SATISFACTION LEVELS WITH MATERNITY SERVICES AMONG POSTNATAL WOMEN ATTENDING PUBLIC HOSPITALS IN NAIROBI CITY COUNTY, KENYA

OKARI MASEME GEOFFREY

A THESIS SUBMITTED IN FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF A DEGREE OF MASTER OF SCIENCE IN HEALTH MANAGEMENT IN THE SCHOOL OF PUBLIC HEALTH OF KENYATTA UNIVERSITY

NOVEMBER, 2018
DECLARATION

This thesis is my own original work and has not been presented for the award of a degree in any other University.

Signature.......................................... Date.............................................

Okari Maseme Geoffrey

Q140/CTY/PT/29049/2014

Supervisors’ approval

This thesis has been submitted for review with our approval as the Candidate’s University Supervisors.

1. Signature.......................................... Date.............................................

Prof Margaret Keraka

Dean, School of Public Health

2. Signature.......................................... Date.............................................

Dr Kenneth Rucha

Lecturer, Department of Health Management and Informatics
DEDICATION

This thesis is dedicated to my Dad Patrick and Mum Peris, my brothers and sisters for their support, humble time, prayer and words of motivation.
ACKNOWLEDGEMENT

First and foremost, I would like to thank the God Almighty for giving me good health, source of knowledge and wisdom through which the completion of this thesis was enhanced.

My sincere gratitude goes to my supervisors, Prof Margaret Keraka and Dr Kenneth Rucha for their generous contributions, positive criticisms, advice and commitment in guiding me through the entire process of developing this thesis.

Special appreciation goes to Kenyatta University, School of Public Health and Department of Health Management and Informatics, especially my lecturers for their maximum cooperation, extra devotion and help to successfully undertake this course.

I am also thankful for the invaluable input and cooperation of the senior management, post-natal staff and patients of Kenyatta National Hospital, Mbagathi District Hospital, Pumwani Maternity Hospital and Mama Lucy Kibaki Hospital.

Last but not least, I am greatly indebted to my family, friends and relatives for their financial, moral and spiritual support without which this thesis could not have been completed successfully.

I would finally wish to pay tribute to all those people who in one way or the other participated in the completion of this piece of academic work.

God bless you all.
# TABLE OF CONTENTS

DECLARATION .................................................................................................................. ii
DEDICATION .................................................................................................................. iii
ACKNOWLEDGEMENT ..................................................................................................... iv
LIST OF TABLES ............................................................................................................... viii
LIST OF FIGURES ........................................................................................................... ix
ABBREVIATIONS AND ACRONYMS ................................................................................ x
OPERATIONAL DEFINITION OF TERMS ....................................................................... xi
ABSTRACT ....................................................................................................................... xii

## CHAPTER ONE: INTRODUCTION .................................................................................. 1

1.1 Background of the study ............................................................................................ 1
1.2 Problem statement ...................................................................................................... 3
1.3 Study justification ....................................................................................................... 4
1.4 Research questions .................................................................................................... 5
1.5 Null hypothesis .......................................................................................................... 5
1.6 Research objectives .................................................................................................. 6
    1.6.1 General objective ............................................................................................... 6
    1.6.2 Specific objectives ............................................................................................ 6
1.7 Significance and anticipated output ........................................................................... 6
1.8 Delimitations of the study ......................................................................................... 7
1.9 Theoretical framework ............................................................................................. 7
1.10 Conceptual framework ........................................................................................... 8

## CHAPTER TWO: LITERATURE REVIEW .................................................................... 11

2.1 Global free maternal health services ......................................................................... 11
2.2 Overview of free maternal healthcare services in Kenya ....................................... 13
2.3 Individual characteristics and satisfaction with maternity care services ............... 15
2.4 Health care provider related factors and satisfaction with maternal care ............. 17
2.5 Health system factors and satisfaction with maternity services ............................. 18
2.6 Obstetric experience factors and satisfaction with maternity services ................. 20
2.7 Summary of literature review and existing gaps ..................................................... 22

## CHAPTER THREE: MATERIALS AND METHODS ...................................................... 23

3.1 Study design ............................................................................................................. 23
3.2 Study variables ........................................................................................................ 23
# CHAPTER THREE

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.2.1</td>
<td>Independent variables</td>
<td>23</td>
</tr>
<tr>
<td>3.2.2</td>
<td>Dependent variable and its measurement</td>
<td>23</td>
</tr>
<tr>
<td>3.3</td>
<td>Study location</td>
<td>25</td>
</tr>
<tr>
<td>3.4</td>
<td>Study population</td>
<td>25</td>
</tr>
<tr>
<td>3.4.1</td>
<td>Inclusion criteria</td>
<td>25</td>
</tr>
<tr>
<td>3.4.2</td>
<td>Exclusion criteria</td>
<td>26</td>
</tr>
<tr>
<td>3.5</td>
<td>Sampling techniques and sample size determination</td>
<td>26</td>
</tr>
<tr>
<td>3.5.1</td>
<td>Sampling procedures and techniques</td>
<td>26</td>
</tr>
<tr>
<td>3.5.2</td>
<td>Sample size determination</td>
<td>27</td>
</tr>
<tr>
<td>3.6</td>
<td>Research instruments</td>
<td>28</td>
</tr>
<tr>
<td>3.7</td>
<td>Pre-Testing of research instruments</td>
<td>28</td>
</tr>
<tr>
<td>3.7.1</td>
<td>Validity</td>
<td>29</td>
</tr>
<tr>
<td>3.7.2</td>
<td>Reliability</td>
<td>29</td>
</tr>
<tr>
<td>3.8</td>
<td>Data collection techniques</td>
<td>29</td>
</tr>
<tr>
<td>3.9</td>
<td>Data management and analysis</td>
<td>30</td>
</tr>
<tr>
<td>3.10</td>
<td>Ethical considerations</td>
<td>31</td>
</tr>
</tbody>
</table>

# CHAPTER FOUR: RESULTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1</td>
<td>Socio-demographic characteristics of respondents</td>
<td>32</td>
</tr>
<tr>
<td>4.2</td>
<td>Patient level of satisfaction</td>
<td>33</td>
</tr>
<tr>
<td>4.3</td>
<td>Individual patient characteristics associated with maternal satisfaction</td>
<td>34</td>
</tr>
<tr>
<td>4.4</td>
<td>Healthcare provider related factors</td>
<td>37</td>
</tr>
<tr>
<td>4.4.1</td>
<td>Patient awareness on provision of free maternity</td>
<td>37</td>
</tr>
<tr>
<td>4.4.2</td>
<td>Sources of information on free maternity</td>
<td>38</td>
</tr>
<tr>
<td>4.4.3</td>
<td>Association of provider-related factors with maternal satisfaction</td>
<td>39</td>
</tr>
<tr>
<td>4.5</td>
<td>Health system factors</td>
<td>40</td>
</tr>
<tr>
<td>4.5.1</td>
<td>Service payment in public hospitals</td>
<td>40</td>
</tr>
<tr>
<td>4.5.2</td>
<td>Choice of facility for delivery</td>
<td>41</td>
</tr>
<tr>
<td>4.5.3</td>
<td>Provision of warm water for bathing</td>
<td>42</td>
</tr>
<tr>
<td>4.5.4</td>
<td>Waiting time for admission to maternity/labour wards</td>
<td>42</td>
</tr>
<tr>
<td>4.5.5</td>
<td>Association of health system factors with maternal satisfaction</td>
<td>43</td>
</tr>
<tr>
<td>4.6</td>
<td>Obstetric experience factors</td>
<td>45</td>
</tr>
<tr>
<td>4.6.1</td>
<td>Antenatal care attendance</td>
<td>45</td>
</tr>
<tr>
<td>4.6.2</td>
<td>Mode of delivery</td>
<td>46</td>
</tr>
<tr>
<td>4.6.3</td>
<td>Association of obstetric experience factors with maternal satisfaction</td>
<td>46</td>
</tr>
</tbody>
</table>
CHAPTER FIVE: DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Discussions
5.1.1 Individual patient characteristics
5.1.2 Provider related factors
5.1.3 Health system factors
5.1.4 Obstetric experience factors
5.1.5 Summary of main findings

5.2 Conclusions

5.3 Recommendations
5.3.1 Recommendations from the study
5.3.2 Recommendations for further study

REFERENCES

APPENDICES

Appendix 1: Consent Form
Appendix 2: Assent form
Appendix 3: Research questionnaire for postnatal mothers
Appendix 4: Interview guide for Focused Group Discussions
Appendix 5: Interview schedule for the Key Informant Interview
Appendix 6: Research approval from Kenyatta University Graduate School
Appendix 7: Research authorization from Kenyatta University Graduate School
Appendix 8: Ethical clearance from KNH-UoN Ethics and Research Committee
Appendix 9: Research authorization from National Council for Science, Technology and Innovation
Appendix 10: Research permit from National Council for Science, Technology and Innovation
Appendix 11: Research authorization from Ministry of Education
Appendix 12: Letter of permission from Kenyatta National Hospital
Appendix 13: Nairobi County Map
LIST OF TABLES

Table 3.1: Satisfaction indicators ..................................................................................................24
Table 3.2: Proportion of respondents selected from each hospital ...........................................28
Table 4.1: Socio-demographic characteristics of respondents ..................................................33
Table 4.2: Patient level of satisfaction .........................................................................................34
Table 4.3: Relationship between individual patient characteristics and level of maternal satisfaction ..................................................................................................................37
Table 4.4: Relationship between provider related factors and level of maternal satisfaction .................................................................................................................................40
Table 4.5: Relationship between health system factors and level of maternal satisfaction ........................................................................................................................................45
Table 4.6: Antenatal care attendance ............................................................................................45
Table 4.7: Relationship between mode of delivery and level of maternal satisfaction .................46
Table 4.8: Relation between obstetric experience factors and level of maternal satisfaction .................................................................................................................................47
LIST OF FIGURES

Fig 1.1: Conceptual framework.................................................................10

Fig 4.1: Awareness of free maternity among respondents..........................38

Fig 4.2: Sources of information on free maternity among respondents...........38

Fig 4.3: Payment of services among respondents........................................41

Fig 4.4: Choice of facility for delivery.......................................................41

Fig 4.5: Provision of warm water for bathing..............................................42

Fig 4.6: Waiting time for admission...........................................................43
### ABBREVIATIONS AND ACRONYMS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANC</td>
<td>Antenatal Care</td>
</tr>
<tr>
<td>CS</td>
<td>Caesarean Section</td>
</tr>
<tr>
<td>FGD</td>
<td>Focused Group Discussion</td>
</tr>
<tr>
<td>FMS</td>
<td>Free Maternity Services</td>
</tr>
<tr>
<td>GoK</td>
<td>Government of Kenya</td>
</tr>
<tr>
<td>IMR</td>
<td>Infant Mortality Rate</td>
</tr>
<tr>
<td>KDHS</td>
<td>Kenya Demographic and Health Survey</td>
</tr>
<tr>
<td>KII</td>
<td>Key Informant Interview</td>
</tr>
<tr>
<td>KNBS</td>
<td>Kenya National Bureau of Statistics</td>
</tr>
<tr>
<td>KNH</td>
<td>Kenyatta National Hospital</td>
</tr>
<tr>
<td>KNHRC</td>
<td>Kenya National Human Rights Commission</td>
</tr>
<tr>
<td>MCH</td>
<td>Maternal and Child Health</td>
</tr>
<tr>
<td>MMR</td>
<td>Maternal Mortality Rate</td>
</tr>
<tr>
<td>NACOSTI</td>
<td>National Council for Science, Technology and Innovation</td>
</tr>
<tr>
<td>PNC</td>
<td>Postnatal Care</td>
</tr>
<tr>
<td>SBAs</td>
<td>Skilled Birth Attendants</td>
</tr>
<tr>
<td>SDGs</td>
<td>Sustainable Development Goals</td>
</tr>
<tr>
<td>SPSS</td>
<td>Statistic Package for Social Sciences</td>
</tr>
<tr>
<td>SVD</td>
<td>Spontaneous Vaginal Delivery</td>
</tr>
<tr>
<td>TBAs</td>
<td>Traditional Birth Attendants</td>
</tr>
<tr>
<td>UNDP</td>
<td>United Nations Development Programme</td>
</tr>
<tr>
<td>UNFPA</td>
<td>United Nations Population Fund</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organization</td>
</tr>
</tbody>
</table>
OPERATIONAL DEFINITION OF TERMS

**Free Maternity Services** refers to provision of cost free care during, immediately before and after childbirth in a health facility.

**Maternal death** refers to the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental means.

**Patient satisfaction** refers to a personal evaluation of the outcome resulting from a particular healthcare service and the care providers collectively.

**Post-natal woman** refers to a mother within the first six weeks after delivery.

**Quality maternal care** refers to provision of a minimum level of care to all pregnant women and their new born babies, and higher level of care to those who need it; obtaining the best possible medical outcome of the mother and baby; providing care which satisfies users and providers and maintaining sound managerial and financial performance.

**Satisfaction level** refers to a measure of how healthcare services provided are perceived to meet or surpass patient expectations.

**Skilled birth attendants** refer to people who have been proficiently trained on necessary midwifery skills to manage normal deliveries and diagnose, manage or refer obstetric complications.

**Utilization of maternity services** refers to the quantity of healthcare services used by women during pregnancy and child birth in health facilities within a specified time period.
ABSTRACT

Globally, the rate of maternal mortality is unacceptably on the rise. A considerable number of women are dying from pregnancy or child birth related complications across the world. Many initiatives have been intensified on policy intervention to curb the high cases of maternal mortality. Delivery in unhygienic conditions without the assistance of a skilled birth attendant may lead to adverse health outcomes. Maternal mortality rates in Kenya remain high at 362 per 100,000 live births. Only 62% of women deliver under the care of a skilled provider indicating a deficiency in the quality of care. The government of Kenya introduced the policy of Free Maternity Services to all women attending public health facilities by June 2013 to increase access to skilled care delivery and help reduce the rate of maternal mortality and morbidity in the country. The study sought to establish the satisfaction levels with free maternity services among postnatal women attending public hospitals in Nairobi City County. The study mainly focused on the individual client characteristics, the health provider related factors, the health system factors and the obstetric experiences associated with maternal satisfaction. The study adopted a descriptive cross-sectional facility-based study design which encompassed use of both quantitative and qualitative data collection methods. Quantitative data was collected using pretested questionnaires administered to post-natal women by trained research assistants. Qualitative data was collected through Focused Group Discussion sessions with patients and Key Informant Interviews with care providers. A sample size of 417 postnatal mothers was proportionally selected from each hospital through systematic random sampling and interviewed. Kenyatta National Hospital, Pumwani maternity, Mbagathi and Mama Lucy Kibaki hospitals were purposively selected. Necessary approvals were sought from relevant authorities and informed consent obtained from research participants prior to data collection. Descriptive data was analyzed using Statistical Package for Social Sciences version 20.0 in conjunction with Microsoft Excel program. Frequency distribution tables, graphs and pie-charts were used for data presentation. Qualitative data was presented as direct quotes or narrations from respondents and triangulated with quantitative results. Inferential statistics were calculated using Chi-Square tests (p<0.05) done at 95% confidence interval to establish the association between study variables. The study found out that the overall satisfaction level of respondents was 62.4%. Chi-square analysis revealed significant statistical association between age (p=0.001), educational level (p=0.001), occupation (p=0.002), parity (p=0.001), income (p=0.001), provision of patient privacy (p=0.001), involvement of patients in decision making (p=0.007), listening to patient issues attentively (p=0.003), availability of staff (p=0.014), facility cleanliness (p=0.002), availability of drugs (p=0.006), sharing of beds (p=0.034), antenatal care advice (p=0.001), labour time (p=0.001) and pain management (p=0.001) with maternal satisfaction level. The study results indicated a sub-optimal maternal satisfaction level with maternity services among post-natal women attending public hospitals in Nairobi City County. These findings would assist key healthcare stakeholders to design strategic policies and initiatives to ensure sustenance of Free Maternity Services in the country. This would enable Human Resources for Health to provide services in an appealing treatment environment matched with adequate equipment, drugs and supplies. This would further ensure that the Free Maternity policy leads to improved quality of maternal service provision in all public hospitals thus increased satisfaction with care among women of reproductive age.
CHAPTER ONE: INTRODUCTION

1.1 Background of the study

Satisfaction with healthcare refers to a personal evaluation of healthcare services and the providers collectively (Sawyer et al, 2013). Getting views from patients may determine the outcome levels of their satisfaction and how best to provide quality healthcare. Patients provide the best possible source of information since they are the service consumers. Their views are useful in planning and evaluating satisfaction levels so as to improve the quality of care provided (Nyongesa et al, 2014). Patient satisfaction is an essential feature for maintenance of high client numbers. Maternal dissatisfaction may lead to poor maternal and child health outcomes due to reduced utilization of available health services (Momanyi et al, 2015).

Globally, the rate of maternal mortality (MMR) is unacceptably on the rise. A considerable number of women die from pregnancy or child birth related complications across the world (Shrestha, 2010). Delivery in unhygienic conditions without the assistance of a skilled birth attendant (SBA) may lead to adverse health outcomes. The developing countries from Asia and sub-Saharan Africa account for 99% of the annual 287,000 maternal deaths occurring during and following pregnancy and child birth. This accounts for 800 deaths per day that are attributed to pregnancy and birth related causes (WHO, 2014). Most of these mortalities are preventable through skilled care provided before, during and after childbirth.

There are still clear discrepancies in maternal mortality worldwide. Many studies have been carried out to define the nature of maternal health in the developing countries (Laura et al, 2013). Many sub-Saharan African countries face inadequate budgetary allocations and limited capacity to deliver quality health care to meet patients’ needs. Poor economic performance, poverty and increased population growth
leads to reduced growth in the health sectors. There is increased demand for health services thus need to mobilize public resources and explore new financial modalities to meet patient requirements (Dzakpasu et al, 2014).

Many initiatives have been intensified on policy intervention for curbing maternal mortality. There are national, regional and global health strategies and policies aimed at improving Maternal and Child Health (MCH). Despite the availability of these interventions to prevent neonatal, child and maternal deaths, MCH indicators remain unacceptably poor across the world (Abok, 2012). Still women are not fully making use of antenatal care services, health facility deliveries and postnatal care services hence not addressing the effect of high child and maternal mortality (GoK, 2010).

Kenya is a prime example of a country that is considered to be having a relatively high maternal mortality rate. This is significantly attributed to limited access to skilled birth attendants due to limited resources (Wamalwa et al, 2015). Maternal and child health is one of the priority areas being addressed by the government and especially the Ministry of Health. This prompted the government of Kenya to introduce the policy of Free Maternity Services (FMS) in all public health facilities as at 1st June 2013 (GoK, 2015). The policy aimed at breaking the financial barriers associated with access to and utilization of SBA services hence improving maternal outcomes.

The government of Kenya estimated that 7,700 women die annually resulting from pregnancy-related causes with 48% of these deaths occurring during delivery (GoK, 2010). The rate of maternal mortality averages at 362 deaths per 100,000 live births in Kenya (KNBS & ICF International, 2015). In Nairobi City County, the rate of maternal mortality stands at 212 per 100,000 live births. This was below the target of 147 per 100,000 live births by World Health Organization (UNFPA, 2014). For every female who dies in childbirth in the country, it is estimated that another extra 20-30
women suffer serious injuries or disability due to pregnancy or delivery related complications (GoK, 2013).

Maternal morbidity and mortality can be reduced through improved access to proper health care during gestation and delivery (Arba et al, 2016). The policy of Free Maternity Services has achieved tremendous results but more concerted efforts should be put in place to address the challenges associated with its implementation (Wamalwa et al, 2015). As evidenced from other studies especially in Ghana, there has been a confirmed increase in SBA deliveries. This was due to introduction of Free Delivery Care policy even though the quality of maternal healthcare service provision was compromised (Witter et al, 2011).

In Kenya, FMS policy in public hospitals has led to a 10% increase in SBA deliveries across the country with a 50% increase in other counties. The feasibility and appropriateness of the policy is still questionable as it might lead to a decline in the quality of health care services (KNHRC, 2015). This may further increase the reproductive health inequalities across the entire nation. The health sector reforms have been doing little to improve the quality service provision in public hospitals thus low patient satisfaction levels (Kamau, 2014).

1.2 Problem statement

On implementation of the policy of Free Maternity Services in Kenya, SBA deliveries increased from 44% in 2012 (Bourbonnais, 2013); to 62% and delivery in a health facility stemmed at 61% in 2014 (KNBS & ICF International, 2015). This was still below the World Health Organization target of 90% deliveries by SBA (WHO, 2014). Policies aimed at lowering user fees may not necessarily increase utilization of services if the quality of such services declines.
Over 50% of patients rated the quality of Kenyatta National Hospital (KNH) services to be poor and preferred public hospitals mainly due to lower costs and not because of good quality (Wanjau and Wangari, 2012). Provision of poor quality services leads to patient dissatisfaction. Dissatisfied patients may shy off from using services efficiently, whether provided without any cost (Ochako et al, 2011). The rate of maternal satisfaction with delivery health care services in public health facilities in Nairobi City County stood at 56% before the introduction of Free Maternity Services (Bitew et al, 2015). Assessment of patient satisfaction in public health sector has been largely ignored by administrators (Wangari et al, 2015).

The policy of Free Maternity Services has faced numerous challenges including delayed reimbursement of funds from the national government, overburdening of the limited infrastructure and existing staff (GoK, 2015). Since devolution, SBA deliveries in public health facilities in Nairobi City County increased from 92,369 in 2012 to 114,209 in 2015 (GoK, 2016). Despite this, there is little evidence-based investment in Human Resources for Health, delivery equipment, essential amenities, provision of drugs and supplies to meet increased service demand (Dzakpasu et al, 2014 & Nyongesa et al, 2014). Therefore, this research sought to investigate maternal satisfaction levels with Free Maternity Services among postnatal women attending public hospitals in Nairobi City County.

1.3 Study justification

There is scanty data concerning maternal satisfaction with utilization of Free Maternity Services in Kenya since its inception in June 2013. The approach to study one of the largest metropolitan counties with people from a diverse socio-economic culture is indicative of a special case of public health hospitals in Nairobi City County. These hospitals experience highest number of maternal deliveries in the
region. Pumwani maternity hospital bears the largest share followed by KNH, Mama Lucy Kibaki and Mbagathi District Hospital. They also provide comprehensive maternal healthcare services including referrals from lower levels. The postnatal care wards were ideal study settings for this research based on the need to capture maternal experiences prevailing delivery hence making the respondents more informative.

1.4 Research questions

i) What are the individual patient characteristics associated with maternal satisfaction level with Free Maternity Services among postnatal women attending public hospitals in Nairobi City County?

ii) What is the influence of healthcare provider related factors on maternal satisfaction level with Free Maternity Services among postnatal women attending public hospitals in Nairobi City County?

iii) What are the health-system factors influencing maternal satisfaction level with Free Maternity Services among postnatal women attending public hospitals in Nairobi City County?

iv) What are the obstetric-experience factors associated with maternal satisfaction level with Free Maternity Services among postnatal women attending public hospitals in Nairobi City County?

1.5 Null hypothesis

H0: Individual patient characteristics, healthcare provider related factors, health system factors and obstetric experience factors are not associated with maternal satisfaction levels among postnatal women utilizing Free Maternity Services in public hospitals in Nairobi City County.
1.6 Research objectives

1.6.1 General objective

To establish the level of maternal satisfaction with Free Maternity Services among postnatal women attending public hospitals in Nairobi City County

1.6.2 Specific objectives

i) To describe individual patient characteristics associated with maternal satisfaction level with Free Maternity Services among postnatal women attending public hospitals in Nairobi City County.

ii) To determine healthcare provider related factors influencing maternal satisfaction level with Free Maternity Services among postnatal women attending public hospitals in Nairobi City County.

iii) To identify the health-system factors influencing maternal satisfaction level with Free Maternity Services among postnatal women attending public hospitals in Nairobi City County.

iv) To determine the obstetric experiences associated with maternal satisfaction level with Free Maternity Services among postnatal women attending public hospitals in Nairobi City County.

1.7 Significance and anticipated output

This study targets to benefit mainly the Ministry of Health, public hospitals, other relevant stakeholders in health and women of reproductive age who are the beneficiaries of Free Maternity Services. This research would point out key areas that need attention to be addressed by policy makers, administrators and healthcare providers before injecting resources towards provision of maternity services in health facilities. The study findings would be valuable to other scholars and researchers as it would add knowledge to the existing literature and provide platforms for further
research. The study would establish the areas of the policy that need strengthening and supported to enhance decision making thus ensure patient satisfaction.

1.8 Delimitations of the study

The study was carried out in postnatal wards of the four selected public hospitals in Nairobi City County. The study was bound to the 417 sampled postnatal women utilizing free maternity services in KNH, Pumwani Maternity, Mbagathi District and Mama Lucy Kibaki Hospitals. This site was ideal because the county is the Capital City of the Country with high expectations of quality health care service provision.

At the same time, the sampled facilities provide comprehensive health care services and have a huge clientele base with a diverse socio-economic culture. This offered the researcher an opportunity to assess the extent to which their expectations with delivery experiences were met. This study results are only generalizable to level four to level six public hospitals providing Free Maternity Services with almost similar characteristics.

1.9 Theoretical framework

This study assumes consumer models of satisfaction with healthcare services. The study focuses on fulfillment and discrepancy theories (Jiang et al, 2009). The fulfillment theory states that a client’s satisfaction is determined by the outcome of the experiences undergone, and that the previous expectations are not important. Therefore, the obstetric experiences that mothers undergo during delivery determine their overall satisfaction. They further reveal that the objective outcome of a maternal delivery determines a mother’s satisfaction with Free Maternity Services.

On the other hand, discrepancy theories states that a client’s satisfaction is determined by the differences between what is expected and the actual perception of service
provision (Sawyer et al, 2013). This theory assumes that any deviation from what is expected creates client dissatisfaction, even if the outcome is more negative or more positive. When the consumers of a service perceive a deviation between expectations and the ultimate outcome, they magnify the deviation.

However, these theories suggest that patient characteristics have little significance in determining client satisfaction. The extent to which this situation measures satisfaction levels with labour and birthing experiences among clients is not clear (Hodnett et al, 2013). These theories of people’s satisfaction with healthcare were used to inform the development of measures of maternal satisfaction levels with Free Maternity Services in this study.

1.10 Conceptual framework

An individual’s satisfaction with healthcare involves a personal evaluation of healthcare services and the interaction with the care providers. This reflects the personal preferences of the individual, his or her expectations, and the realities with the experience of the care received (Sawyer et al, 2013). When the health system and the providers meet the individual’s expectations, it ensures increased satisfaction.

The health system factors affecting utilization include facility infrastructure, adequate skilled birth attendants thus reduced client waiting time, availability of drugs and other essential supplies, readily available equipment, facility overall cleanliness, provider attitudes and behaviours towards clients; and adequacy of other essential amenities. When the quality of the services is perceived to be high, clients are satisfied with the service hence influencing the service utilization rate.

Also the obstetric experience that a mother undergoes during child birth determines where to deliver their subsequent pregnancies. A positive outcome of delivery boosts
mothers’ level of satisfaction because that is their ultimate goal. However, a planned status of pregnancy plays a larger part in this case.

Dissatisfaction may be associated with poor postnatal psychological adjustment, preference of caesarean section to normal delivery, a higher chance of future abortions, more negative feelings towards new-born and breast-feeding problems. From other researches, individual patient factors show inconsistent association with the levels of satisfaction with maternity services. Middle-aged women have higher rates of satisfaction than the other reproductive age brackets (Babalola et al, 2009).

As you climb up the educational ladder, the rates of utilization increases due to increased level of awareness and knowledge on the importance of delivering under a skilled birth attendant. Education empowers women in terms of employability thus increases their income status. They can access higher quality maternal healthcare services hence increased level of maternal satisfaction with Free Maternity Services.
The conceptual framework

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Intervening variable</th>
<th>Dependent variables</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Individual characteristics</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Socio-demographic and economic factors such as age, educational level, marital status, income, occupation, parity and religion</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Care provider factors |                      |                     |
| Staff respect and privacy | Listening to client issues | Decision making |
| Provider friendliness, helpfulness, support |

| Health-system factors |                      |                     |
| Facility infrastructure | Facility cleanliness | Equipment and drugs |
| Essential amenities | Waiting time | Staff availability and skills |

| Obstetric experience factors |                      |                     |
| Mode of delivery | Outcome of delivery | ANC advice |
| Labour time | Pain management |                     |

Satisfaction level
- Tangibility
- Reliability
- Responsiveness
- Assurance
- Empathy

Figure 1.1: Conceptual framework

Source: Author, (2016)
CHAPTER TWO: LITERATURE REVIEW

2.1 Global free maternal health services

Globally, the rate of maternal mortality is unacceptably on the rise. It is approximated that daily, about 800 women die from complications related to pregnancy or child birth worldwide (Bitew et al, 2015). In 2010, there were about 287,000 global maternal deaths with 99% of these occurring in the developing countries of Asia and Africa. Maternal mortality in Sub-Saharan Africa is one of the highest, averaging at 686 per 100,000 live births (WHO, 2014). Mostly, the common clinical causes of global maternal deaths include haemorrhage, eclampsia, obstructed labour, anaemia, abortion and hypertensive disorders (Quansah, 2013).

The reduction of maternal and child mortality and morbidity rate is one of the key targets of achieving the Sustainable Development Goal (SDG) number 3 of ensuring global health and wellbeing (UNDP, 2015). Developing countries have adopted measures to reduce the increasing rates of maternal and child mortality including free maternity. In the more developed countries, SBA rate is about 99.5% whereas that of Africa is 46.5% (Esena et al, 2013). The World Health Organization advocates for utilization of SBA at every birth to improve delivery outcomes and recommends assessment of women’s satisfaction to promote the quality and effectiveness of health care delivery (WHO, 2014).

Ghana adopted the policy of free maternity services in public hospitals in 2008. By then, the utilization rate of SBA was 59% well below the World Health Organization target of 85% by 2010 (Esena et al, 2013). The policy led to a steady rise in the number of facility-based deliveries from about 300,000 in 2007 to 500,000 in 2011. In
the New Juaben Municipality, the policy achieved tremendous results including reduced maternal mortality rates (Ameyaw, 2011).

The introduction of the policy ensured pregnant women with complications arrived in health facilities earlier in Ghana. This was accompanied with very poor quality of health care to clients leading to low utilization rates as well as low satisfaction levels (Tornui et al, 2015). The basic delivery equipment, consumables and midwifery staff were readily available although overstretched. Expectant mothers reported different aspects of quality improvement in the public facilities, thus positively impacting on future health seeking behaviour, maternal service utilization and reduced maternal morbidity and mortality (Tuncalp et al, 2012).

In Asia, especially in the Pakistani context, studies done suggested that women’s utilization of maternity care services was very minimal. The most important concern was whether their service quality meets patient expectation levels (Ashraf et al, 2012). There are hidden costs that are attributed to the low utilization of free maternity policy in government health facilities in Dhaka, Bangladesh. Further, it was found that 72% of clients assessed were willing to pay a government levied user charge although this was less prevalent in low income families at 61% (Nahar, 2018).

Nepal introduced the policy of free delivery in 2009 as a constitutional right (Witter et al, 2011). It faces the challenge of high poverty levels, poor access to health facilities and poor health indicators. The use of free maternity services continues to improve with increased deliveries in health facilities. The funds are adequate to cover free maternal service delivery costs, with some surplus being invested in staff incentives and improving services. This has promoted flexible use of resources and reimbursement of funds without delay (Paudel et al, 2015).
Nearly, a half (47.8%) of clients were satisfied with government provided free maternity services in Nepal (Shrestha et al., 2010). However, understaffing is a key issue in some posts and areas. There is decreased general revenue for facilities due to wider loss of user fee revenues. This explains the on-going charges for patients as reported by both facilities and patients from some hospitals. Despite the hindrances in access to SBA and effective emergency obstetric care provision, there has been some progress in reducing maternal mortality and morbidity levels. This in turn, increases the rates of satisfaction due to improved utilization (Koenig et al., 2009).

### 2.2 Overview of free maternal healthcare services in Kenya

In Kenya, maternal and child mortality rates have been relatively high. The rate of maternal mortality stands at 362 deaths per 100,000 live births (KNBS & ICF International, 2015). Further, for every woman who dies during child birth an extra 20-30 women suffer serious injury or disability due to complications related to pregnancy or delivery (Otieno, 2013). The high MMR has persisted irrespective of improvements in other health indicators due to lack of access to quality maternal health care including antenatal, delivery and post-natal services (GoK, 2013).

Despite witnessed growth in health sector infrastructure recently, many mothers are still unable to access quality maternal health services. In Kenya, only 62% of births occur under supervision of a skilled birth attendant (KNBS & ICF International, 2015). This was well below the WHO target of 90% deliveries by the year 2015. Traditional Birth Attendants (TBAs) continue to assist expectant mothers with 28% of births; relatives and friends are estimated at 21%, while the rest (7%) of the mothers deliver on their own (WHO, 2014).
The government of Kenya has seen a major success in the fight towards reducing maternal and child mortality, with the introduction of free maternal and primary health care services by the year 2013. This is a major milestone towards universal health coverage as documented in the Kenya Health Sector Strategic Plan (KHSSP) 2014-2018 (GoK, 2014). The idea of abolishing user fees has been long running in subsequent governments with strong resistance from proponents who believe that free health care may not make economic sense given the increasing budgetary deficits.

Civil society organizations along with Save the Children International, had been lobbying for this change, and now focus on ensuring that public health facilities are adequately equipped, staffed and stocked with drugs to make sure that the free maternity services become a reality (Save the children International, 2014). The government’s efforts may not work unless the free services are combined with high quality of care, something majority of Kenyan women seem to doubt (Otai, 2013).

The Ministry of Health reported that ANC service utilization increased by 11% since initiating FMS, with ANC re-visits accounting for 13% (GoK, 2015). Normal deliveries increased by 22% while those of CS increased by 17%. The complications related to maternal care dropped from 4.3% in 2012/13 to 3.8% in 2013/14. The rate of obstructed labour declined greatly while other maternal complications remained fairly the same (GoK, 2013). Overall, there has been a 10% increase in health facility deliveries across the country, with a 50% increase in certain counties (Owino, 2013).

The increased demand for maternal health services has overstretched the available resources and overloaded the limited human resources. This has affected accessibility and availability of quality, equity and sustainable healthcare services (Bourbonnais, 2013). The policy has faced several challenges that need to be addressed. They
include insufficient funds and delayed reimbursements, limited investment in new infrastructure, lack of adequate equipment and low staffing levels (GoK, 2015).

2.3 Individual characteristics and satisfaction with maternity care services

Individual client characteristics are one of the factors that may determine access to and use of health services (Essendi et al, 2011). This consequently plays part in assessing maternal satisfaction with quality of service provision. However, there is inconsistent relationship between satisfaction levels and the individual client characteristics as pertained to utilization of maternity services (Leslie et al, 2009).

The educational status of women may be associated with the rate at which they use health care. This improves the health of women by providing them with skills training for employment (Ebere, 2013). Education increases awareness levels among women thus inspires their need for using skilled maternity services at their disposal. Clients who have high educational level demand much information on quality of care provided and try to build trust with physicians (Mukabana et al, 2016).

Income provides women with the ability to achieve improved nutritional status (Dalinjong et al, 2018) and adequate housing, which protect and advance their health status (Leslie et al, 2009). This enables them to access quality services thus enhancing positive delivery outcomes hence increased satisfaction. Other studies have found that house wives/non-working women are more likely to use free maternal health services compared to those employed (Nahar, 2018 & Mugambi, 2013). Studies done in Ethiopia and Nigeria revealed that ANC use is based on economic status. Women from richer households were six times more likely to use such services than their poorer counterparts (Yusuf et al, 2013).
According to a study done in Nyatike and Muhuru Divisions, a higher proportion of low income earners utilized more of the free maternity services than higher income earners. In fact, higher income earners may bear the cost of private facilities in the region (Mugambi, 2013). The same study reveals that education enhances female autonomy hence can make personal health decisions. Women with higher educational levels have greater access and therefore utilize high quality maternity services from private hospitals. On the other hand, those with little education and hailing from poor backgrounds mostly rely on government subsidized care.

The age and parity of the mother have been examined as determinants of maternal health care utilization and repeated use. Mothers in the middle childbearing ages are most likely to use more maternal services compared to their peers in the early or late childbearing ages (Babalola et al, 2009). Women who get pregnant at tender ages tend to face more complications during pregnancy and childbirth. Older women have greater experience and confidence on matters related to maternal care. Women with higher parity, especially those with successful deliveries, have more confidence and less fear for pain and risky pregnancy outcomes (Tsegay et al, 2013). Women with higher parity have greater responsibilities within the household for child care and thus increase their level of health service utilization (Kwast et al, 2008).

Given low socio-cultural status of women in developing countries, it impacts negatively on women’s health status. It is a major barrier to improve health due to the unequal status between men and women. Overall, lower education levels, age, and marital status also contribute to women’s poor maternal health conditions. Those married spend more time caring for their spouses and families imposing a strain on their health (Marchie, 2012). It is further revealed that socio-cultural variables when taken together contribute positively to maternal mortality.
2.4 Health care provider related factors and satisfaction with maternal care

In health care industry, service provision is extremely people-centric. Nearly all procedures and treatments that patients undergo/consume are administered by people (Peltier et al, 2009). Patient satisfaction with care is a multi-dimensional concept corresponding to the major characteristics of providers and services. Provision of services which are in line with the wishes, expectations and needs of patients is vital to a humane health care system (Kingori et al, 2016).

The perception of patients about the quality of care is important as it influences their health outcomes (Ashraf et al, 2012). Satisfaction has been associated with interpersonal interactions between hospital staff and patients (Khamis et al, 2014). Dehumanizing, devaluing and disempowering experiences results in a perceived challenge to personal identity and undermines self-sensing. Poor staff attitudes, treatment experiences and insensitivity to women in labour pain discourage them from delivering in health facilities (Davidson et al, 2012).

Proper communication, information sharing and patient involvement in making decisions about labour procedures and child birth are significant (Muhammad et al, 2014). Healthcare providers should listen to client concerns, give reliable advice, and provide full and accurate information. They should also provide explanation for drug use and side effects (Bitew et al, 2015). They should devote their time, pay attention to mothers’ problems and offer guidance and counselling. Perceived support from care providers during labour improves delivery outcomes and overall women’s satisfaction with care (Hodnett et al, 2013 & Bazant et al, 2009).

The quality of maternity services must be imbued with the concept of caring that include the humanistic attributes of competence, commitment, confidence compassion and conscience. Providers should respect clients’ right to dignity, privacy and
confidentiality (Khamis et al, 2014). This should be based on knowledge, skills and values. This affects the health seeking behaviours and ultimately the effectiveness of such care thus determines clients’ satisfaction (Otieno, 2014).

2.5 Health system factors and satisfaction with maternity services

The use of services by patients is hinged on how they perceive the quality of services at their disposal. The facility’s structural factors and service organization plays a key role. This predicts the patient service utilization, compliance with drug prescriptions and treatment referral advices by service providers (Kiplagat, 2009). Poor quality service provision may prompt patients to seek medication elsewhere. Most studies focus on provision of free maternity services with very little attention on their quality as a predictor of patient satisfaction (Ashraf et al, 2012).

The physical environment encompasses the surroundings in which care is given and features equipment, facilities and the atmosphere (Essendi et al, 2011). The physical birthing environment in most cases, affects patient safety and health, effectiveness of care and the morale of the care providers (Sheehy et al, 2011). Developed countries have attempted to make health facilities in which birth occurs more homelike and less clinical thus more comfortable to patients (Foureur et al, 2010). Overall satisfaction with the health facility’s physical and birthing environment is a predictor to women’s positive experience during labour and eventual delivery.

The organization of various structures within a given hospital may influence patients’ perceptions on provision of quality services. Physically appealing structures improve the chances of a good medical procedure thus promoting achievement of a desired outcome, as reflected by patients’ satisfaction (Khamis et al, 2014). Measuring patient’s past experience with care reflects on how the health system responds to
patient needs as conceptualized by the World Health Organization. Healthcare organizations have been pressurized to promote service quality, safeguard patient safety and reduce the cost of providing healthcare services (Sara et al, 2009).

The availability of adequate supplies and equipment; and reliable referral or adequate transportation to another health facility determines the quality of care accessed in emergency situations. The status of the hospital infrastructure is worsening with increased demand for free maternity services hence increased bed occupancy and incubator sharing by children (Otieno, 2014). Maternity wards in public health facilities need to be regularly maintained to prevent further wear and tear.

The overall cleanliness and physical ambiance of health facilities is key to satisfaction with maternal health care (Nyongesa et al, 2014). Delivery in unhygienic conditions without the assistance of a SBA may result in adverse maternal health conditions (WHO, 2014). Increased demand for free maternity services in public hospitals has compromised the adequacy and accessibility of the already available maternity amenities. This is worsening the delivery conditions in such facilities due to overstretching of the available infrastructure and equipment (KNHRC, 2015).

There is inadequate number of trained/skilled healthcare personnel to meet the increased demand for free maternity services (Orare, 2015). This leads to long waiting time thus client dissatisfaction (Shrestha et al, 2010 & Tayelgn et al, 2011). Maternity wards in public health facilities are more often overcrowded with high bed occupancy rates throughout the year (Karkee et al, 2014). The current staffing levels in Public facilities in Kenya meet only 17% of minimum requirements needed for effective performance of the health care systems. The ratio of nurses to patients is 7:4000 which is half the number recommended by the World Bank (Bourbonnais, 2013).
Limited availability of essential supplies and drugs is a challenge that is significantly affecting maternal satisfaction (Nyongesa et al, 2014). Delayed reimbursements from the National government to the facilities leads to a lack of enough funds to purchase such supplies. This has led to stalling of the provision of this services resulting to threats of abandoning the policy as recently evidenced in Kenya.

2.6 Obstetric experience factors and satisfaction with maternity services

The perception and attitudes of women affects the quality of maternal care significantly since they are the service consumers (Ashraf et al, 2012). A study done in Amhara, Ethiopia revealed that having a plan to deliver at a given hospital was significantly associated with maternal satisfaction compared to referral cases (Bitew et al, 2015). This is based on their past experiences and perception of care in a health care facility, myths and societal values (Amdemichael et al, 2015).

Long labour time and suffering from complications is significantly associated with reduced maternal satisfaction levels (Yohannes et al, 2013). Postpartum reports reveal that maternal conditions after delivery also play a part in determining maternal satisfaction with delivery services. Application of appropriate pain relief methods among women in labour increases maternal satisfaction with intrapartum care (Nyaberi, 2012). Mothers with complications after delivery are most likely to be dissatisfied with maternal health services (Shrestha et al, 2010).

Obstetric procedures associated with increased pain during labour and eventual delivery may be associated with maternal dissatisfaction (Emina et al, 2011). Subjecting women to painful, unnecessary and risky procedures such as routine episiotomy, frequent vaginal examinations and adopting lithotomic position of birth regularly demotivates women (Muhammad et al, 2014). Adoption of delivery methods
that portray reduced pain and discomfort ensures safe positive labour experience hence patient satisfaction (Kwambai et al, 2013). Adhering to continued midwifery care and support during labour and childbirth require less pain-relief as it improves the quality of physical and emotional care (Hodnett et al, 2013).

Early entry into antenatal care ensures early detection and treatment of inherent disease conditions among pregnant women, thus preventing adverse pregnancy outcomes (Adungo, 2013). The WHO recommends a minimum of four comprehensive ANC visits for normal pregnancy with more visits advised for complicated pregnancies (WHO, 2016). Fewer ANC visits may lead to increased perinatal deaths, low birth-weights, premature deliveries and high risk of intra-uterine retarded growth (Kiplagat, 2009). More women utilized SBA services during pregnancy and childbirth in Malindi district, Kenya due to the removal of user fees (Lang’at et al, 2015).

Mothers who discuss the elements of birth plan with care providers are eight times more likely to deliver in a health facility than those who do not (Abok, 2012). Perceived poor quality of care partly demotivates the choices made by women to seek ANC services and hence not deliver in hospital settings. This is important in increasing the use of ANC among women and reducing the number of opportunities missed (WHO, 2016). This ensures continuity and adhered use of regimens prescribed by care providers. Antennal care satisfaction is correlated with positive patient perception on the facility staff, quality, reduced waiting time, patient privacy and easier service accessibility (Sara et al, 2009).

Other researchers have failed to detect the differences in the level of maternal satisfaction with different modes of delivery (Tayelgn et al, 2011). Most cases of caesarean section deliveries are conducted in emergency situations thus saving the baby in this condition is paramount. More women prefer to deliver normally through
Spontaneous Vaginal Delivery (SVD) since they may believe in delivering more children in the future thus affecting their satisfaction levels with service delivery.

2.7 Summary of literature review and existing gaps

Review of literature shows that several studies done have focused on utilization, determinants and factors influencing implementation of free maternity services and their quality in Nairobi City County. Other researchers focused on satisfaction with healthcare services in Nairobi though that was well before the introduction of the policy of free maternity services by the government of Kenya by 1st June, 2013.

This underpins the need to study satisfaction levels with free maternity services among postnatal women attending public hospitals in Nairobi City County. This study focuses on their perception and expectation levels towards maternal health care service delivery. Policies aimed at lowering user fees do not necessarily lead to increased utilization of services if their quality is poor. The level of patient satisfaction with services is hinged on the quality of maternity services provided.

Despite delivery in all public hospitals in Kenya being free and available, each facility operates on its own framework and service delivery depends on resources available. The increased demand for free maternity services in public hospitals has led to overstretching of the available resources and overloading the limited staff thus compromising the quality of care. There is scanty information on the satisfaction levels with free maternity services in the country thus the call for this study.
CHAPTER THREE: MATERIALS AND METHODS

3.1 Study design
This research adopted a descriptive cross-sectional facility-based approach in collecting data from the sampled research respondents (Kothari, 2008). It was preferred because it ensured complete description of the situation making sure that there was minimal bias in data collection. This provided an operational framework, through which the facts were placed, analyzed and thus produced valuable outputs (Otieno, 2014). The design was justified as it captured information on satisfaction levels with free maternity services as exhibited by postnatal women attending public hospitals in Nairobi City County.

3.2 Study variables

3.2.1 Independent variables
The independent variables of this study included;

i) Individual patient characteristics such as age, educational status, occupation, parity, marital and income status.

ii) Health care provider related factors such as friendliness, involvement of patients in decision making, provision of privacy and interaction with clients.

iii) Health-system factors including staff availability, infrastructure, equipment, essential supplies/drugs, patient waiting time and facility cleanliness.

iv) Obstetric factors such as mode of delivery, pain management methods, ANC visits, labouring time and delivery plan.

3.2.2 Dependent variable and its measurement
The dependent variable was the satisfaction level with free maternity services among postnatal women attending public hospitals in Nairobi City County. This was measured using satisfaction index derived from a set of statements assessed using a 5-
point Likert scale based on patient quality perception scores. The statements were drawn from the patient satisfaction indicators of tangibility, reliability, responsiveness, assurance and empathy as shown in Table 3.1 below. Patient quality perception scores ranged from highly dissatisfied, dissatisfied, neither dissatisfied nor satisfied, satisfied and highly satisfied. The satisfaction index was derived by direct summation and averaging of all satisfaction scores of each patient quality perception response.

\[
\text{Satisfaction index} = \sum_{i=0}^{n} \{ \text{Satisfaction score} \}
\]

Where;  
\[
\text{Satisfaction index} = \text{Average aggregate sum of satisfaction scores of all the statements based on patient quality perceptions.}
\]

\[
\text{Satisfaction score} = \text{Average response score of each statement based on patient quality perceptions.}
\]

**Table 3.1: Satisfaction indicators**

<table>
<thead>
<tr>
<th>Satisfaction indicator</th>
<th>Statement</th>
<th>Satisfaction level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><strong>Tangibility</strong></td>
<td>Patient rooms are comfortable enough according patient privacy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hospital has employees with neat professional appearance</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The hospital has visually appealing physical facilities such as buildings</td>
<td></td>
</tr>
<tr>
<td><strong>Reliability</strong></td>
<td>The hospital has employees who sincerely solve patient problems</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The hospital provides promised services at promised time</td>
<td></td>
</tr>
<tr>
<td><strong>Responsiveness</strong></td>
<td>Health care staff provides prompt services to customers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Staff informs customers as to when services will be performed</td>
<td></td>
</tr>
<tr>
<td><strong>Assurance</strong></td>
<td>The hospital employees are consistently courteous and polite</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The hospital employees make customers feel secure and confident</td>
<td></td>
</tr>
<tr>
<td><strong>Empathy</strong></td>
<td>Doctors and nurses spends enough time with patients</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hospital employees understand specific needs of patients</td>
<td></td>
</tr>
</tbody>
</table>
3.3 Study location
The study was conducted in four public hospitals in Nairobi City County. They comprised of one level 4 hospital, two level 5 hospitals and one level 6 hospital. This specifically focused on mothers in postnatal wards of Pumwani Maternity Hospital, Mama Lucy Kibaki Hospital, Mbagathi District Hospital and Kenyatta National Hospital. The county’s public health facility bed occupancy stands at 110.7% (GoK, 2016). In Nairobi, the doctor-patient ratio is 1:23,000 while the nurse-patient ratio is 1:2,797 in (Paice, 2014). In Nairobi City County, Maternal Mortality Rate (MMR) and Infant Mortality Rate (IMR) stood at 212 per 100,000 live births and 57 per 1,000 live births respectively (UNFPA, 2014).

3.4 Study population
A study population is defined as the entire group of persons, events or objects with some common observable features (Mugenda and Mugenda, 2003). The study population comprised of 12,117 postnatal women in postnatal wards who delivered in the sampled hospitals between May-July 2017, aged between 15-49 years attending the four sampled public health facilities in Nairobi City County (Field data, 2017). This group was more experienced as it was the targeted beneficiary of free maternity services hence making the respondents more informative.

3.4.1 Inclusion criteria
Participants for this study included sampled postnatal women seeking free maternity services in postnatal wards of the four sampled health facilities in Nairobi City County, aged 15-49 years and who were willing to participate. The respondents included women who delivered in the sampled facilities whether by individual choice or referral and discharged during the data collection period. Only those who consented to participate in the study were included. Permission for interviewing respondents
aged below 18 years was obtained through their guardians/parents. The mature minors were then subjected to signing an assent form to allow them participate in the study.

3.4.2 Exclusion criteria

The study excluded all postnatal women who did not talk and had complications/sick thus unable to participate during the time of conducting this study. The study also excluded hospital readmissions into postnatal wards since they were not covered by the policy of free maternity services.

3.5 Sampling techniques and sample size determination

3.5.1 Sampling procedures and techniques

Nairobi City County was purposively chosen because it is one of the most populated counties and the capital city of Kenya. The study was carried out purposively in level 4 and above selected hospitals within the County. The study was conducted among postnatal women utilizing FMS at KNH, Pumwani maternity hospital, Mama Lucy Kibaki hospital and Mbagathi district hospital.

Women exiting PNC wards after discharge were identified from postnatal registers in each facility with the help of postnatal staff. The first respondent was picked using simple random sampling through folded pieces of paper. The subsequent respondents exiting each hospital’s PNC wards were selected using systematic random sampling at a predetermined interval. Every 5th respondent exiting the PNC wards was picked for interview until the required number of participants in each hospital was reached.

The respondents selected for the study were proportional to the number of postnatal women attending each sampled hospital. Before interviewing the participants, the purpose of the study and the risks involved in participating in the study were explained. Those who consented to participate in the study were recruited and then given questionnaires to fill in their responses with the help of research assistants.
In order to obtain additional information, 4 Focused Group Discussions (FGD) were held by the researcher with patients. Due to financial and time constraints, each facility held one FGD. The FGDs comprised of 8 postnatal women who were purposively selected based on their ability to give the required information. Those who were able to answer a given set of questions concerning delivery experiences and showed eagerness to give reliable information were recruited.

In addition, 8 Key Informant Interviewees (KII) were purposively selected to give their views on the study area. The researcher picked the nursing officer in charge of maternity and the matron in charge of the postnatal wards in each facility. Key informants comprised of informed, knowledgeable and experienced persons who were involved in managing the provision of maternity services (Otieno, 2014).

3.5.2 Sample size determination

Sample size refers to the number of observations made in a sample (Kothari, 2008). Sampling enhances statistical precision of results by reducing bias which is related to low response rates. Sample size was determined using Fishers’ formula for populations more than 10,000. There were 12,117 deliveries in the selected public hospitals in Nairobi City County between May-July 2017.

According to Fishers et al (1998), sample size:

\[ n = \frac{z^2pq}{d^2} \]

Where: \( n \) = desired sample size
\( z \) = standard normal deviate (1.96) at 95% confidence interval
\( p \) = 0.56 Proportion of the postnatal women attending public hospitals satisfied with maternity services in Nairobi City County (Nyongesa et al, 2014).
\( q \) = 1 – p=1-0.56=0.44 Proportion of postnatal women attending public hospitals dissatisfied with maternity services in Nairobi City County.
\( d \) = degree of accuracy (0.05) i.e. at 95% confidence interval
Thus sample size was given by: \(\frac{1.96^2 \times 0.56 \times 0.44}{0.05^2} = 379 \text{ patients}\)

10% of subjects were included to cater for non-responses thus 417 questionnaires were administered. However, after questionnaire checking, cleaning and editing, 383 questionnaires were deemed fit for analysis representing a 91.8% response rate.

Table 3.2: Proportion of respondents selected from each hospital

<table>
<thead>
<tr>
<th>Hospital</th>
<th>No of deliveries (births) May-July 2017</th>
<th>Sample size proportion</th>
<th>Response rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>KNH</td>
<td>4150</td>
<td>143</td>
<td>133</td>
</tr>
<tr>
<td>Pumwani Maternity</td>
<td>4526</td>
<td>156</td>
<td>145</td>
</tr>
<tr>
<td>Mbagathi</td>
<td>1635</td>
<td>56</td>
<td>51</td>
</tr>
<tr>
<td>Mama Lucy Kibaki</td>
<td>1806</td>
<td>62</td>
<td>54</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>12117</strong></td>
<td><strong>417</strong></td>
<td><strong>383 (91.8%)</strong></td>
</tr>
</tbody>
</table>


3.6 Research instruments

The study used semi-structured questionnaires for collection of quantitative data from postnatal women. The questionnaires were administered in English and translated in Swahili where appropriate with the aid of trained research assistants. Focused group discussion guides were used to collect qualitative data from FGD sessions with 8 patients. Additional qualitative information was also collected using key informant interview guides through sessions held with the nursing officer in charge of maternity and the matron in charge of the postnatal wards in each selected hospital. The data collection instruments comprised of questions covering individual characteristics, health provider factors, health system factors and obstetric experience factors.

3.7 Pre-Testing of research instruments

The research instruments were pretested at Kiambu Level 5 Hospital in Kiambu County which is adjacent to Nairobi City County. The hospital has almost similar infrastructure and population features with the selected hospitals for study. A total of 42 post-natal women representing 10% of the study sample were randomly selected to
pre-test the validity and ensure reliability of the research instruments. Focused group
discussion guides and key informant interview schedules were also pretested.

3.7.1 Validity

Validity is defined as the degree to which data collection methods correctly measure
what they are meant to measure. This ensures accurate interpretation and
generalization of study results on other populations (Oso et al, 2009). The study
sought expert opinions from the area of research which included the research
supervisors. The research tools were well structured and ensured all relevant aspects
of the study variables were addressed. The study adopted sampling methods that
resulted in a randomized and a representative sample. Random sampling techniques
and uniformity of sampled population ensured internal validity. To ensure external
validity, a large sample was randomly selected.

3.7.2 Reliability

Reliability refers to the ability of particular items to consistently measure the same
difference (Gwamaka, 2012). This decreased the random sampling bias. Reliability of
research instruments was ensured by appropriate selection of research assistants. They
were adequately trained and familiarized with the study area and topic of research
before data collection. The research instruments were pre-tested in the field prior to
the conduct of the actual study to ensure they were clearly understood by the research
respondents and necessary corrections were made (Sekaran, 2013).

3.8 Data collection techniques

Quantitative data was collected using semi-structured research questionnaires. The
questionnaires were administered by trained research assistants who guided the
participants to fill in their responses. They were monitored, guided and supervised by
the researcher. All filled questionnaires were collected and kept in locked cabinets
throughout the study period and accessed by the researcher only to ensure confidentiality and avoid data loss. All interviews were done in a private room within each selected hospital.

Qualitative data was obtained from focused group discussions held with patients in four FGD sessions in a private room within each selected hospital. The sessions were moderated by the researcher. Voice recording of the FGD sessions was done and also notes taken by research assistants. This encouraged free discussion among participants thus captured information which was not achievable in a one on one interview.

The researcher also conducted key informant interviews with 8 healthcare providers to supplement information obtained from patients. The interviews were done at their offices on appointment with the nursing officer in charge of maternity and the matron in charge of the postnatal wards in each facility. Their views, opinions and suggestions were taken into account.

3.9 Data management and analysis

Quantitative data was entered and stored in Microsoft Excel program. Data cleaning and editing was done where extreme, missing and inconsistent values were identified and corrected. Data entry and cleaning was supervised by the researcher. Coding and verification of the data was done for easy manipulation, analysis and presentation. Data were then exported to Statistical Package for Social Sciences (SPSS) software version 20.0 for descriptive analysis. Frequency distribution tables, percentages, charts and graphs were used to present quantitative results.

Inferential statistics were computed using Pearson’s Chi-square and Fisher’s Exact Test presented in cross-tabulations. This was done at 95% confidence interval and p-values of less than 0.05 were considered significant in testing the association between
the independent and dependent variables. Individual patient characteristics, provider related factors, health system factors and obstetric experience factors were subjected to statistical analysis in relation to patient satisfaction levels. Qualitative data from the FGDs and KII were presented as direct quotes or narrations and triangulated to validate and enrich quantitative results.

3.10 Ethical considerations

The researcher sought approval from Kenyatta University Graduate School. The study obtained ethical clearance from Kenyatta National Hospital-University of Nairobi Ethics and Research Committee. A research permit was sought from the National Council for Science, Technology and Innovation (NACOSTI). Research authorization was sought from Nairobi City County Commissioner, County Director of Education and County Director of Health Services. Permission was also sought from the respective management authorities of KNH, Mbagathi, Pumwani and Mama Lucy Kibaki hospitals before actual data collection.

The study sought informed consent from research participants before they were interviewed. Consent for those who were aged below 18 years was obtained through signing assent forms subject to permission from their parents or guardians. The purpose of the study was clearly explained and participants were informed that their involvement in the research was voluntary without due coercion or influence. Their identities were kept private and confidential and the collected information used only for the purpose of this study. The results would be submitted to reproductive health department of KNH, Mbagathi, Pumwani and Mama Lucy Kibaki hospitals. These results would also be disseminated through publication for future reference and presented in conferences and workshops of relevant stakeholders.
CHAPTER FOUR: RESULTS

4.1 Socio-demographic characteristics of respondents

The study found out that slightly more than a half 198(51.7%) of the respondents were aged 20-29 followed by 114(29.8%) aged 30-39 years. 40(10.4%) of the postnatal mothers were aged 40-49 years while the rest 31(8.1%) were aged 15-19 years. The mean age of the study respondents was 28.4 years. Concerning the highest education level attained, the study results revealed that slightly more than half 202(52.7%) of the respondents had secondary education followed by 115(30.0%) with tertiary education. Those with Primary education comprised of 59(15.4%) while the rest 7(1.8%) had no formal education.

Regarding religion, majority 311(81.2%) of the respondents were Christians while the rest 72(18.8%) were Muslims. In relation to parity, slightly more than a half 199(52.0%) of the respondents had less than or equal to two children followed by 131(34.2%) with three children while the rest 53(13.8%), had four or more children. The study revealed that the marital status of majority 275(71.8%) of respondents were married followed by 86(22.5%) single and the rest 22(5.7%) divorced.

Concerning the occupational status, less than a half 147(38.4%) of the respondents were housewives followed by 133(34.7%) who were self-employed. 83(21.7%) were employed while the rest 20(5.2%) gave no response. Slightly less than a half 182(47.5%) of the respondents earned an average family income of less than 20,000 with 138(36.0%) earning between 20,000-30,000 while the rest 63(16.5%) earned more than 30,000 shillings per month. The results were presented in Table 4.1 below.
Table 4.1: Socio-demographic characteristics of respondents (n=383)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Respondent response</th>
<th>Frequency (N)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>15-19</td>
<td>31</td>
<td>8.1%</td>
</tr>
<tr>
<td></td>
<td>20-29</td>
<td>198</td>
<td>51.7%</td>
</tr>
<tr>
<td></td>
<td>30-39</td>
<td>114</td>
<td>29.8%</td>
</tr>
<tr>
<td></td>
<td>40-49</td>
<td>40</td>
<td>10.4%</td>
</tr>
<tr>
<td>Mean age=28.4 years</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level of education</td>
<td>No formal education</td>
<td>7</td>
<td>1.8%</td>
</tr>
<tr>
<td></td>
<td>Primary education</td>
<td>59</td>
<td>15.4%</td>
</tr>
<tr>
<td></td>
<td>Secondary education</td>
<td>202</td>
<td>52.7%</td>
</tr>
<tr>
<td></td>
<td>Tertiary education</td>
<td>115</td>
<td>30.0%</td>
</tr>
<tr>
<td>Parity</td>
<td>≤2 children</td>
<td>199</td>
<td>52.0%</td>
</tr>
<tr>
<td></td>
<td>3 children</td>
<td>131</td>
<td>34.2%</td>
</tr>
<tr>
<td></td>
<td>≥4 children</td>
<td>53</td>
<td>13.8%</td>
</tr>
<tr>
<td>Religion</td>
<td>Christian</td>
<td>311</td>
<td>81.2%</td>
</tr>
<tr>
<td></td>
<td>Muslim</td>
<td>72</td>
<td>18.8%</td>
</tr>
<tr>
<td>Marital status</td>
<td>Married</td>
<td>275</td>
<td>71.8%</td>
</tr>
<tr>
<td></td>
<td>Single</td>
<td>86</td>
<td>22.5%</td>
</tr>
<tr>
<td></td>
<td>Divorced</td>
<td>22</td>
<td>5.7%</td>
</tr>
<tr>
<td>Occupation</td>
<td>Employed</td>
<td>83</td>
<td>21.7%</td>
</tr>
<tr>
<td></td>
<td>Self-employed</td>
<td>133</td>
<td>34.7%</td>
</tr>
<tr>
<td></td>
<td>Housewife</td>
<td>147</td>
<td>38.4%</td>
</tr>
<tr>
<td></td>
<td>No response</td>
<td>20</td>
<td>5.2%</td>
</tr>
<tr>
<td>Average monthly income (KShs)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;20,000</td>
<td>182</td>
<td>47.5%</td>
<td></td>
</tr>
<tr>
<td>20,000-30,000</td>
<td>138</td>
<td>36.0%</td>
<td></td>
</tr>
<tr>
<td>&gt;30,000</td>
<td>63</td>
<td>16.5%</td>
<td></td>
</tr>
</tbody>
</table>

4.2 Patient level of satisfaction

The study found out that the overall patient satisfaction level with perceived quality of maternal services was slightly above average (62.4%). Among the satisfaction attributes, satisfaction rated highest on tangibility (68.6%) and lowest on empathy (56.6%) as shown in Table 4.2 below. The median satisfaction score was 63.6%. Respondents with satisfaction scores less than or equal to the median score were classified under low satisfaction level while those with satisfaction scores more than the median score were classified under high satisfaction level. It was further revealed that slightly more than a half 202(52.7%) of the respondents had high satisfaction levels while the rest 181(43.7%) had low satisfaction levels.
Table 4.2: Patient level of satisfaction

<table>
<thead>
<tr>
<th>Satisfaction indicator</th>
<th>Perception score</th>
<th>Mean perception score</th>
<th>Patient satisfaction level (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tangibility</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patient rooms are comfortable enough according patient privacy</td>
<td>3.14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hospital has employees with neat professional appearance</td>
<td>3.89</td>
<td>3.43</td>
<td>68.6%</td>
</tr>
<tr>
<td>Hospital has visually appealing physical facilities e.g. buildings</td>
<td>3.26</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Reliability</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The hospital has employees who sincerely solve patient problems</td>
<td>2.87</td>
<td>2.96</td>
<td>59.2%</td>
</tr>
<tr>
<td>The hospital provides promised services at promised time</td>
<td>3.05</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Responsiveness</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health care staff provides prompt services to customers</td>
<td>3.13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staff informs customers as to when services will be performed</td>
<td>3.41</td>
<td>3.27</td>
<td>65.4%</td>
</tr>
<tr>
<td><strong>Assurance</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The hospital employees are consistently courteous and polite</td>
<td>2.97</td>
<td>3.11</td>
<td>62.2%</td>
</tr>
<tr>
<td>The hospital employees make customers feel secure and confident</td>
<td>3.25</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Empathy</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doctors and nurses spend enough time with patients</td>
<td>2.72</td>
<td>2.83</td>
<td>56.6%</td>
</tr>
<tr>
<td>Hospital employees understand specific needs of patients</td>
<td>2.94</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Patient satisfaction index</strong></td>
<td></td>
<td>3.12</td>
<td>62.4%</td>
</tr>
</tbody>
</table>

4.3 Individual patient characteristics associated with maternal satisfaction

The study established that among the respondents with high satisfaction levels, more than a half 115(56.9%) of them were aged 20-29 followed by 66(32.7%) aged between 30-39 years. There were higher satisfaction levels among postnatal women aged 20-29 years. Most of the younger and older postnatal women accounted for smaller numbers across the two satisfaction levels. The study showed a significant statistical association (p=0.001) between age and maternal satisfaction level.
More than a half 111(55.0%) of postnatal women with high satisfaction levels had attained secondary education followed by 80(39.6%) who had tertiary education. There was a significant statistical association between highest educational level attained and maternal satisfaction level (p=0.001). Qualitative results showed that increased education enables women to demystify pregnancy related beliefs on maternal complications thus more satisfied. One Key Informant interviewed said, “Uneducated women tend to have difficult and contradictory beliefs on pregnancy related complications which increases refusal to accept poor delivery outcomes.” (Maternity in-charge)

Regarding parity, the study findings showed that majority 135(66.8%) of respondents with high satisfaction levels had less than or equal to two children followed by 50(24.8%) of postnatal women with three children. The level of maternal satisfaction among postnatal women increased with decrease in parity. The results showed existence of a significant statistical association (p=0.001) between parity and the level of maternal satisfaction with service provision among postnatal women.

Majority 149(82.3%) of respondents with low satisfaction levels were Christians while the rest 32(17.7%) were Muslims. There were slight differences between the satisfaction levels across the two religious categories. This results shows that religion did not have a direct influence on the level of maternal satisfaction. There was no significant statistical association (p=0.596) between religion and patient level of satisfaction. However, qualitative results indicated religion plays a significant indirect role on maternal satisfaction. Muslims encourage women to seek spiritual interventions and traditional midwives attendance to avert curses and associated misfortunes. One FGD discussant commented,
“In our religion, you become a woman only when you have vaginal delivery… Cesarean section is associated with a curse; when a woman is unable to deliver normally, we call religious leader (sheikhs) to come and pray for us to remove the curse.” (Postnatal Woman)

The study results showed that majority 151(74.8%) of respondents with high satisfaction levels were married. It was further revealed that the levels of satisfaction did not differ significantly across the various marital status categories. Marital status was not significantly associated (p=0.207) with the level of maternal satisfaction.

Concerning the occupational status, the study results found out that less than a half 88(43.5%) of respondents with high satisfaction levels were housewives. Satisfaction levels increased with decreased occupational status from being employed, self-employed and eventually to housewives. The study showed a significant statistical association (p=0.002) between occupational status and level of maternal satisfaction.

The study established that more than a half 111(55.0%) of respondents with high satisfaction levels earned an average family monthly income of less than 20,000 Kenyan shillings. The level of maternal satisfaction among postnatal women increased with decreased family monthly income. The study results revealed a significant statistical association (p=0.001) between average monthly family income and maternal satisfaction level. The results were presented in Table 4.3 below.
Table 4.3: Relationship between individual patient characteristics and maternal level of satisfaction with free maternity (n=383)

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>Respondent response</th>
<th>Dependent variable</th>
<th>Statistical significance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Low satisfaction level (N=181)</td>
<td>High satisfaction level (N=202)</td>
</tr>
<tr>
<td>Individual characteristics</td>
<td></td>
<td>7(3.5%)</td>
<td>115(56.9%)</td>
</tr>
<tr>
<td>Age</td>
<td>15-19</td>
<td>24(13.3%)</td>
<td>7(3.5%)</td>
</tr>
<tr>
<td></td>
<td>20-29</td>
<td>83(45.8%)</td>
<td>115(56.9%)</td>
</tr>
<tr>
<td></td>
<td>30-39</td>
<td>48(26.5%)</td>
<td>66(32.7%)</td>
</tr>
<tr>
<td></td>
<td>40-49</td>
<td>26(14.4%)</td>
<td>14(6.9%)</td>
</tr>
<tr>
<td></td>
<td>Mean age 28.4 years</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Highest education level attained</td>
<td></td>
<td>7(3.9%)</td>
<td>0(0.0%)</td>
</tr>
<tr>
<td></td>
<td>Non-formal education</td>
<td>48(26.5%)</td>
<td>11(5.4%)</td>
</tr>
<tr>
<td></td>
<td>Primary</td>
<td>91(50.3%)</td>
<td>111(55.0%)</td>
</tr>
<tr>
<td></td>
<td>Tertiary</td>
<td>35(19.3%)</td>
<td>80(39.6%)</td>
</tr>
<tr>
<td>Parity</td>
<td>&lt;2 children</td>
<td>64(35.4%)</td>
<td>135(66.8%)</td>
</tr>
<tr>
<td></td>
<td>3 children</td>
<td>81(44.7%)</td>
<td>50(24.8%)</td>
</tr>
<tr>
<td></td>
<td>&gt;4 children</td>
<td>36(19.9%)</td>
<td>17(8.4%)</td>
</tr>
<tr>
<td>Religion</td>
<td>Christian</td>
<td>149(82.3%)</td>
<td>162(80.2%)</td>
</tr>
<tr>
<td></td>
<td>Muslim</td>
<td>32(17.7%)</td>
<td>40(19.8%)</td>
</tr>
<tr>
<td>Marital status</td>
<td>Married</td>
<td>124(68.5%)</td>
<td>151(74.8%)</td>
</tr>
<tr>
<td></td>
<td>Single</td>
<td>43(23.8%)</td>
<td>43(21.3%)</td>
</tr>
<tr>
<td></td>
<td>Divorced</td>
<td>14(7.7%)</td>
<td>8(3.9%)</td>
</tr>
<tr>
<td>Occupation</td>
<td>Employed</td>
<td>36(19.9%)</td>
<td>47(23.3%)</td>
</tr>
<tr>
<td></td>
<td>Self-employed</td>
<td>71(39.2%)</td>
<td>62(30.7%)</td>
</tr>
<tr>
<td></td>
<td>House wife</td>
<td>59(32.6%)</td>
<td>88(43.5%)</td>
</tr>
<tr>
<td></td>
<td>None response</td>
<td>15(8.3%)</td>
<td>5(2.5%)</td>
</tr>
<tr>
<td>Average family monthly income (Kshs)</td>
<td>&lt;20,000</td>
<td>71(39.2%)</td>
<td>111(55.0%)</td>
</tr>
<tr>
<td></td>
<td>20,000-30,000</td>
<td>86(47.5%)</td>
<td>52(25.7%)</td>
</tr>
<tr>
<td></td>
<td>&gt;30,000</td>
<td>24(13.3%)</td>
<td>39(19.3%)</td>
</tr>
</tbody>
</table>

4.4 Healthcare provider related factors

4.4.1 Patient awareness on provision of free maternity

Majority (87%) of the postnatal women were aware that maternity services were free in public hospitals while 10% of the respondents were not aware. The rest (3%) of the respondents gave no response. The results were as presented in Figure 4.1 below.
Fig 4.1: Awareness of free maternity among respondents

4.4.2 Sources of information on free maternity

Regarding information sources, there were multiple responses in which most of the postnatal mothers chose more than one source from which they acquired information concerning free maternity. 37.5% of the responses were on mass media, followed by community health workers (19.3%), hospital staff (17.4%), friends and close relatives (14.4%), social sites (10.5%) and the rest (1.0%) on others sources of information including chiefs and religious leaders. The results were presented in Figure 4.2 below.

Fig 4.2: Sources of information on free maternity among respondents
4.4.3 Association of provider-related factors with maternal satisfaction

In regards to provision of patient privacy, there was almost equal distribution of postnatai women across the various response categories for each satisfaction level. The study revealed that majority 158(78.2%) of respondents with high satisfaction levels comprised of postnatai women who reported that healthcare providers ensured them privacy. However, there was no significant statistical association (p=0.356) between provision of patient privacy and patient level of satisfaction.

Majority 130(64.3%) of postnatai with high satisfaction levels reported that healthcare providers were friendly to them during service provision. There existed a significant statistical association (p=0.001) between provider friendliness and maternal level of satisfaction. Qualitative results also showed that provider unfriendliness affects patient level of satisfaction negatively. One FGD discussant narrated her experience with a nurse and said,

“....When she came and got me standing next to the door, she just roared to me like an hungry lion; move to the other side and follow simple instructions... I am only serving those who are on the queue.” (Postnatal Woman)

Slightly more than a half 103(51.0%) of postnatai women with high satisfaction levels were involved in making decisions concerning their delivery. There was a significant statistical association (p=0.007) between involvement of patients in decision making and maternal level of satisfaction. Qualitative results showed that involvement of pregnant women in determining their preferred mode of delivery and the ultimate outcome of delivery boosts their confidence. One Key Informant said,

“Involvement of pregnant women in making decisions concerning their treatment and the expected mode of delivery prepares them to accept the most probable outcome of delivery.” (Postnatal ward Matron)
The study results showed that majority 118(65.2%) of respondents with low satisfaction levels comprised of postnatal women who reported that the healthcare providers did not listen to their concerns attentively. This may be due to the fact that public hospitals in Kenya are characterised by high patient numbers hence attending to each individual attentively becomes a problem. There was a significant statistical association (p=0.003) between listening to patient concerns attentively and level of maternal satisfaction. The results were as presented in Table 4.4 below.

**Table 4.4: Relationship between provider related factors and level of maternal satisfaction (n=383)**

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>Respondent response</th>
<th>Dependent variable Low satisfaction level (N=181)</th>
<th>High satisfaction level (N=202)</th>
<th>Statistical significance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Provision of privacy</strong></td>
<td>Yes</td>
<td>131(72.4%)</td>
<td>158(78.2%)</td>
<td>$\chi^2=2.064$ df=2 p=0.356</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>43(23.7%)</td>
<td>36(17.8%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I can't tell</td>
<td>7(3.9%)</td>
<td>8(4.0%)</td>
<td></td>
</tr>
<tr>
<td><strong>Provider friendliness</strong></td>
<td>Yes</td>
<td>85(46.9%)</td>
<td>130(64.3%)</td>
<td>$\chi^2=13.390$ df=2 p=0.001</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>49(27.1%)</td>
<td>44(21.8%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I can't tell</td>
<td>47(26.0%)</td>
<td>28(13.9%)</td>
<td></td>
</tr>
<tr>
<td><strong>Involvement in decision making</strong></td>
<td>Yes</td>
<td>55(30.4%)</td>
<td>103(51.0%)</td>
<td>$\chi^2=10.036$ df=2 p=0.007</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>94(51.9%)</td>
<td>73(36.1%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I can't tell</td>
<td>32(17.7%)</td>
<td>26(12.9%)</td>
<td></td>
</tr>
<tr>
<td><strong>Provider listening to client issues</strong></td>
<td>Yes</td>
<td>32(17.7%)</td>
<td>100(49.5%)</td>
<td>$\chi^2=11.592$ df=2 p=0.003</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>118(65.2%)</td>
<td>40(19.8%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I can't tell</td>
<td>31(17.1%)</td>
<td>62(30.7%)</td>
<td></td>
</tr>
</tbody>
</table>

**4.5 Health system factors**

**4.5.1 Service payment in public hospitals**

Majority (78%) of the postnatal women said that they did not pay for any service in their respective hospitals of delivery while the rest (22%) said they paid for some services as shown in Figure 4.3 below. The respondents indicated that they mainly paid for admission fee.
Fig 4.3: Service payment among respondents

4.5.2 Choice of facility for delivery

More than half (53%) of the respondents reported that the facility in which they delivered was their preferred choice while the rest (47%) said it was not as shown by results in Figure 4.4 below. The main reasons for delivery in the respective hospital included experiencing instant labour pains, recommendation by friends/relatives, perceived provision of quality services and nearness of the facility to patient homes.

Fig 4.4: First choice delivery facility by respondents
4.5.3 Provision of warm water for bathing

Majority (85%) of the respondents were not provided with warm while the rest (15%) were provided with warm water for bathing after delivery. This was based on request from the nurses on duty. The results were presented in Figure 4.5 below.

Fig 4.5: Provision of warm water for bathing

4.5.4 Waiting time for admission to maternity/labour wards

The waiting time of slightly more than a half (51%) of the respondents was between 30 minutes to 1 hour with 28% being over 1 hour while the rest (21%) waited for less than 30 minutes to be admitted. The results were presented in Figure 4.6 below.
Fig 4.6: Waiting time for admission

4.5.5 Association of health system factors with maternal satisfaction

The study results showed that slightly more than a half 106(52.5%) of the respondents with high satisfaction levels comprised of postnatal women who reported staff to be readily available to attend to them. There was a significant statistical association (p=0.014) between availability of staff and level of maternal satisfaction. However, qualitative results showed increased workload on the already available nurses. One key informant in one of the hospitals said,

“Many women are turning up for delivery in our facility and the high numbers are becoming unmanageable... The already available members of our staff are overburdened by such increase in demand for our services.” (Postnatal ward Matron)

Majority 167(82.7%) of respondents with high satisfaction levels reported that maternity and postnatal wards were clean. The level of satisfaction with maternity services increased with increased perception by postnatal women on facility cleanliness. The results showed a significant statistical association (p=0.002) between cleanliness of facility wards and the level of maternal satisfaction.
Majority 139(68.9%) of respondents with high satisfaction levels reported availability of prescribed drugs within the facility pharmacies. There was a significant statistical association (p=0.006) between availability of drugs and level of maternal satisfaction. Qualitative results showed inadequate supplies and drugs as the main challenge facing the implementation of the policy of FMS. One Nursing Officer replied,

“Despite monthly delivery reports being provided regularly to the national office, reimbursement for the last quarter has not been received....” (Maternity in-charge)

The study results showed that majority 142(78.4%) of respondents with low satisfaction levels reported sharing beds while they were admitted in postnatal wards. Sharing of beds among patients signifies increased congestion and thus discomfort among clients. There was a significant statistical association (p=0.034) between sharing of beds and level of maternal satisfaction. A nursing officer in charge of postnatal wards in one of the facilities interviewed said,

“Most of the time wards in this hospital are full almost every day... We are forced to accommodate two mothers in one bed since we cannot turn them away.” (Postnatal ward Matron)

The study results showed that more than a half 105(58.0%) of the respondents with low satisfaction levels reported admission time to within the service charter timelines. There was almost equal distribution of postnatal women across the various admission time categories for the two satisfaction levels. The study revealed no significant statistical association (p=0.199) between shortness of admission time and maternal level of satisfaction. The results were presented in Table 4.5 below.
Table 4.5: Relationship between health system factors and level of maternal satisfaction (n=383)

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>Respondent response</th>
<th>Low satisfaction level (N=181)</th>
<th>High satisfaction level (N=202)</th>
<th>Statistical significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff availability</td>
<td>Yes</td>
<td>91(50.3%)</td>
<td>106(52.5%)</td>
<td>( \chi^2=8.534 ) df=2 p=0.014</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>73(40.3%)</td>
<td>82(40.6%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I can't tell</td>
<td>17(9.4%)</td>
<td>14(6.9%)</td>
<td></td>
</tr>
<tr>
<td>Cleanliness of maternity wards</td>
<td>Yes</td>
<td>136(75.1%)</td>
<td>167(82.7%)</td>
<td>( \chi^2=12.512 ) df=2 p=0.002</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>18(9.9%)</td>
<td>26(12.9%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I can't tell</td>
<td>17(9.4%)</td>
<td>6(3.0%)</td>
<td></td>
</tr>
<tr>
<td>Availability of drugs</td>
<td>Yes</td>
<td>47(25.9%)</td>
<td>139(68.9%)</td>
<td>( \chi^2=10.338 ) df=2 p=0.006</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>121(66.9%)</td>
<td>32(15.8%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I can't tell</td>
<td>13(7.2%)</td>
<td>31(15.3%)</td>
<td></td>
</tr>
<tr>
<td>Sharing of beds by mothers</td>
<td>Yes</td>
<td>142(78.4%)</td>
<td>61(30.2%)</td>
<td>( \chi^2=6.748 ) df=2 p=0.034</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>32(17.7%)</td>
<td>120(59.4%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I can't tell</td>
<td>7(3.9%)</td>
<td>21(10.4%)</td>
<td></td>
</tr>
<tr>
<td>Shortness of admission time</td>
<td>Yes</td>
<td>105(58.0%)</td>
<td>104(51.5%)</td>
<td>( \chi^2=3.229 ) df=2 p=0.199</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>21(11.6%)</td>
<td>36(17.8%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I can't tell</td>
<td>55(30.4%)</td>
<td>62(30.7%)</td>
<td></td>
</tr>
</tbody>
</table>

4.6 Obstetric experience factors

4.6.1 Antenatal care attendance

The study revealed that less than a half 157(41%) of the postnatal women interviewed attended four ANC visits with 153(39.9%) of the respondents attending three ANC visits. At the same time, more than a half 208(54.3%) of the respondents timed their first ANC visit within 3-4 months of their pregnancy. This may be due to breaking of financial barriers through removal of user fees by implementation of free maternity policy in public hospitals. The results were as shown in Table 4.6 below.

Table 4.6: ANC attendance (n=383)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Respondent response</th>
<th>Frequency (N)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of ANC visits</td>
<td>≤2</td>
<td>50</td>
<td>13.0%</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>153</td>
<td>39.9%</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>157</td>
<td>41.0%</td>
</tr>
<tr>
<td></td>
<td>&gt;4</td>
<td>23</td>
<td>6.0%</td>
</tr>
<tr>
<td>Timing of first ANC Visit</td>
<td>1-2 Months</td>
<td>94</td>
<td>24.5%</td>
</tr>
<tr>
<td></td>
<td>3-4 Months</td>
<td>208</td>
<td>54.3%</td>
</tr>
<tr>
<td></td>
<td>5-6 Months</td>
<td>45</td>
<td>11.7%</td>
</tr>
<tr>
<td></td>
<td>More than 6 Months</td>
<td>36</td>
<td>9.4%</td>
</tr>
</tbody>
</table>
4.6.2 Mode of delivery

The results showed that majority 156(86.2%) of respondents with low satisfaction levels comprised of postnatal women who delivered through spontaneous vaginal delivery. There were slight differences in satisfaction levels within the two modes of delivery. There was almost equal distribution of postnatal women along the two levels of satisfaction. There were no significant statistical association (p=0.119) between mode of delivery and maternal satisfaction level as shown in Table 4.7 below.

Qualitative results showed that the main indication for Caesarean Section (CS) were obstructed labour, ruptured uterus and reproductive scars. Women always associate CS with maternal deaths, pain and inability to undertake their daily chores. One FGD discussant said,

“We tend to believe that when one delivers through CS, she will not be able to do any other work for herself thus prefer spontaneous vaginal delivery to caesarean section.”

(Postnatal Woman)

Table 4.7: Relationship between mode of delivery and level of maternal satisfaction (n=383)

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Respondent response</th>
<th>Dependent variable</th>
<th>Statistical significance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Low satisfaction level (N=181)</td>
<td>High satisfaction level (N=202)</td>
</tr>
<tr>
<td>Mode of delivery</td>
<td>Vaginal Delivery</td>
<td>156(86.2%)</td>
<td>162(80.2%)</td>
</tr>
<tr>
<td></td>
<td>Caesarean Section</td>
<td>25(13.8%)</td>
<td>40(19.8%)</td>
</tr>
</tbody>
</table>

4.6.3 Association of obstetric experience factors with maternal satisfaction

Majority 158(78.2%) of the respondents with high satisfaction levels reported receiving enough advice during ANC visits. Satisfaction levels increased among postnatal women with increased advice from healthcare providers during ANC visits.

The study established a significant statistical association (p=0.001) between ANC advice and level of maternal satisfaction. One FGD discussant said,
“We were not advised on the best mode of delivery during the antenatal care attendance. Nurses really do not talk about it so we don’t have good information to inform our delivery decisions.” (Postnatal Woman)

The study revealed that slightly more than a half 105(58.0%) of respondents with low satisfaction levels reported experiencing long labour time. There were slight differences in satisfaction levels within the various labour time responses. The study further revealed that the average labour time was 7.79 hours. There was a significant statistical association (p=0.001) between labour time and level of maternal satisfaction.

The study showed that slightly more than a half 97(53.6%) of the respondents with low satisfaction levels did not like the pain relief method applied during labour and child delivery. High satisfaction levels were experienced among respondents who perceived care providers did enough to alleviate their pain and suffering. The study revealed existence of a significant statistical association (p=0.001) between the pain relief method used and maternal satisfaction level. The results were presented as shown in Table 4.8 below.

**Table 4.8: Relationship between obstetric experience factors and maternal level of satisfaction (n=383)**

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>Respondent response</th>
<th>Dependent variable</th>
<th>Statistical significance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Low satisfaction level (N=181)</td>
<td>High satisfaction level (N=202)</td>
</tr>
<tr>
<td>Advice from ANC visits</td>
<td>Yes</td>
<td>108(59.7%)</td>
<td>158(78.2%)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>44(24.3%)</td>
<td>36(17.8%)</td>
</tr>
<tr>
<td></td>
<td>I can't tell</td>
<td>29(16.0%)</td>
<td>8(4.0%)</td>
</tr>
<tr>
<td>Long labour time</td>
<td>Yes</td>
<td>105(58.0%)</td>
<td>82(40.6%)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>62(34.3%)</td>
<td>85(42.1%)</td>
</tr>
<tr>
<td></td>
<td>I can't tell</td>
<td>14(7.7%)</td>
<td>35(17.3%)</td>
</tr>
<tr>
<td>Pain relief method</td>
<td>Yes</td>
<td>66(36.5)</td>
<td>83(41.1%)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>97(53.6%)</td>
<td>63(31.2%)</td>
</tr>
<tr>
<td></td>
<td>I can't tell</td>
<td>18(9.9%)</td>
<td>56(27.7%)</td>
</tr>
</tbody>
</table>
CHAPTER FIVE: DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Discussions

5.1.1 Individual patient characteristics

The study found out that more middle aged women had slightly high satisfaction levels compared to younger and older women. Younger and older women tend to face more complications during childbirth due to underdeveloped and weakened reproductive organs respectively. There were slight differences in satisfaction levels across the various age categories. This finding was similar to a study done in Nigeria which showed that most women in the middle childbearing ages are most likely to use more maternal services compared to their peers in the early or late childbearing ages thus increased level of maternal satisfaction (Babalola et al, 2009).

The level of education played a significant role in determining maternal satisfaction among respondents. This study showed that most of the respondents with secondary education had high satisfaction levels. Educated mothers have a greater ability to easily access and make use of available information to inform their delivery decisions. Meeting expectations of patients by service providers boosts their satisfaction with maternal care delivery services. Education plays a significant role in demystification of poor delivery outcome related beliefs.

These results concur with the findings of a study done in Kakamega County Referral Hospital which stated that most clients with higher educational level demand much information on quality of care provided and try to build trust with physicians (Mukabana et al, 2016). Meeting their expectations ensures increased satisfaction with care delivery. Similar results were also reported by a Nigerian study which showed that education increases awareness levels for the need to use skilled maternity services.
at women’s disposal (Ebere, 2013). Whenever patient expectations are fulfilled, their satisfaction levels are boosted.

Concerning parity, the study showed that majority of respondents with high satisfaction levels had less than or equal to two children. It was further revealed that the level of maternal satisfaction increased with decrease in parity. This could be due to higher standards of living in the urban areas, where women prefer to have a smaller number of children whom they can cater for.

These results were contrary to a study done in Addis Ababa, Ethiopia which showed that majority of women with higher parity have greater responsibilities within the household for child care. This increases health service utilization consequently affecting their satisfaction (Kwast et al, 2008). These results were also inconsistent with another Ethiopian study done in Tigray region, in which it was reported that most women with higher parity, especially those with successful deliveries, have more confidence and less fear for pain and risky pregnancy outcomes (Tsegay et al, 2013).

In regard to religion, this study showed that majority of respondents with low satisfaction levels were Christians. The level of maternal satisfaction did not differ significantly across the various religious affiliations. However, the study revealed that religion plays a significant indirect role on pregnancy and delivery outcomes. Some religions such as Muslim encourages women to seek spiritual interventions and services of TBAs to avert complications associated with pregnancy and delivery. This may result in delivery complications due to delayed access to skilled obstetric care thus low maternal satisfaction. This was contrary to past studies which associated religion with maternal satisfaction. Relying on religious interventions and cultural activities to solve pregnancy and delivery complications poses significant challenges resulting in poor delivery outcomes (Belachew et al, 2011).
The current study found out that majority of married women had higher satisfaction levels. However, marital status was not significantly associated with maternal satisfaction level. This may be attributed to the slight differences in the distribution of respondents across the various marital status categories. These results were inconsistent with a study done in Edo South Senatorial District, Nigeria which showed that majority of married women spent more time caring for their spouses and families imposing a strain on their health thus reducing their satisfaction levels (Marchie, 2012). These results were consistent with a study done in Western Uganda which documented higher satisfaction levels among most married mothers. This was attributed to financial support from their spouses and consequently greater access to quality maternal care (Asiimwe, 2010).

The study showed that majority of respondents with higher satisfaction levels were housewives and unemployed women. The level of maternal satisfaction had significant differences across the various occupational categories. Unemployed women lack enough resources to finance their healthcare needs thus seem to enjoy free maternity services provided by the government. This finding was consistent with studies done in Nyatike and Muhuru Bay divisions in Nyanza region by Mugambi (2013) and in Bangladesh by Nahar (2018) which found out that more housewives/non-working women are more likely to use free maternal health services compared to their employed counterparts thus more satisfied.

Income was significantly associated with satisfaction levels. The study found out that majority of postnatal women with high satisfaction levels were low income earners. The levels of satisfaction increased with decrease in income among respondents. This could be because higher income earners have a greater ability to access/afford and use health care inputs from private facilities unlike their poorer counterparts who mostly
rely on government subsidized care. Therefore the income earned by majority of postnatal women was insufficient to sustain their family needs, especially those living in the urban areas of Nairobi City County hence satisfied with FMS provided.

This finding was similar to a Kenyan study which revealed that higher satisfaction levels with free maternity were exhibited among majority of low income earners (Mugambi, 2013). This finding was contrary to studies done in Nigeria by Ebere (2013) and in Ghana by Dalinjong et al (2018) who showed that income enables women to improve their nutritional status thus improved delivery outcomes. This contributes to increased satisfaction levels among majority of higher income earners.

5.1.2 Provider related factors

The study found out that majority of women with higher satisfaction levels perceived hospital staff being friendly to them. The level of satisfaction among respondents increased with increased perception on staff friendliness. This may be due to the fact that friendliness enables women to create good rapport and establish trust with clinicians thus higher perceived quality of care. This result was supported by a study done in Kenya by Ochako (2011) who reported that when mothers perceive care providers to being unsympathetic and having poor attitudes towards women in labour pains creates mistrust between them thus reducing their satisfaction levels.

Similar results were also reported by another Kenyan study done in Pumwani Maternity hospital in Nairobi City County which revealed that provider friendliness is a predictor of client satisfaction among majority of patients (Nyongesa et al, 2014). The findings of significance of staff friendliness on patient satisfaction were also reported by a study done by Davidson et al (2012) which showed that poor staff attitudes and poor treatment experiences and insensitivity to women in labour pains
discourages them from delivering in health facilities. Similar results were also reported by another study done in Tanzania which associated satisfaction with interpersonal interactions between hospital staff and women in labour seeking delivery services in public health facilities (Khamis et al, 2014).

The current study revealed that majority of women who reported that hospital staff ensured them privacy had higher maternal satisfaction levels. Maternal satisfaction with maternity services increased with increased provision of privacy. This is because patients feel valued as the hospital staff respects their rights to dignity, privacy and confidentiality. The results concur with a study done by Otieno (2014) who argued that provision of patient privacy affects the health seeking behaviours and ultimately the effectiveness of such care. Provision of patient privacy encourages more women to use the available maternal services since they feel satisfied with service delivery components at their disposal. The same results were also reported by a study done in Debre Markos Town, Ethiopia which showed that provision of respect and assurance of patient privacy increases client satisfaction (Bitew et al, 2015).

Involvement of women in making decisions concerning their mode of delivery was found to have a significant impact on their satisfaction. This is because majority of women view providers to violate mothers’ right for choice of delivery when a reliable advice is not provided. Involvement of patients in decision making prepares them to accept the most probable outcome of delivery and boosts their confidence. According to a study done by Muhammad et al (2014), the same opinion was also reached where it was found that involvement of patients in making decisions about labour procedures and child birth are significant in determining client’s satisfaction.

The study found that slightly more than a half of respondents with low satisfaction levels reported that the facility staff did not pay attention to their issues attentively.
This would be attributed to the fact that addressing client issues involves solving the consumers’ problems thus making care more people centric and humanistic. However, this may not be achievable in public hospitals which are always congested and implementing patient desires becomes problematic. Health care providers should devote their time, pay attention to mothers’ problems and offer guidance and counselling. Satisfaction level was significantly associated with solving of patient problems by care providers.

This result was consistent with an Ethiopian study which showed that proper communication, information sharing and listening to clients’ concerns enhances their satisfaction (Bitew et al, 2015). The study findings were also similar to another study done in Nairobi’s Informal Settlements in which Bazant et al (2009) argued that perceived support from care providers during labour improves delivery outcomes and overall women’s satisfaction with care.

5.1.3 Health system factors

The availability of staff to attend to mothers when they needed help was significantly associated with maternal satisfaction levels. This could be explained by the view of the majority of postnatal women with high satisfaction levels who reported that the available staff worked hard to ensure that clients received the necessary help. However, it was revealed from the researcher’s observation that most of the hospitals had inadequate number of staff to meet the increased number of deliveries occurring at public hospitals due to the effects of free maternity policy.

These results were contrary to a study done in Machakos level five hospital, Kenya in which majority of the respondents indicated inadequate number of midwives to attend to women in labour wards thus low satisfaction levels among postnatal women (Orare,
The same results were also inconsistent with results from a World Bank report which showed that the current staffing levels in public facilities in Kenya meet only 17% of minimum requirements needed for effective performance of the health care systems (Bourbonnais, 2013).

The study found out that majority of women with high satisfaction levels reported prescribed drugs to be readily availability. This was significantly associated with maternal satisfaction. Availability of prescribed drugs within the hospitals pharmacy departments save patients’ time from travelling outside the facility looking for drugs which may even be more costly thus more satisfied. The results are in line with another Kenyan study which showed that availability of essential drugs is a predictor that is significantly affecting satisfaction with maternity services among patients (Nyongesa et al, 2014). However, delayed reimbursement of funds from the national government to the county offices at times leads to acute shortage of drugs which significantly affects service delivery in public hospitals.

The study showed that most of the respondents with high satisfaction levels reported postnatal wards to be clean. Facility cleanliness had a significant influence on maternal satisfaction. Perceived facility cleanliness is associated with high quality service provision. Similar results were reported by Sheehy et al (2011) who argued that the physical birthing environment in most cases, affects patient safety and health, effectiveness of care and the morale of the care providers. Overall satisfaction with the health facility’s physical and birthing environment is a predictor to women’s positive experience during labour and eventual delivery (Foureur et al, 2010). This was further supported by a report by the World Health Organization which explained that delivery in unhygienic conditions without the assistance of a Skilled Birth Attendant may result
in adverse health conditions of pregnant women consequently reducing their satisfaction levels (WHO, 2014).

High bed occupancy rate is a feature that is common across most public facilities in Kenya. With increased demand for free maternity services, most patients reported sharing beds which significantly reduced their satisfaction with service delivery. Bed sharing in majority of public hospitals causes patient discomfort and hinders patient privacy. This concurs with a report by KNHRC (2015) which stated that increased demand for services in public hospitals is worsening the delivery conditions due to overstretching of the available infrastructure and equipment. The same results were also reported by another study done in Nepal which showed that maternity wards in public health facilities were more often overcrowded with high bed occupancy rates throughout the year (Karkee et al, 2014).

Majority of respondents with low satisfaction levels reported waiting time to be within the service charter timelines. The study did not establish a significant influence of waiting time on the level of maternal satisfaction. Waiting time was not viewed as a significant issue among respondents since there were slight differences in satisfaction levels across all the waiting time categories. The findings were inconsistent with an Ethiopian study done in Amhara region, which showed that majority of respondents reported long waiting time as a feature that was associated with patient dissatisfaction (Tayelgn et al, 2011). These results were also contrary to another study done in Paropakar Maternity and Women Hospital in Nepal which showed that majority of postnatal women who experienced shorter admission time and to consult a doctor were more satisfied (Shrestha et al, 2010).
5.1.4 Obstetric experience factors

The study results revealed a significant influence of ANC attendance on the level of maternal satisfaction. Attendance of antenatal clinics and receiving of advice from health care providers improves delivery outcomes of pregnant mothers thus enhancing mothers’ satisfaction with maternity services received. Majority of the respondents attended their first ANC visit at their first trimester (before 16 weeks) as recommended by the WHO. This was supported by a Kenyan study done in Malindi district which reported that more women were utilizing the services of SBAs during pregnancy and childbirth due to removal of user fee charges (Lang’at et al, 2015).

These results concurred with another Kenyan study which showed that early entry into antenatal care ensures early detection and treatment of inherent disease conditions, preventing adverse pregnancy outcomes thus enhancing maternal satisfaction (Adungo, 2013). According to Kiplagat (2009), he argued that fewer ANC visits may lead to increased perinatal deaths, low birth-weights, premature deliveries and high risk of intra-uterine retarded growth which could have been otherwise prevented.

Similar results were also reported by another Kenyan study which showed that attending the recommended number of ANC visits and getting enough advice from SBAs improves maternal delivery outcomes (Abok, 2012). This was also supported by a report by the World Health Organization which postulated that perceived poor quality of care partly demotivates the choices made by women to seek ANC services and hence not deliver in hospital settings (WHO, 2016).

The study showed that majority of respondents with high satisfaction levels got their babies through spontaneous vaginal delivery. However, there was no significant statistical association between mode of delivery and maternal level of satisfaction. This would be because most cases of caesarean section deliveries are conducted in
emergency situations thus saving the baby in this condition is important. This finding was consistent with an Ethiopian study done in Amhara region, which failed to detect differences in the level of maternal satisfaction among women who had different modes of delivery (Tayelgn et al, 2011).

These findings were contrary to a study done in China which showed that the quality of service delivery has a significant impact on maternal choices for mode of delivery especially cesarean section (Tian et al, 2014). Postnatal women need the assurance of availability of skilled providers and resources to conduct the operation in a safe and successful manner. This finding was also inconsistent to a survey conducted by Sawyer et al (2013) which showed that maternal satisfaction was a crucial predictor for the choice of delivery mode by women. Mothers who are satisfied with the quality of service delivery in a given health facility are more likely to accept medical advice on delivery modes by physicians.

The study results revealed that majority of women with low satisfaction levels had long labour time. Labour time was significantly associated with satisfaction levels among postnatal women. This may be due to increased pains and complications associated with long labour time among pregnant women and subsequently resulting to poor delivery outcomes. This finding was in line with another study done in Wolaita Zone, Southern Ethiopia which explained that long labour time and suffering from complications is significantly associated with maternal dissatisfaction (Yohannes et al, 2013). This finding was also supported by another study done in Bangladesh which revealed that majority of mothers with complications after delivery were more dissatisfied with maternal service delivery (Shrestha et al, 2010).

The study found out that majority of respondents with low satisfaction levels did not like the pain management method used. The application of appropriate pain
management method among women in labour had significant influence on maternal satisfaction level. This resulted in reduced pain among women in labour through provision of back massage, pain killers and perceived support from midwives. This result was similar to a study done in Kisii Teaching and Referral Hospital which showed that application of appropriate pain relief method among mothers in labour increased maternal satisfaction with intrapartum care (Nyaberi, 2012).

The same results were also documented by another study done by Emina et al (2011) which explained that obstetric procedures associated with increased pain during delivery may lead to maternal dissatisfaction. Adoption of delivery methods that portray reduced pain and discomfort ensures safe positive labour experience thus satisfied postnatal women (Kwambai et al, 2013). Adhering to continued midwifery care and support during labour and childbirth require less pain-relief as it improves the quality of physical and emotional care among mothers.

5.1.5 Summary of main findings

The study revealed that the overall satisfaction of postnatal women utilizing free maternity services in public hospitals in Nairobi City County was above average (62.4%). Recommending the facility to others by majority of the respondents showed a sign of improved service delivery. The policy has increased demand for maternity services which suggest a reduced quality of care due to lack of evidence of increased investments thus overstretching the available resources.

The study sought to describe the individual patient characteristics of postnatal women associated with maternal satisfaction. Generally, the study found out that slightly more than a half (51.7%) of the respondents were in the age bracket of 20-29, majority (52.7%) had attained secondary level of education, largest proportion (52.0%) had less
than or equal to two children, most (81.2%) of the respondents were Christians, huge majority (71.8%) were married and largest proportion (38.4%) were housewives. The study findings indicated that age (p=0.001), educational level (p=0.001), parity (p=0.001) and occupational status (p=0.002) were significantly associated with maternal satisfaction level.

The study also sought to determine health provider related factors associated with satisfaction with free maternity. It was revealed that most (75.5%) of the postnatal women were accorded privacy and majority (56.1%) reported care providers to be friendly to them. Slightly less than a half (43.6%) of the respondents were not involved in decision making while the issues of a larger proportion (41.3%) of postnatal women were not addressed attentively. The study results showed that provider friendliness (p=0.001), involvement in decision making (p=0.007) and listening to client issues (p=0.003) had a significant statistical association with maternal satisfaction level.

This study identified health system factors associated with maternal satisfaction. The findings indicated that slightly more than a half (51.4%) of the respondents reported staff to be readily available and most (79.1%) indicated that postnatal wards were clean. It was further revealed that slightly less than a half (48.6%) of the respondents reported availability of prescribed drugs, majority (53.0%) indicated sharing of beds among patients and most (54.6%) estimated waiting time to be within the service delivery charter timelines. Availability of staff (p=0.014), facility cleanliness (p=0.002), availability of prescribed drugs (p=0.006) and sharing of beds (p=0.034) among respondents were significantly associated with maternal satisfaction level.
The study also sought to determine the obstetric experience factors associated with maternal satisfaction. Majority (83.0%) of postnatal women gave birth through spontaneous vaginal delivery, most (69.5%) got sufficient advice from ANC visits, slightly less than a half (48.8%) had endured long labour time and a larger proportion (41.8%) did not like the pain relief method applied. There were significant statistical association between maternal satisfaction and ANC advice (p=0.001), long labour time (p=0.001) and appropriate pain relief management method applied (p=0.001).

5.2 Conclusions

The study concludes that maternal satisfaction level with FMS in Nairobi City County public hospitals was sub-optimal. Individual patient characteristics were significantly associated with maternal satisfaction. Delivery at tender and older age increases risks of delivery complications hence reduced satisfaction. Housewives and middle income earners exhibited higher satisfaction levels with free maternity services.

These findings conclude that provider related factors played a significant role towards maternal satisfaction levels with free maternity services. Depriving of patient privacy, discouraging problem sharing and making decisions without involving expectant mothers on pregnancy management and ultimate delivery outcome affects their satisfaction. This disrupts establishment of trust in physician-patient relationships.

The results established that health system factors predicted maternal satisfaction with free maternity services. Despite healthcare workers being available to attend to clients, the study witnessed high bed occupancy among postnatal mothers and drug shortages associated with delayed reimbursements from the national government.

Finally, this study showed that obstetric experience factors were associated with maternal satisfaction level. There were improved rates of ANC utilization enabling
mothers to discuss their delivery plans with care providers. Long labour time and poor pain management promotes poor delivery outcomes hence low maternal satisfaction.

5.3 Recommendations

5.3.1 Recommendations from the study

i) The County Government of Nairobi in collaboration with relevant health stakeholders should develop, implement and scale up women and girls education empowerment initiatives and programmes aimed at improving women educational levels, preventing early or tender-age pregnancies and enhancing their access and use of relevant information on maternity care.

ii) The County Government together with the Ministry of Health should organize for staff workshops and sensitization programs to promote friendly patient interactions, information sharing and establish working physician-patient relationships to promote effective maternal service delivery.

iii) The Ministry of Health, National and County Government of Nairobi City should develop a specific policy for effective implementation, timely reimbursement and efficient utilization of FMS funds at the county and public hospitals. They should construct modern maternity wards, expand/renovate existing structures, deploy adequate staff and ensure provision of adequate sustainable supplies, drugs and equipment for effective service delivery.

iv) The Ministry of Health, Nairobi City County Government and public hospitals should sensitize the public on significance of seeking skilled care during pregnancy and child delivery and make client follow ups to enhance ANC utilization. They should also ensure necessary guidelines are in place to guide public facilities and needed key actions taken and monitored to enhance
patient safety, improve patient experience and promote adherence to standards of care thus improve the quality of FMS provided to clients.

5.3.2 Recommendations for further study

i) A research should be conducted to determine the quality of Free Maternity Services across Public Hospitals in Kenya.

ii) An assessment should be done to establish the effect of the Kenya Quality Model of Health implementation on patient satisfaction with perceived quality of FMS in Kenya.

iii) A comparative study should be conducted on perceived quality of FMS in National referral and County health facilities in Kenya.
REFERENCES


Appendix 1: Consent Form

Satisfaction levels with free maternity services among postnatal women attending Public Hospitals in Nairobi City County, Kenya.

Introduction
I am Geoffrey Maseme Okari, a student from Kenyatta University undertaking a master’s degree in Health Management. I am conducting a research on the above stated title in postnatal wards of Kenyatta National Hospital, Mbagathi District Hospital, Mama Lucy Kibaki Hospital and Pumwani Maternity Hospital. I wish to request for permission from you to participate in this study. I am humbly requesting you to cooperate with me and provide the necessary accurate information.

Study purpose
The study aims at establishing the levels of satisfaction among clients attending postnatal care clinics in public hospitals and thus addresses the barriers related to utilization of free maternity services in these facilities. The study results will help strengthen and support the policy to enhance decision making thus improve the provision of these services ensuring patient satisfaction.

Study procedure
Participation in this research involves answering questions which you are asked in a research questionnaire concerning provision of free maternity services in this facility. You are required to tick/fill your responses in the spaces provided and return the questionnaires. At any given time, you are free to seek clarification on aspects related to the study.
Voluntary participation

You have the right to refuse participating in this research as it is purely voluntary and thus optional. You may as well decline to respond to some questions and withdraw from the interview at any particular time without any dire consequences.

Discomforts and risks

This interview schedule is detailed and you may be tired underway. You may realize that a number of questions provoke your cultural and religious beliefs hence you may choose not to answer. This exercise may extend your time you will spend in this facility after receiving your daily routine healthcare services.

Benefits and rewards

Your participation in the study will provide us with the necessary information ensuring provision of effective maternity services that can improve the health of women and their new-born babies seeking free maternity services in public hospitals in Nairobi County. The study will not provide any monetary rewards to participants.

Confidentiality

The interview will be held in private settings within the facility. The information you give will be treated with utmost privacy and confidentiality. Your identity will not be revealed and the information will be used for the purpose of this study only.

Contact information

In case of any questions regarding this study, you may contact my supervisors.

Prof Margaret Keraka: keraka.margaret@ku.ac.ke; 0721817521

Dr. Kenneth Rucha: kennethrucha@gmail.com: 0723227480

Or Kenyatta National Hospital-University of Nairobi ERC

Prof M.L. Chindia. Secretary, KNH-UoN ERC

Tel. 2726300 Ext. 44102; uonknh_erc@uonbi.ac.ke
Participant’s statement

The information concerning my involvement in this study has been clarified to me. I have been given an opportunity to ask questions and my concerns have been addressed adequately. Participation in this research is purely optional and voluntary. I understand that the information I will give in this study shall be kept confidential. I can also choose to withdraw from participating from the study at any one given time.

Sign……………………………………            Date……………………………………

Principal Investigator’s statement

I, the undersigned, have explained to the volunteer in a language that she best understands the proceedings to be followed in the study and the risks and benefits involved.

Geoffrey Maseme Okari: gokarimaseme2@gmail.com; 0728431936

Signature………………………………… Date……………………………………..
Appendix 2: Assent form

Title: Satisfaction levels with maternity services among postnatal women attending Public Hospitals in Nairobi City County, Kenya.

Investigator: Okari Maseme Geoffrey

I am doing a research on maternal satisfaction with free maternity services in this health facility. This study has been granted permission by the Kenyatta National Hospital-University of Nairobi Ethics and Research Committee (KNH-UoN ERC Protocol No. P722/10/2016). This research is a way to learn about the provision of services you receive in this facility. A few mothers aged below the age of 18 will be recruited for participating in this research.

Participation in this research involves answering questions which you are asked in a research questionnaire concerning provision of free maternity services in this facility. You are required to tick/fill your responses in the spaces provided and return the questionnaires. At any given time, you are free to seek for a further clarification. This interview schedule is detailed and you may tire underway. You may realize that some questions may provoke your cultural and religious beliefs hence you may choose not to answer. This exercise may extend your time you will spend at this facility.

This study will not directly benefit you. However, your participation in the study will provide us with the necessary information to improve service provision in this facility. After finalizing this study a report will be written but it will not include your name or that you were in the study. You do not have to be in this study if you do not want. If you decide to stop after we begin, that’s okay too. Your parents know about the study too. If you decide to participate in this study please sign in the spaces provided below.

__________________________  ___________________
Signature                        Date
Appendix 3: Research questionnaire for postnatal mothers

Thank you for your willingness to participate in this study. The session will take 20 to 30 minutes. You will be required to record your responses against the questions in the spaces provided. You are encouraged to give as accurate responses as possible. The information you give will be kept confidential and used for the purpose of this study only. There is no right or wrong response. Feel free to ask for any clarification in the questions asked below. Thank you.

Please tick or insert in the brackets the option which best describes your answer.

A. Demographic information

1. What is your age?

2. What is your highest level of education?

3. How many children do you have?

4. What was your age at first birth?

5. What is your religion?
   [4] Others (specify)……………………………………

6. What is your marital status?

B. Socio-economic factors and utilisation of free maternity services

7. What is your present occupation?
8. What is the level of income per month in your family (Kenya shillings)?
   [4] 21,000 – 25,000  [5] 26,000 and above
9. What means of transport did you use to get to the hospital?
10. How long did you take from your area of residence to the health facility?

C. Administration of Free maternity services by health care providers

11. Are you aware that delivery in public hospitals is free?
12. If yes, how did you get information on the free maternal health care?
   [1] Mass media (radio, TVs)  [2] Social sites (Facebook, twitter)
13. a). Did you pay/have you paid for any maternal service that you have received in
     this hospital?
     b). If YES;
        i) How much cost did you pay (Kshs)? .................................
        ii) Which services did you pay for? (Tick those that you paid for)
14. State whether the following statements are true or false in relation to delivery in
    public hospitals

<table>
<thead>
<tr>
<th>Statement</th>
<th>True</th>
<th>False</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antenatal care is not free</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Postnatal care is free</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Am not required to pay for normal delivery</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delivery through caesarean section is not free</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ultra-sound/scanning of pregnant mothers is free</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
15. How long did you wait before you were admitted?

16. Respond to the following statements:

<table>
<thead>
<tr>
<th>Statement</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are staff readily available to attend to you when you call them for help</td>
<td>Yes No I can’t tell</td>
</tr>
<tr>
<td>Are the nurses friendly to you</td>
<td></td>
</tr>
<tr>
<td>Is the waiting time within the service delivery charter timelines</td>
<td></td>
</tr>
<tr>
<td>Were you accorded sufficient privacy by providers during delivery</td>
<td></td>
</tr>
<tr>
<td>Were you involved in decision making about your mode of delivery</td>
<td></td>
</tr>
<tr>
<td>Providers listen to your issues or concerns attentively</td>
<td></td>
</tr>
</tbody>
</table>

D. Health system factors and utilisation of free maternal health services

17. a) Was this your first choice facility to deliver at?
   b) If NO, what reason(s) made you deliver in this facility?
      [1] Referral  [2] It was near my home
      [3] I got unexpected/instant labour pains  [4] It was recommended to me
      [5] The providers are skilled  [6] It offers quality services
      [7] Others (specify)..............................................

18. Does the facility provide warm water for bathing after delivery?

19. Respond to the following statements by ticking the most appropriate response for the questions in the table below:

<table>
<thead>
<tr>
<th>Statement</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>The maternity ward for delivery was clean</td>
<td>Yes No I can’t tell</td>
</tr>
<tr>
<td>Drugs are readily available in the hospital</td>
<td></td>
</tr>
<tr>
<td>The hospital has adequate functional hygiene facilities</td>
<td></td>
</tr>
<tr>
<td>(Bathrooms &amp; toilets with plenty water supply).</td>
<td></td>
</tr>
<tr>
<td>The hospital had adequate functional medical equipment required for delivery</td>
<td></td>
</tr>
<tr>
<td>Mothers in the maternity ward shared beds</td>
<td></td>
</tr>
<tr>
<td>New born babies shared incubators</td>
<td></td>
</tr>
</tbody>
</table>
E. Obstetric experience factors and satisfaction with free maternal health services

20. How many antenatal care visits did you attend?

21. What was the timing of your first Antenatal care visit?

22. Does the healthcare providers make antenatal care clinic follow ups to you?

23. a) What was your mode of delivery?

   b) Were you satisfied with the way your delivery was conducted?

24. How long the labour did signs last? ........................................(Hours).

25. Were you allowed to see your baby after delivery?

26. Respond to the following statements regarding your obstetric experience during delivery in this facility by ticking the most appropriate response.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Yes</th>
<th>No</th>
<th>I can’t tell</th>
</tr>
</thead>
<tbody>
<tr>
<td>My Child was in a stable condition after delivery</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I was in a stable condition after delivery</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I received enough advice from ANC clinics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I discussed the delivery plan with the care providers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My pregnancy was planned for</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Labouring time lasted for long (more than 6hrs)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I liked the pain relief method used after delivery</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I had good interaction with the care givers</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

F. Satisfaction with free maternal delivery

27. On a scale of 1-5, rate your level of satisfaction with delivery in this facility by ticking a response that best describes your opinion where “1” means “Highly dissatisfied” “2” means “Dissatisfied” “3” means “Neither dissatisfied nor satisfied” “4” Satisfied and “5” means “Highly satisfied.”
<table>
<thead>
<tr>
<th>Statement</th>
<th>Satisfaction level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient rooms are comfortable enough according patients privacy</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>Hospital has employees with neat and professional appearance</td>
<td></td>
</tr>
<tr>
<td>The hospital has visually appealing facilities e.g bathrooms, toilets</td>
<td></td>
</tr>
<tr>
<td>The hospital has employees who sincerely solve patient problems</td>
<td></td>
</tr>
<tr>
<td>The hospital provides promised services at promised time</td>
<td></td>
</tr>
<tr>
<td>Health care staff provides prompt services to customers</td>
<td></td>
</tr>
<tr>
<td>Staff informs customers as to when services will be performed</td>
<td></td>
</tr>
<tr>
<td>The hospital employees are consistently courteous and polite</td>
<td></td>
</tr>
<tr>
<td>The hospital employees make customers feel secure and confident</td>
<td></td>
</tr>
<tr>
<td>Doctors and nurses spends enough time with patients</td>
<td></td>
</tr>
<tr>
<td>Hospital employees understand specific needs of patients</td>
<td></td>
</tr>
</tbody>
</table>

28. What do you like most about free maternal care?

……………………………………………………………………………………
……………………………………………………………………………………
……………………………………………………………………………………
……………………………………………………………………………………
……………………………………………………………………………………
……………………………………………………………………………………
……………………………………………………………………………………

29. What do you think should be done to enable more people to access free maternal care?

……………………………………………………………………………………
……………………………………………………………………………………
……………………………………………………………………………………
……………………………………………………………………………………
……………………………………………………………………………………
……………………………………………………………………………………
……………………………………………………………………………………

30. The maternity services offered in this hospital are of high quality and I would recommend other women to deliver in this facility.


Thank you for your time and participation!
Appendix 4: Interview guide for Focused Group Discussions

Dear participant,

You are hereby invited to participate in a Focused Group Discussion for a study on ‘Satisfaction levels with free maternity services among postnatal women attending Public hospitals in Nairobi City County’. You will be one of the members of a focused discussion group made up of 8 to 10 participants. You are requested to be honest, free and active in your participation. Participation will be guided by use of FGD Guide. There will be an observer, moderator and note taker for your focused group discussion. All information gathered will be held under strict confidentiality and will be used for purposes of this research only.

1. As a client, what is your opinion on the quality of free maternal health services in this facility?

2. From your own view, do you think there are individual client characteristics which influences your satisfaction with free maternity services? If yes, give an explanation. Are there systems in place to assist mothers deliver in case of an emergency in your organisation?

3. From your experience, what are some of the healthcare provider related factors that hindered free interaction during delivery?

4. Following delivery in this facility, which health system factors influenced your satisfaction with maternal services? Are there enough facilities, equipment and resources to cater for the number of women delivering in this facility?

5. How can you describe your obstetric experience during labouring and delivery? What are some of these experiences increased your satisfaction with service delivery?

6. What do you think are the challenges facing this policy?

7. What do you think can be done to improve the quality of free maternity services provided in this facility?

8. In your opinion, do you think maternity services are free?

Thank you for your participation!
Appendix 5: Interview schedule for the Key Informant Interview

Dear participant,

You are hereby invited to participate in a Key Informant Interviewee for a study on ‘Satisfaction levels with free maternity services among postnatal women attending Public hospitals in Nairobi City County’. You have been chosen purposively due to the expected level of information and knowledge you have on the study topic. You are requested to be honest, free and active in your participation. Participation will be guided by use of FGD Guide. There will be an observer, moderator and note taker for your focused group discussion. All information gathered will be held under strict confidentiality and will be used for purposes of this research only.

1. What is your opinion on the effectiveness of free maternity policy in Kenya? How has it affected the quality of service delivery?
2. In your own opinion, what individual patient characteristics influence satisfaction with free maternity in Kenya? Do you think education, age, economic status affect satisfaction with free maternity services?
3. What are the health system factors/aspects affect the implementation of free maternity services? Is there enough infrastructures to deliver mothers who are seeking maternity services in this facility?
4. From experience, what are the key perceptions of healthcare providers on the implementation of free maternity services?
5. What suggestions would you recommend to the hospital to ensure improved service delivery?
6. Do you think the free maternity policy should be maintained and why?
7. Do you think there are enough nurses are assigned to deliver the increasing number of women using maternity services in public hospitals in Nairobi County? How can you describe their workload?

Thank you for your participation!
Appendix 6: Research approval from Kenyatta University Graduate School

Internal Memo

FROM: Dean, Graduate School
TO: Okari Masene Geoffrey
    C/o Health Management & Informatics
    Department,

SUBJECT: APPROVAL OF RESEARCH PROPOSAL

This is to inform you that Graduate School Board, at its meeting of 21st September, 2016 approved your Research Proposal for the M.P.H Degree entitled, “Satisfactions Levels with Free Maternity Services among Women Attending Public Hospitals in Nairobi County, Kenya”.

You may now proceed with data collection, subject to clearance with the Director, Ethics Office, Kenyatta University and Director General, Commission for Science, Technology & Innovation.

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,

GIDEON KAINENYI
FOR: DEAN, GRADUATE SCHOOL

c.c. Chairman, Department of Health Management and Informatics
Supervisors:

1. Prof. Margaret Keraka
   C/o Department of Population and Reproductive Health
   Kenyatta University

2. Dr. Kenneth K. Rucia
   C/o Department of Health Management and Informatics
   Kenyatta University
Appendix 7: Research authorization from Kenyatta University Graduate School

KENYATTA UNIVERSITY
GRADUATE SCHOOL

E-mail: dear-graduate@ku.ac.ke
Website: www.ku.ac.ke

Our Ref: Q140/CYT/PT/29049/2014

DATE: 29th September, 2016

Director General,
National Commission for Science
& Innovation,
P.O. Box 20623-00100,
NAIROBI

Dear Sir/Madam,

RE: RESEARCH AUTHORIZATION FOR OKARI MASEME GEOFFREY – REG. NO.
Q140/CYT/PT/29049/2014

I write to introduce Mr. Okari Maseme Geoffrey who is a Postgraduate Student of this University. He is registered for M.P.H degree programme in the Department of Health Management and Informatics.

Mr. Okari intends to conduct research for an M.P.H Proposal entitled, “Satisfaction Levels with Free Maternity Services among Women Attending Public Hospitals in Nairobi County, Kenya”.

Any assistance given will be highly appreciated.

Yours faithfully,

[Signature]

MR. LUCY N. MBAAJU
FOR: DEAN, GRADUATE SCHOOL
Appendix 8: Ethical clearance from KNH-UoN Ethics and Research Committee

This is to inform you that the KNH-UoN Ethics & Research Committee (KNH-UoN ERC) has reviewed and approved your above revised proposal. The approval period is from 8th March 2017 – 7th March 2018.

This approval is subject to compliance with the following requirements:

a) Only approved documents (informed consents, study instruments, advertising materials etc) will be used.

b) All changes (amendments, deviations, violations etc) are submitted for review and approval by KNH-UoN ERC before implementation.

c) Death and life threatening problems and serious adverse events (SAEs) or unexpected adverse events whether related or unrelated to the study must be reported to the KNH-UoN ERC within 72 hours of notification.

d) Any changes, anticipated otherwise that may increase the risks or affect safety or welfare of study participants and others or affect the integrity of the research must be reported to KNH-UoN ERC within 72 hours.

e) Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. (Attach a comprehensive progress report to support the renewal).

f) Clearance for export of biological specimens must be obtained from KNH-UoN ERC for each batch of shipment.

g) Submission of an executive summary report within 90 days upon completion of the study. This information will form part of the data base that will be consulted in future when processing related research studies so as to minimize chances of study duplication and/or plagiarism.

For more details consult the KNH-UoN ERC website: [http://www.erc.uonbi.ac.ke](http://www.erc.uonbi.ac.ke)
Appendix 9: Research authorization from National Council for Science, Technology and Innovation
Appendix 10: Research permit from National Council for Science, Technology and Innovation
Appendix 11: Research authorization from Ministry of Education

Republic of Kenya
MINISTRY OF EDUCATION
STATE DEPARTMENT OF BASIC EDUCATION

Telegram: “SCHOOLING”, Nairobi
Telephone: Nairobi 020 2303409
Email: ednairobi@gmail.com

When replying please quote
Ref: RCE/NRB/GEN/1/VOL. 1

Geoffrey Maseme Okari
Kenyatta University
P.O. Box 43844-00100
NAIROBI

DATE: 20TH APRIL, 2017

RE: RESEARCH AUTHORIZATION

We are in receipt of a letter from the National Commission for Science, Technology and Innovation regarding research authorization in Nairobi County on “Satisfaction levels with free maternity services among women attending public hospitals in Nairobi County, Kenya.”

This office has no objection and authority is hereby granted for a period ending 14TH MARCH, 2018 as indicated in the request letter.

Kindly inform the Sub County Director of Education of the Sub County you intend to visit.

MAINA NGURU
FOR REGIONAL COORDINATOR OF EDUCATION
NAIROBI

C.C.
Director General/CEO
National Commission for Science, Technology and Innovation
NAIROBI
Appendix 12: Letter of permission from Kenyatta National Hospital

KENYATTA NATIONAL HOSPITAL,
P. O. BOX 20723-00202,NAIROBI
Tel: 2726-300 0, 2726450/2726550
Fax: 2725272
Email: kahadmin@knh.or.ke

KNH/RH/16/VOL.1

DATE: 22nd June, 2017

To
Okari Maseme Geoffrey
Q140/CYT/PT/29049/2014
Dept. Of Health Management
SCHOOL OF PUBLIC HEALTH
KENYATTA UNIVERSITY

RE: REvised research proposal: Satisfaction levels with free maternity services among women attending public hospitals in Nairobi County, Kenya (P722/10/2016)

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

Liaise with the Senior Assistant Chief Nurse, Senior Nursing Officer in Clinic 16 and incharge labour ward to facilitate your study.

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

DR. I.S.O. MARANGA
HEAD OF DEPARTMENT
REPRODUCTIVE HEALTH DEPARTMENT

CC: SACN -RH
incharge labour ward
Appendix 13: Nairobi County Map

Source: www.herstorycentre.org