.5% of the nurses disagreed that post abortion care should be provided in a non-judgemental and non-discriminatory manner to all women seeking care. The findings imply that nurses have conflict with their value system hence divergent perception towards post abortion practice despite post abortion care being within their scope.

Nurses are willing to refer post abortion clients to other health care professionals, slightly above forty-one percent disagreed. Though most 37.4% agreed a woman needs emergency post abortion care, a nurse must provide it even if he or she does not want. Majority 52.8% disagreed that if nurse objects to performing post abortion care due to religious beliefs, she or he must refer the woman to someone who can, and 45.2% agreed on privacy and confidentiality of post abortion clients. The findings show a negative perception towards post abortion care and lack of awareness on conscientious objection rules, however most of them appreciate privacy and confidentiality.

The researcher sought to establish the rating of each statement on nurses' perception on post abortion care practice in tier three hospitals in Nairobi County using the following adopted rating scale disagree (1.0-1.7) Uncertain (1.8-3.3) and agree (3.4-5.0). The study concluded that nurses were uncertain if women seeking post abortion care should be treated with full respect for her individual dignity. However, they were comfortable providing post abortion care consistent with their professional ethics and standards. Women seeking PAC services should receive care in a non-

judgmental and non-discriminatory manner. They are willing to refer post abortion client to other health care professionals. If a woman needs emergency post abortion care, a nurse must provide it even if he or she doesn't want; If a nurse objects to performing post abortion care due to religious beliefs, she or he must refer the woman to someone who can; Post abortion care should be provided in private and be confidential

The researcher sought to establish the rating of nurse's perception on post abortion care practice in tier three hospitals in Nairobi County and means of each statement was used to obtain the composite mean. A rating scale was adopted as follows negative (1.0-1.8), neutral (1.8-3.3) and positive (3.4-5.0). A composite mean of 2.81 was obtained and the researcher concluded that the nurses' perception towards post abortion care was generally neutral.

**Table 4.7 Nurses' Perception towards Post Abortion Care (n=195)**

Statements	D	U	A	Mean	S.Dev
	F (%)	F (%)	F (%)		
Post abortion clients should be treated with full respect for her individual dignity.	72(37.0)	50(25.6)	73(37.4)	2.94	1.213
I am comfortable providing PAC consistent with my professional ethical code and standards.	111(57)	35(17.9)	49(25.1)	2.41	1.314
Women seeking PAC services ought to be treated in a non-judgmental and non-discriminatory manner.	77(39.5)	61(31.3)	57(29.2)	2.84	1.345
I am willing to refer post abortion clients to other health care professionals.	81(41.5)	42(21.5)	72(37)	2.91	1.342
If a woman needs emergency post abortion care, a nurse must provide it even if he or she doesn't want.	67(34.4)	55(28.2)	73(37.4)	2.92	1.306
If a nurse objects to performing post abortion care due to religious beliefs, she or he must refer the woman to someone who can.	103(52.8)	42(21.5)	50(25.7)	2.50	1.266
Post abortion care should be provided in private and be confidential	72(36.9)	35(17.9)	88(45.2)	3.17	1.463
<b>Composite Mean</b>				<b>2.81</b>	

**Source: Author (2006)**

#### **4.9 Association between various components of perception and post abortion care practice**

This study sought to establish whether there was significant association between various components of perception and post abortion care practice. From the findings, on all the variables, the computed chi square values were greater than their corresponding critical values. Similarly, the P values were smaller than 0.05 level of significance. A significant association between the variables tested was established.

Perception on accessibility, integration, linkage and counselling significantly affected post abortion practices such as accessibility of P.A.C services, integration of P.A.C services, linkage of P.A.C services and counselling of P.A.C respectively.

**Table 4.8: Association between various components of perception and post abortion care practice(n=195)**

Perception	Practice	Variable	X <sup>2</sup> Statistic
1	5	Accessibility	X <sup>2</sup> =258.89, DF=16 CV=26.296, P=0.00
5	1	Integration	X <sup>2</sup> =243.02, DF=16 CV=26.296, P=0.00
4	7	Linkage	X <sup>2</sup> =210.65, DF=20 CV=31.410, P=0.00
3	2	Counselling	X <sup>2</sup> =294.09, DF=16 CV=26.296, P=0.00

**Source: Author (2019)**

According to Key Informant at Mama Lucy Kibaki Hospital: *“The hospital attends approximately 100 Post abortion clients every month, Nurses used to perform manual vacuum aspirations but following the hospital policy allowing only doctors and clinical officers the perception of nurses has become negative towards post abortion clients”*

**Table 4.9: Relationship between perception and PAC practice**

Independent Variable	Dependent Variable	Karl Pearson Correlation Coefficient	Interpretation
Perception PAC Perceptions. <ul style="list-style-type: none"> <li>• Accessibility</li> <li>• Integration</li> <li>• Linkages to other RH services (STD/HIV)</li> </ul>	PAC Practice <ul style="list-style-type: none"> <li>• Community education</li> <li>• History Taking</li> <li>• Screening</li> <li>• Pain management</li> <li>• Follow up</li> </ul>	0.957	Very Strong Positive Relationship

**Source: Author (2019)**

Pearson correlation coefficient of  $r = 0.957$  between nurses' perception on post abortion care practice and post abortion care practice was also obtained. A very strong positive association was established between nurses' perception towards post abortion care practice suggesting that improvement in the nurses' perception on post abortion care practice will result to improvement in nurses' post abortion care practice

### **Hypothesis Testing**

**H<sub>02</sub>:** There is no significant association between nurses' perception and post abortion care practice in tier three hospitals in Nairobi County.

Null hypothesis was to be rejected if the p-value is less than or equal to 0.05 at 5% level of significance or the chi-square value is greater than its corresponding critical value. In the hypothesis, the p-value was less than 0.05; similarly, chi-square value was greater than its corresponding critical value resulting in rejection of the null hypotheses. The findings indicate that there was sufficient evidence to reject the null hypothesis in favour of the alternative hypothesis. Conclusion was made that there is significant association between nurses' perception and their practice of post abortion care in tier three hospitals in Nairobi County.

**Table 4.10: Hypothesis Summary Table (n=195)**

<b>Null Hypothesis</b>	<b>Test</b>	<b>Chi-Square Value</b>	<b>Degrees Of Freedom</b>	<b>Critical Value</b>	<b>P-Value</b>	<b>Decision</b>
<b>Hypothesis 2</b>	Chi-Square Test	2174.554	1540	1632.408	0.00	Reject <b>H<sub>02</sub></b>

**Source: Author (2019).**

## CHAPTER FIVE

### DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 Discussion

This chapter presents the summary of the findings based on the objectives. It also presents the conclusions made based on the findings. This chapter also presents recommendations made based on the findings of the study and suggestions for further studies. The findings established that on socio-demographic characteristics majority (69%) of the respondent were female, only 4% had a degree while majority (71%) had diploma as their highest level of academic qualification. This aligns to Kenya Nursing Workforce study (2012) which states that nursing is a female dominated profession, most of nurses within the public health care facilities has diploma as their highest level of academic education.

In the present research, most of the nurses had an experience of more than 15 years and similar to the Kenya nursing workforce (2012) many nurses were aged between 51-60 years than the private sector which employed younger nurses aged between 21-30 years.

Fifty-five percent of the respondents had not been taught on post abortion care during their studies while the other 18% were taught during pre-service, 10% taught as in-service and 17% on-job training. This lack of training exemplify that nurses may not have adequate knowledge and skills to attend to post abortion care holistically.

This is consistent with published literature that health providers require adequate training and induction as well as protocols on post abortion care (WHO, 2017). The

willingness to attend on-job and in-service post abortion care training is a positive though is an indicator on the nurses' willingness to participate in practice of post abortion care it cannot be relied upon. The findings of this study aligns to the findings by James (2015) that employees may prefer to provide abortion related services if they had personal experience or had sought professional training opportunity on abortion related studies (James, 2015). The findings relate to a recent study by Amanda (2019) that found that scaling up task sharing with midwives in post abortion care is highly acceptable to women and can improve access including the safety of misoprostol use.

The level of knowledge (51.21) and the perception (mean of 2.81) exhibited by the respondent corresponds a study by Chandra-Mouli (2013) which reported that the knowledge, skills and perceptions among nurses regarding the use of the guidelines to deliver high quality post abortion care in hospitals is still wanting.

Post abortion practice among the nurses was low which aligns to a study by centre for reproductive rights (2010); there is still an evident gap on how different countries respond to the healthcare needs of women who require PAC. World health organisation states that there is evidence, that health professionals may not be adequately prepared to meet the needs of society, especially in developing countries (WHO, 2015). The findings also correspond to a study by (Onikepe Owolabi, 2018) which concluded that there are critical gaps in the provision of post abortion care with less than 40% of referral health facilities could provide comprehensive post-abortion care.

The findings supports the Ministry of Health (2019) findings on the improve the knowledge and skills of health care professionals so as to provide timely quality PAC services to reduce morbidity and mortality associated with the complications of abortion (Ministry of Health, 2019). The findings also corresponds to a study by (Taylor Riley, 2020) which found critical gaps in the availability of PAC services in Zimbabwe. Nurses require adequate training and induction similar to what was done in Ethiopia after legal reforms that were done recently (WHO, 2017). According to health assessment survey (2017) Nairobi County had the lowest level of satisfaction of health services at 38% with only 44% stating that the services are better than before devolution of health services (KIPPRA, 2017).

The general rating of the level of nurses' knowledge in regards to their role on post abortion care in tier three hospitals in Nairobi County and established that the level of knowledge was generally average as indicated by a composite mean of 3.31. On establishing the level of knowledge on importance of post abortion care the study established nurse's knowledge was average at 51.21%. These findings aligns with findings of Chandra-Mouli (2013) that the knowledge, skills and perceptions among nurses regarding the use of the guidelines to deliver high quality care to the population of women who seek post abortion care services from hospitals is still wanting(Chandra-Mouli, 2013).

The findings of this study agree with a study by Loi (2015), that nurses in in developing countries are aware of post abortion care guidelines and are trained on how to translate the guideline into practice. Pearson correlation coefficient revealed there was a very strong positive association (0.918) between the knowledge and post abortion care practice. Hypothesis test conducted also established a significant

association between nurses' knowledge and their practice on post abortion care in tier three hospitals in Nairobi County.

On the level of nurses' perception towards practice of Post Abortion Care, the findings established that the respondents generally were positive towards post abortion care practice with an aggregate mean of 2.51. The respondents also generally disagreed (52.8) that nurses should not provide post abortion care based on religious beliefs and agreed that if a woman needs emergency post abortion care, a nurse must provide it even if he or she doesn't want. The respondents agreed generally that post abortion care should be private and confidential and they were willing to refer post abortion care clients if they are unable to provide the service. This aligns to Ministry of Health (2018) that health providers bias is part of barriers to sexual and reproductive health service accessibility.

The respondents perception was neutral towards post abortion care and this contradicts a study in Nigeria that found that despite the extensive knowledge that nurses in Nigeria perception towards the application of the same in practice is still wanting (Adinma, 2010).

This study contradicts the findings of Centre for reproductive rights that many service providers including trained nurses refuse to give medical abortion to women even when medically indicated (CRR, 2015). There was sufficient evidence to reject the null hypothesis in favour of the alternative hypothesis. The study concluded there is a significant association between nurse's perception and post abortion care practice.

In summary, the purpose of this study was to establish knowledge and perceptions of nurses towards post abortion care in tier three health facilities in Nairobi county-Kenya. The major findings were majority of the respondent were female who were aged between 51-60 years, had diploma as the highest level of education, they had not been trained on PAC during their preservice training. Their level of knowledge on post abortion care average and their perception towards post abortion care was neutral. The findings aligns with various studies on socio-demographics but contradicts several on knowledge and perception.

## **5.2 Conclusion**

This study examined Knowledge and perception to determine nurse's practice on post abortion care. Nurses working in tier three health facility had an average (51.21) knowledge level, though most of them were not taught on post abortion care during their studies but majority had undergone on job training. This may explain the association that was established between the nurse's knowledge and their practice on post abortion care in tier three hospitals within Nairobi County.

The perceptions of nurses' towards post-abortion care in tier three health facilities in Nairobi County-Kenya was neutral as indicated by a composite mean of 3.31. Equally, there is significant association between nurses' perception and their practice on post abortion care in tier three hospitals within Nairobi County.

There was very strong relationship between knowledge, perception and post abortion practice, which mean increase in the level of knowledge or perception, would influence the post abortion care practice. Noting that post abortion care is a lifesaving procedure and nurses have the prerequisite knowledge the findings from

this study should. Encourage the Nairobi County Government to increase the level of knowledge among nurses, provide resources for post abortion care, as this will contribute to the County strategies to improve the health and well-being of mothers at risk of death due to unsafe abortion. A higher level of knowledge and positive perception towards post abortion will increase the uptake of post abortion care in Nairobi County. The findings have shown knowledge and perception influence the nurse's involvement on post abortion care.

### **5.3 Recommendations**

#### **5.3.1 Recommendations based on findings**

Pre-service training of nurses should incorporate post abortion care training to equip young nurses with post abortion care knowledge and skills. Qualified nurses to equipped with necessary post abortion knowledge and skills. Government should consider task sharing to improve Nurses skills as they can effectively offer health education on prevention of unsafe abortion, which contribute to the majority of Post abortion clients, is entirely preventable and remains a significant cause of maternal morbidity and mortality in Kenya.

Given that nurses, contribute 90% of patient-health provider relationship and in many instances are the only health care provider available in the community. The study recommends review of the nursing curriculum to incorporate post abortion care, as nurses are the closet the community hence able to achieve community and service provider partnerships.

To leverage on the Nurses neutral perception towards post abortion care there is need to conduct training on value clarification and attitude transformation among

nurses and conscientious objection. Using theory of change the study there recommends Nairobi County government to review its policy of PAC that is limiting to nurses. Studies has established that nurses can effectively provide post abortion care services to women in need of post abortion services.

### **5.3.1 Suggestions for further studies**

Further qualitative studies on nurses and clients experience should be conducted since this was largely quantitative and was only conducted in tier three facilities other comparative studies should be carried out in other public health facilities in Nairobi County and in other counties in Kenya. The target population was only nurses in the tier three health facilities and similar studies should be undertaken among the other trained health professionals.

A longitudinal study using other methods such as qualitative should be applied in future studies. Future studies should also consider inclusion of clients as respondents as well as evaluation of post abortion care outcomes.

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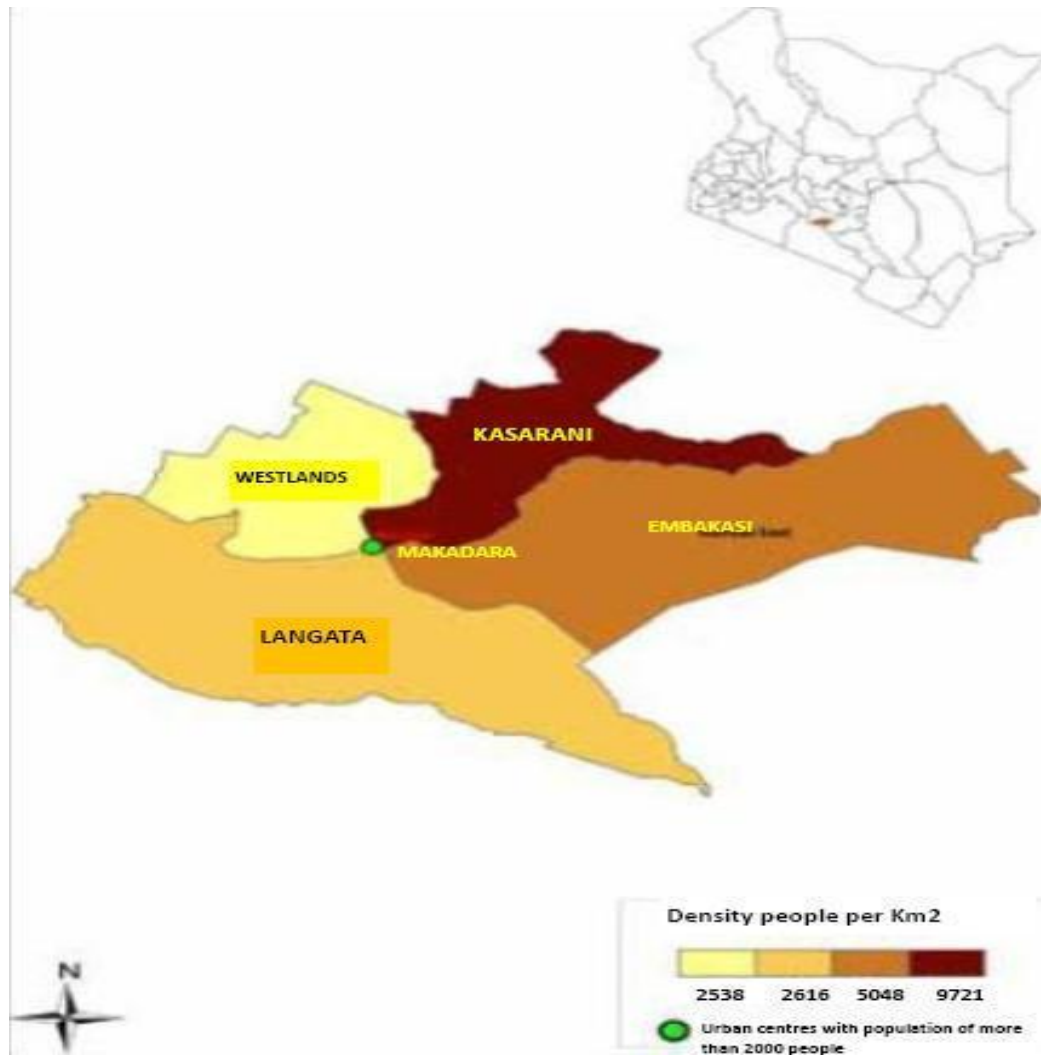
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## APPENDICES

### Appendix I: Map of Study Area



## Appendix II: Consent

### CONSENT FORM

Serial

No. \_\_\_\_\_

#### Dear Respondent.

Ref: “**knowledge and perception of nurses towards post abortion care practices in tier three health facilities in Nairobi County-Kenya**”.

I am a post graduate student from Kenyatta University undertaking an academic study on Knowledge and Perception of Nurses towards Post Abortion Care practice In Tier Three Health Facilities in Nairobi County-Kenya.

The information will be used by the Ministry of Health and County Government in their efforts to reduce maternal mortality.

#### Procedures to be followed

Participation in this study will require that I ask you some questions. I will record the information from you in a questionnaire. You have the right to refuse participation in this study.

Please remember that participation in the study is voluntary. You may ask questions related to the study at any time.

You may refuse to respond to any questions and you may stop an interview at any time. You may also stop being in the study at any time without any consequences.

#### Discomfort and risks

Some of the questions you will be asked are on intimate subject and may be embarrassing or make you uncomfortable. If this happens, you may refuse to answer these questions if you so choose. You may also stop the interview at any time. The interview will be approximately half an hour.

#### Benefits

If you participate in this study you will help us to learn about Post abortion care in public health facilities in Nairobi County. Can improve the health of women and to improve access and quality for Post abortion care

#### Reward

If you agree to participate in this study, lunch will be provided.

**Confidentiality**

The interviews and examinations will be conducted in a private setting in the health facility. Your name will not be recorded on the questionnaire. The questionnaires will be kept in a locked cabinet for safekeeping. Everything will be kept private

**Contact Information**

If you have any questions you may contact my supervisors on:

- 1. Prof. MargretKerakamnyanchoka2000@yahoo.com.
- 2. Dr. Otieno. G. O, PhDotienogo@gmail.com.
- 3. Or the Kenyatta University Ethical Review Committee Secretariat on:  
 chairman. kuerc@ku.ac.ke.,secretary.kuerc@ku.ac.ke.  
 ercku2008@wail.com.

**Participant’s statement**

The above information regarding my participation in the study is clear to me. I have been given a chance to ask questions and my questions have been answered to my satisfaction. My participation in this study is entirely voluntary. I understand that my records will be kept private and that I can leave the study at any time. I understand that I will be consequences whether I decide to leave the study or not.

Name of participant-----

Signature or thumb print

Date

Investigator’s statement

I, the undersigned, have explained to the volunteer in a language s/he understands, the procedures to be followed in the study and the risks and benefits involved

Name of Interviewer-----

\_\_\_\_\_

Interviewer Signature

\_\_\_\_\_

Date

Name of the Institution.....Date.....

**Appendix III: Key Informant Interview Guide**

Serial No. \_\_\_\_\_.

FACILITY .....

Key informant interview guide

1. Do your facility offer post abortion care? (Yes/No)
  
2. Which post abortion care services do you offer?
  
3. Which post abortion services don't you offer?
  
4. Why don't you offer these post abortion care services?
  
5. Do nurses participate in post abortion care services? (Yes/No)
6. Which post abortion care services do they perform?
  
7. Are there Post abortion care services they do not perform?
  
8. Why don't they perform these post abortion care services?

**Appendix IV: Self-Administered Questionnaire**

Serial No. \_\_\_\_\_.

FACILITY .....

**SECTION A: SOCIO-DEMOGRAPHIC DATA**

Please tick the appropriate answer

1. Gender
  - i. Male
  - ii. Female
2. Kindly indicate your current Age .....
3. For how long have you been employed as a nurse in years.....
4. Education level
  - i. Certificate
  - ii. Diploma
  - iii. Higher Diploma
  - iv. Degree
  - v. Masters
5. Post abortion care Training
  - i. Pre-service
  - ii. In-service
  - iii. On-Job Training
  - iv. None

## SECTION B: POST ABORTION CARE PRACTICES

Indicate how you would rate the following statements using the following scale:

1= Low, 2 =Moderate, 3=High

	Post Abortion Care Practice	Low	Moderate	High
1	To what extent do you participate in reproductive health community outreach services?			
2	To what extent do you integrate post abortion services with other Reproductive Health Services?			
3	To what extent have you been trained on post abortion care?			
4	To what extent do you provide guidance and counselling on prevention of unwanted pregnancy to women seeking abortion care services?			
5	To what extent do you provide post abortion services to women seeking abortion services?			
6	To what extent do you offer post abortion care pain relief to women seeking abortion services?			
7	To what extent does the hospital procure equipment and supplies for post abortion care?			
8	To What extent does the hospital adhere to infection prevention protocols in regards to post abortion care			
9	To what extent does the hospital apply the current technology in management of post abortion services?			
10	To what extent does the hospital allocate resources to post abortion care?			
11	To what extent are you conversant to post abortion laws and guidelines as stipulated in the constitution?			
12	To what extent does the hospital adhere to the law when handling post abortion related cases?			
13	To what extent is the public aware of the post abortion services offered in this facility.			
14	To what extent are the existing policies on referral on unsafe abortion cases adhered?			

**SECTION C: NURSES KNOWLEDGE**

**Kindly state your opinion on the following statements to the best of your knowledge concerning PAC as an important strategy to reduce maternal mortality.**

	<b>Statements</b>	<b>True</b>	<b>False</b>
1	Unsafe abortion is among the five leading causes of maternal death in Kenya		
2	Post abortion care is a lifesaving procedure		
3	Most pregnancies are unwanted, and therefore abortions, are preventable		
4	We have the technology to make quality PAC services much more accessible		
5	Death from abortion complications is preventable		
6	The following are complications from unsafe (Incomplete abortion, Sepsis, Shock, Cervical/vaginal lacerations and Uterine laceration/perforation		
7	Treatment that post-abortion complication sometimes fails to cure and the patient who must be retreated.		
8	Nurses are allowed to offer post abortion care under the Kenyan Laws, standards and guidelines.		
9	According to World Health Organisation, legally restricting abortions reduces the number of abortions that occur in a country		
10	If a woman needs emergency post abortion care to save her life, a nurse must provide it even if he/she does not wish to		
11	Use of misoprostol to evacuate the uterus after early pregnancy failure can completely evacuate the uterus 50 to 96 percent of the time if given orally or vaginally, and is more effective than expectant management in reducing the need for surgical intervention		
12	WHO defines unsafe abortion as a procedure for terminating an unwanted pregnancy either by persons lacking the necessary skills or in an environment lacking the minimal medical standards, or both		
13	59 % of all unsafe abortions in Africa are estimated to occur to women aged less than 25 years		
14	Vacuum aspiration (VA) (electric, foot pump, manual vacuum aspiration) is as effective as sharp curettage for the treatment of incomplete abortion.		
15	Manual vacuum aspiration is associated with less bleeding than sharp curettage.		
16	Use of IUDs in the immediate post abortion period is safe.		

17	Counseling partners of PAC clients on follow-up care, fertility return and contraception may increase uptake of contraception, psychological support for PAC clients.		
18	Most clients would like their partners to be present during counselling and be informed on the condition, treatment, follow up contraception and their usage.		
19	Training midwives to counsel PAC patients on FP, STIs/HIV and nutrition (in addition to midwives undertaking other aspects of PAC, including emergency treatment using MVA) can increase counseling on these topics		
20	Post-abortion counselling, education and family planning services should be offered promptly, which will also help to avoid repeat abortions		

**Kindly answer the following statements to the best of your knowledge concerning Post Abortion Care.**

**D=Disagree U=Uncertain A= Agree**

<b>Statements</b>	<b>D</b>	<b>U</b>	<b>A</b>
Nurses should provide enabling environment for Post abortion care			
Nurses should offer High quality post abortion education to women and in the community			
Nurses should offer high-quality counselling related to post abortion care			
Nurses should effectively provide integrated post abortion care			
When a patient in pain is receiving analgesic medication on a “p.r.n.” (when necessary) basis, it is appropriate for the patient to request pain medications before the pain returns.			
Nurses should Provide immediate post-abortion contraception (including IUDs, implants, DMPA)			
Nurses should provide high quality sexually transmitted infection and reproductive tract infection care to post abortion care clients.			
Nurses should offer screening and referral for reproductive tract cancers to post abortion care clients			
Nurses should provide pre-conception care to Post abortion clients.			

**SECTION D: NURSES PERCEPTION****Kindly answer the following statements on Post Abortion Care****Key: 1: Disagree 2: Neutral: A=Agree**

		<b>D</b>	<b>Neutral</b>	<b>A</b>
1	Post abortion clients should be treated with full respect for her individual dignity.			
2	I am comfortable providing Post Abortion Care services consistent with personal and professional ethics and standards.			
3	Women seeking Post Abortion Care should be treated in a non-judgmental and non-discriminatory manner.			
4	I am willing to refer patients inquiring about post abortion care service to other health care providers			
5	If a woman needs emergency post abortion care, a nurse must provide it even if he or she doesn't want.			
6	If a nurse objects to performing post abortion care due to religious beliefs, she or he must refer the woman to someone who can.			
7	Post abortion care should be provided in private and be confidential			

## Appendix V: Research Proposal Approval- KU-Graduate School

file W97



KENYATTA UNIVERSITY  
GRADUATE SCHOOL

E-mail: [dean-graduate@ku.ac.ke](mailto:dean-graduate@ku.ac.ke)Website: [www.ku.ac.ke](http://www.ku.ac.ke)

P.O. Box 43844, 00100  
NAIROBI, KENYA  
Tel. 810901 Ext. 57530

Internal Memo

FROM: Dean, Graduate School

DATE: 14<sup>th</sup> December, 2014

TO: Mr. Jeremiah Mainah  
C/o Environmental Health Dept.  
Kenyatta University

REF: P57/20433/10

### SUBJECT: APPROVAL OF RESEARCH PROPOSAL

This is to inform you that Graduate School Board at its meeting of 10<sup>th</sup> December, 2014 approved your Research Proposal for the M. Env. Degree, entitled "Low Intake of Comprehensive Abortion Care in Public Health Facilities in Nairobi County".

You may now proceed with your Data collection, subject to clearance with the Principal Secretary, Higher Education, Science and Technology.

As you embark on your data collection, please note that you will be required to submit to Graduate School completed supervision Tracking Forms per semester. The form has been developed to replace the progress Report Forms. The Supervision Tracking Forms are available at the University's Website under Graduate School webpage downloads.

Thank you.

**JOHN M. OBONGI**  
**FOR: DEAN, GRADUATE SCHOOL**

c.c. Chairman, Environmental Health Dept.

Supervisors:

1. Dr. Margaret Keraka  
C/o Environmental Health Dept.  
KENYATTA UNIVERSITY
2. Dr. Otieno G. O.  
C/o Health Management & Informatics Dept.  
KENYATTA UNIVERSITY

JMO/cao

*Committed to Creativity, Excellence & Self-Reliance*

Appendix VI: Research Protocol Approval- KU Ethics Review Committee

ETHICS REVIEW COMMITTEE

Email: chairman.kuerc@ku.ac.ke  
secretary.kuerc@ku.ac.ke  
erc@ku.ac.ke  
Website: www.ku.ac.ke

P. O. Box 43844 - 00100 Nairobi  
Tel: 8710901/12  
Fax: 8711242/8711576

Our Ref: KU/R/COMM/51/492

Date: 9<sup>th</sup> July, 2015

Jeremiah Mainah  
Kenya University,  
P.O Box 43844, Nairobi

Dear Mainah

RE: APPLICATION NUMBER PKU/357/1334- "UPTAKE OF COMPREHENSIVE ABORTION CARE IN PUBLIC HEALTH FACILITIES IN NAIROBI COUNTY"

1. IDENTIFICATION OF PROTOCOL

The application before the committee is with a research topic "uptake of comprehensive abortion care in public health facilities in Nairobi County" received on 4<sup>th</sup> May, 2015 and discussed on 1<sup>st</sup> July, 2015.

2. APPLICANT

Jeremiah Mainah, Department of Environmental Health

3. STUDY SITE

Nairobi County, Kenya

4. DECISION

The committee has considered the research protocol in accordance with the Kenya University Research Policy (section 7.2.1.3) and the Kenya University Ethics Review Committee Guidelines AND APPROVED that the research may proceed for a period of ONE year from 9<sup>th</sup> July, 2015.

5. ADVICE/CONDITIONS

- i. Progress reports are submitted to the KU-ERC every six months and a full report is submitted at the end of the study.
- ii. Serious and unexpected adverse events related to the conduct of the study are reported to this board immediately they occur.
- iii. Notify the Kenya University Ethics Committee of any amendments to the protocol.
- iv. Submit an electronic copy of the protocol to KUERC.

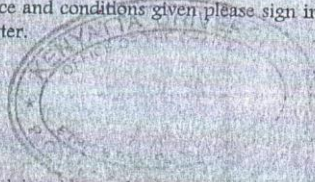
If you accept the decision reached and advice and conditions given please sign in the space provided below and return to KU-ERC a copy of the letter.

PROF. NICHOLAS K. GIKONYO  
CHAIRMAN ETHICS REVIEW COMMITTEE

I, Jeremiah Mainah, accept the advice given and will fulfill the conditions therein.

Signature: [Signature] Dated this day of 24/8 2015.

cc: Vice-Chancellor



## Appendix VII: Research Authorisation- NACOSTI



### NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone: +254-20-2213471,  
2241349,3310571,2219420  
Fax: +254-20-318245,318249  
Email: dg@nacosti.go.ke  
Website : www.nacosti.go.ke  
When replying please quote

NACOSTI, Upper Kabete  
Off Waiyaki Way  
P.O. Box 30623-00100  
NAIROBI-KENYA

Ref. No. **NACOSTI/P/18/5883/4997**

Date: **13<sup>th</sup> March, 2019**

Jeremiah Waithaka Mainah  
Kenyatta University  
P.O. Box 43844-00100  
**NAIROBI**

#### **RE: RESEARCH AUTHORIZATION**

Following your application for authority to carry out research on "*Factors influencing the role of nurses in post abortion care in tier three health facilities in Nairobi County - Kenya*" I am pleased to inform you that you have been authorized to undertake research in **Nairobi County** for the period ending **4<sup>th</sup> September, 2016**.

You are advised to report to **the County Commissioner, the County Director of Education and the County Director of Health Services, Nairobi County** before embarking on the research project.

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit **a copy** of the final research report to the Commission within **one year** of completion. The soft copy of the same should be submitted through the Online Research Information System.

  
**GODFREY P. KALERWA MSc., MBA, MKIM**  
**FOR: DIRECTOR-GENERAL/CEO**

Copy to:

The County Commissioner  
Nairobi County.

The County Director of Education

## Appendix VIII: Research Permit

### 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 and any rights thereunder are non-transferable.
3. The Licensee shall inform the 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 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  
P.O. Box 30623 - 00100, Nairobi, Kenya  
TEL: 020 400 7000, 0713 788787, 0735 404245  
Email: dg@nacosti.go.ke, registry@nacosti.go.ke  
Website: www.nacosti.go.ke



REPUBLIC OF KENYA



National Commission for Science,  
Technology and Innovation

RESEARCH LICENSE

Serial No.A 23598

CONDITIONS: see back page

THIS IS TO CERTIFY THAT:  
**MR. JEREMIAH WAITHAKA MAINA**  
of MOUNT KENYA UNIVERSITY, 2183-202  
NAIROBI, has been permitted to conduct  
research in *Nairobi County*

on the topic: **FACTORS INFLUENCING  
THE ROLE OF NURSES IN POST  
ABORTION CARE IN TIER THREE HEALTH  
FACILITIES IN NAIROBI COUNTY-KENYA**

for the period ending:  
**4th September, 2016**

Permit No : NACOSTI/P/15/5883/4997  
Date Of Issue : 13th March, 2019  
Fee Received : Ksh 1,000



.....  
Applicant's

.....  
Director General

## Appendix IX: Research Authorisation- Nairobi County

### NAIROBI CITY COUNTY

Director,  
Telephone: +254 20 2221166  
+25420 2224281  
Website: www.nairobi.go.ke



City Hall,  
P.O. Box 30298- 00100,  
Nairobi,  
KENYA.

#### EDUCATION, YOUTH, CHILDREN, SPORTS, GENDER & SOCIAL SERVICES SECTOR

REF: GL/NC/141/VOL. VI/103

18<sup>th</sup> March, 2019


Jeremiah Waithaka Mainah  
Kenyatta University  
P.O. Box 243844 - 00100  
NAIROBI

#### RE: RESEARCH AUTHORIZATION

Following your application to carry out Research and Subsequent approval by **National Commission for Science, Technology and Innovation vide letter Ref: NACOSTI/P/18/5883/4997 dated 13<sup>th</sup> March, 2019**

I am pleased to inform you that authority has been granted to you to carry out research on **“Factors influencing the role of nurses in post abortion care in tier three health facilities in Nairobi County, Kenya”**.

On conclusion of the study, you are expected to submit a copy of the research findings.

  
**GEORGE P. LETEMA**  
**CHIEF ADVISOR TO SCHOOLS**

Copy to Chief officer- Education, Social Services and Gender