POSTPARTUM MOTHERS’ PERCEPTION ON QUALITY OF INTRA-PARTUM CARE IN NAIVASHA DISTRICT HOSPITAL LABOUR WARD

AUTHOR: ZILLAH M. MALACHI

REG.NO H/56/64253/2010

A THESIS SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTERS DEGREE IN NURSING SCIENCES (MIDWIFERY/ OBSTETRIC NURSING) OF THE UNIVERSITY OF NAIROBI

9TH JULY 2012

DECLARATION

I declare that this is my original work and that it has not been presented for a degree award in the university or any other institution of higher learning.

……………………………..

Zillah Malachi

Registration Number: H56/64253/2010

Date: ……………………………………..

SUPERVISORS' APPROVAL

This master's dissertation has been submitted with our approval as university supervisors.

Dr. Blasio Osogo Omuga

Lecturer,

School of Nursing Sciences

University of Nairobi.

Signature………………………… Date……………………………

Dr. Waithira Mirie

Senior Lecturer,

School of Nursing Sciences,

University of Nairobi.

Signature…………………………… Date……………………………

DEDICATION

I dedicate this work to my husband Richard Onkware and our sons Sammy, Alvin and Ryan for their love and patience.

ACKNOWLEDGEMENT

I am grateful to my supervisors, Dr. Blasio Osogo Omuga and Dr Waithira Mirie, for their tireless support and guidance throughout the study period.

I am greatly indebted to the administrators of Naivasha District Hospital for granting me the authority to conduct the study. I also thank the Kenyatta National Hospital Ethics and Research Committee for approving my study.

I appreciate the statistician, Philip Ayieko, for the technical support he gave with the data analysis.

I would like to thank all my friends who found time from their busy schedules to read and critique the study towards substantial improvement of the final copy.

Finally I appreciate my husband, Dr Richard Onkware, for his encouragement throughout the study period.

Contents

DECLARATION i

SUPERVISORS' APPROVAL..... ii

DEDICATION iii

ACKNOWLEDGEMENT iv

LIST OF ABBREVIATIONS ix

OPERATIONAL DEFINITIONS x

LIST OF TABLES xii

LIST OF FIGURES xiii

ABSTRACT..... xiv

CHAPTER 1.0: INTRODUCTION 1

1.1: BACKGROUND INFORMATION 1

1.1.1: Quality of Intra-partum Care 1

1.1.2: Mothers' perceptions on quality of intra-partum care..... 1

1.1.3: Naivasha District Hospital 1

1.2: PROBLEM STATEMENT..... 2

1.3: JUSTIFICATION 3

1.6: RESEARCH QUESTION: 4

1.7.0: OBJECTIVES 4

1.7.1: Broad objective: 4

1.7.2: Specific Objectives: 4

1.4: BENEFITS OF THE STUDY 4

1.5: PURPOSE OF THE STUDY 4

1.7: KEY VARIABLES:..... 5

1.8: THEORETICAL STATEMENT: 5

1.9: CONCEPTUAL FRAMEWORK 7
1.10: OPERATIONAL FRAMEWORK 8
CHAPTER 2.0: LITERATURE REVIEW 9
2.1: Introduction: 9
2.2: Factors affecting postpartum mothers' perception on quality of intra-partum care 10
2.2.1: Demographic factors 10
2.2.2: Institutional factors 10
2.2.3: Resource factors 11
2.2.4: service provider factors 12
2.2.5: Intra-partum care procedures 13
2.3: Gaps in literature review 14
CHAPTER 3.0: MATERIALS AND METHODS 16
3.2: Study design: 16
3.1: Study area: 16
3.3.0: Study population: 16
3.3.1: Inclusion criteria: 16
3.3.2: Exclusion criteria: 16
3.4: Sample size determination: 17
3.5: Sampling method 18
3.6: Sampling interval 18
3.7: Study instruments 18
3.8: Pretesting of the study tools: 19
3.9: Recruitment and training of research assistants 19
3.10: Data collection, cleaning and entry 19
3.11: Data analysis and presentation: 19

3.12: Ethical considerations: 19
3.13: Study Limitations: 20
CHAPTER FOUR 21
4.0: RESULTS 21
4.1: DEMOGRAPHIC FACTORS 21
4.2: INSTITUTIONAL FACTORS 27
4.3: RESOURCE FACTORS 28
4.4: SERVICE PROVIDER FACTORS 31
4.5: INTRAPARTUM CARE 34
CHAPTER FIVE 38
5.0: DISCUSSION 38
5.1: Demographic factors 38
5.2: Institutional factors 39
5.3: Resource factors 39
5.4: Service provider factors 40
5.5: Intra-partum care 41
5.6: CONCLUSION 42
5.7: RECOMMENDATIONS 43
REFERENCES 44
APPENDICES 48
APPENDIX 1: QUESTIONNAIRE FOR PATIENTS 48
APPENDIX 2: CONSENT FORM FOR FOCUS GROUP DISCUSSION 52
APPENDIX 3: FOCUS GROUP DISCUSSION INTERVIEW GUIDE 53
APPENDIX 4: PARTICIPANTS’ CONSENT FORM 54
APPENDIX 5: KEY INFORMANT CONSENT FORM 55

APPENDIX 6: KEY INFORMANT INTERVIEW GUIDE 56

APPENDIX 7: LETTER TO KENYATTA NATIONAL HOSPITAL RESEARCH AND ETHICS COMMITTEE 57

APPENDIX 8: LETTER FROM UON/KNH ERC 58

APPENDIX 9: MAP OF STUDY AREA 60

LIST OF ABBREVIATIONS

WHO ……………………..World Health Organization

MDGs …………………… Millennium Development Goals

EOC……………………… Essential Obstetric Care

EmOC …………………… Emergency Obstetric Care

HMIS ……………………. Health Management and Information System

KNH …………………….. Kenyatta National Hospital

SPSS………………………Statistical Package for Social Scientists

KDHS…………………….Kenya Demographic Health Survey

PMTCT…………………...Prevention of Mother To Child Transmission

CCC. ……………………..Comprehensive Care Centre

CME……………………… Continuous Medical Education

FGD ……………………… Focus Group Discussions

UNFPA…………………… United Nations Population Fund

ISO ……………………….. International Standards Organization

ICD ………………………. International Classification of Diseases

UNICEF ………………….. United Nations Children Education Fund

OPERATIONAL DEFINITIONS

Intra-partum care: The period that includes labor and delivery of a newborn

Labor: regular, painful contractions and either rupture of the membranes or show

Caesarian section: a surgical procedure in which incisions are made through a woman's abdomen and uterus to deliver her baby.

User fees: an excise tax often in the form of a supplemental charge levied to fund a public service.

Level 4 hospital: these are mainly district hospitals which offer curative, rehabilitative services and address; a limited extent of preventive and promotive care services. It is also a referral facility for the health centres and dispensaries.

Quality of intra-partum care: the extent to which these services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge.

Essential obstetric care: These are a broad array of services including family planning, antenatal care, intra-partum care and postpartum care to reduce maternal mortality.

Accessible intra-partum care services: delivery care that is timely, geographically reasonable and provided in a setting where skills and resources are appropriate to need.

Acceptable intra-partum care services: this is patient centred care which takes into account the preferences and aspirations of individual service user.

Equitable intra-partum care services: does not vary in quality because of personal characteristics e.g. gender, race, ethnicity etc.

Efficient intra-partum care services: delivering care in a manner which maximizes resource use and avoids waste.

Effective intra-partum care services: care adherent to evidence based and results in improved health outcomes for individuals based on need.

Safe intra-partum care services: minimizes risks and harm to service users.

Emergency Obstetric Care: prompt identification, referral and treatment of women with obstetric complications.

Skilled birth attendants: an accredited health professional such as a midwife, doctor, nurse who has been educated and trained to proficiency in the skill needed to manage normal (uncomplicated) pregnancy, childbirth and postnatal period and in the identification, management and referral of complications in women and newborns.

Maternal mortality: is a 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 causes.

Neonatal death: early neonatal death refers to a death of a live-born baby within the first seven days of life, while late neonatal mortality covers the time after 7 days until before 28 days.

LIST OF TABLES

Table 1: Mothers rating of intra-partum care at Naivasha District Hospital………………24

Table 2: Demographic factors versus mothers' perception on quality…………………….25

Table 3: Demographic factors versus mothers' perception on quality…………………....26

Table 4: Institutional factors influencing mothers' perception on quality………………...26

Table 5: Institutional factors versus mothers' perception on quality……………………...27

Table 6: Resource factors influencing mothers' perception on quality …………………...28

Table 7: Resource factors influencing mothers' perception on quality …………………...29

Table 8: Resource factors versus mothers' perception on quality ………………………...30

Table 9: Resource factors versus mothers' perception on quality …………………….....30

Table 10: Service provider factors influencing mothers' perception on quality…………..31

Table 11: Service provider factors versus mothers' perception on quality ……………....33

Table 12: Intra-partum care factors influencing mothers' perception on quality................35

Table 13: Bivariate logistic regression analysis…………………………………………..36

LIST OF FIGURES

Figure 1: Conceptual framework…………………………………………………7

Figure 2: Operational framework………………………………………………8

Figure 3: Occupation of the mothers interviewed………………………………..23

Figure 4: Level of education of the mothers interviewed………………………..23

Figure 5: Mothers' perception on quality of intra-partum care………………….25

ABSTRACT

Quality of intra-partum care is an important determinant of outcomes of pregnancy especially in minimizing intra-partum and post-partum related complications of pregnancy. The realization of Millennium Development Goal number 5 requires increased access to health services and improved provision of high quality delivery care including essential obstetric care. Therefore it is imperative to offer care that meets the clients' needs and is acceptable to them.

The aim of the study was to determine the post-partum mothers' perception on quality of intra-partum care at Naivasha District Hospital labour ward. This was a cross-sectional quantitative and qualitative study conducted at Naivasha District Hospital labour ward. One hundred and ninety five post-partum mothers were randomly selected. Questionnaires, a focus group discussion and a key informant interview were used to obtain data. Data collection took one month to be complete. The quantitative data was then entered into SPSS computer software version 17.0 and analyzed using descriptive and inferential statistics. The qualitative data was analyzed using content analysis. The chi square, fishers exact and logistic regression statistical methods were used to show the relationships between the variables. Statistical significance was based on a cut off value of 0.05.

Significant predictors for mothers' perception on quality of intra-partum care in Naivasha District Hospital labour ward were residence from the hospital (P = 0.03), cost of services (P = 0.007), comfort in the waiting rooms (P = 0.025) and availability of delivery beds (P= 0.017). A positive relationship also existed between mothers' perception on quality of intra-partum care and nurses attention to individual client's needs (P = 0.037). Mothers who rated nurses' attention to individual needs, cost of services, availability of delivery beds and comfort in waiting rooms as good were likely to have a positive perception on quality of intra-partum care. Those mothers who lived more than 4km away from the hospital were likely to have a negative perception.

The study reveals that mothers delivering in Naivasha District Hospital labour ward perceive quality on intra-partum care as good. However, the study revealed that there was a discrepancy between the data collected using questionnaires and the focus group discussion. This was attributed to lack of awareness of what the mothers should expect from a health facility. It is important that the clients' rights are explained to the mothers or information on their rights displayed well for all to see. This enables them to judge the care they receive accurately. Community based studies are recommended to determine mothers' perception on quality of intra-partum care in other health facilities in the community. This can then be

related to institutional based studies to give a wider perspective of client satisfaction in intrapartum care services

CHAPTER 1.0: INTRODUCTION

1.1: BACKGROUND INFORMATION

1.1.1: Quality of Intra-partum Care

There is a growing recognition and insistence that intra-partum care must be responsive to the preferences and values of the consumers of health care services especially individual mothers seeking these services and that their opinions of care are important indicators of its quality (Pitchforth et al 2010). The Institute of Medicine 2006 defines quality intra-partum care as the extent to which these services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge. According to (WHO 2010), quality intra-partum care is; effective, efficient, accessible, acceptable, equitable and safe. It is pertinent that the health care delivery system ensure that the care offered respect the clients' rights to access, safety, comfort, dignity, privacy and confidentiality and right to express opinion about the services offered (Ruminjo J. et al.2001)

1.1.2: Mothers' perceptions on quality of intra-partum care

Perceived quality of intra-partum care is defined as what mothers want, need and experience in intra-partum care and not what health care workers think they need (Sofaer and Firminger 2005). A user based definition of quality suggests that quality is the ability of a product or service to satisfy human needs (Russel and Miles 1998).

Health care professionals have often discounted the importance of clients' perspectives in the belief that clients have very limited knowledge of what constitutes technical quality (Institute of Medicine 2006). However it is important to offer intra-partum care that is responsive to clients' needs (WHO 2010).

WHO recommends that intra-partum care activities should be delivered in a manner that integrates attention to the essential physical and psychological health care needs combining preventive and curative aspects as well as an educational component. This allows for client centered care and participation which enables them to be satisfied with the services (WHO 2010)

1.1.3: Naivasha District Hospital

Naivasha District Hospital is the second largest hospital in Nakuru County, Rift Valley province, Kenya. The public Hospital is run by the Ministry of Medical Services, located in Sokoni Location, Lakeview

Sub location. The hospital serves a population of approximately 10,000 people. The majority of the people are from the kikuyu ethnic group. The main occupation of the population is small scale farming and others work in flower farms owned by companies.

The hospital is a level 4 facility and serves as a referral centre for many of the health facilities in Nakuru County. The hospital offers Essential Obstetric Care and Emergency Obstetric Care services. The prenatal and postnatal wards have 16 beds each. It has 4 delivery beds and there is a maternity theatre available. The theatre is operational 24 hours. The facility also offers comprehensive care services (CCC) including Prevention of Mother To Child HIV Transmission (PMTCT) services. The newborn unit has a cot capacity of 15 with 200% occupancy in the year 2010 (Health Management and Information System Kenya 2011).

There are 2 obstetricians and 8 nurses working at the labour ward. The nurses are of different cadres and are redeployed regularly. Training in life saving skills and emergency obstetric care is considered during deployment.

The facility also offers laboratory services which are available 24 hours. The tests that are done include; biochemistry, haematology, serology and microbiology. Laboratory tests for pregnant women are mandatory and a standard fee is charged for these.

The hospital has the necessary supplies and equipment for Emergency obstetric care (EmOC) including essential drugs.

Guidelines and protocols for maternal health (normal labour/delivery care) are available at the point of service delivery. There is a Health Management and Information System office available at the facility.

1.2: PROBLEM STATEMENT

In all areas of public health concerned with maternal and newborn health, the key indicators of progress tend to be proportions and rates, measuring coverage or density of contacts and outcomes (Fauveau 2011). Monitoring the achievement of the Millenium Development Goal 5 also follows this trend. However, it is now evident from studies that health outcomes such as maternal and neonatal mortality are not as much influenced by coverage or number of contacts between health care workers than by quality of the services delivered. The health outcomes are not sufficient as clients are now demanding greater personalized care (Fauveau 2011). This implies that women's perceptions and preferences should be central in planning services.

The Kenya National Maternal and Newborn Health Roadmap 2010 identify key challenges to provision of maternal and newborn health services. These are weaknesses in the health sector that affect access to, quality of, demand for and utilization of these services. The Kenya National Reproductive Health Policy 2007 also emphasizes equitable access to reproductive health services, improving quality, efficiency and effectiveness of service delivery at all levels and improving responsiveness to the client needs. This implies that provision of client centered care is important in improving the quality of care.

According to KDHS 2008/2009 over 50% of the mothers within Nakuru County, within which is Naivasha district, deliver at home. This implies that the mothers' perception on quality of intra-partum care may determine the place of delivery. Negative perception on quality of intra-partum care in public health institutions may be the cause of the home deliveries in Nakuru County. Therefore it is necessary to understand the mothers' perceptions and expectations so as to tailor the care to their needs. Hence this will prevent maternal, neonatal mortality and morbidity from home deliveries in Naivasha District. This will in turn enable the country to achieve the millennium development goals.

Customers' perception on quality of intra-partum care surveys are important in determining whether clients will come back for the same services or will recommend the health facilities to others. D'Ambrouso et al (2005) notes that, women will consciously change their place of delivery and recommendations to others if they experience degrading and unacceptable behavior. To ensure satisfied clients, caregivers have to meet their obligations to uphold clients' rights to access, safety, comfort, dignity, privacy and confidentiality (Ruminjo J et al 2001). This has not been done to explain the high rate of home deliveries in Naivasha.

1.3: JUSTIFICATION

Many customer satisfaction surveys have been carried out in Kenya to determine the quality of maternity services. However a comprehensive study on the mothers' perception on quality of intra-partum care in Kenyan District hospitals is lacking.

There is evidence that understanding what our clients' needs and expectations are will enable us to create demand for and utilization of our services. Hence there is a need to understand what mothers expect from a health institution during the intra-partum period. This will enable the service providers tailor their care to the needs of the clients hence improvement in skilled deliveries and the achievement of the millennium development goals.

1.6: RESEARCH QUESTION:

What are the perceptions of post-partum mothers on quality of intra-partum care offered at Naivasha District Hospital labour ward?

1.7.0: OBJECTIVES

1.7.1: Broad objective:

To determine the perceptions of postpartum mothers on quality of intra-partum care offered at Naivasha District Hospital labour ward.

1.7.2: Specific Objectives:

1. To determine the demographic factors influencing the perception of postpartum mothers on the quality of intra-partum care.
2. To establish postpartum mothers' perception towards institutional factors determining the quality of intra-partum care.
3. To determine postpartum mothers' perception towards resource availability for providing quality intra-partum care.
4. To determine the postpartum mothers' perception towards service providers.
5. To determine the perception of postpartum mothers on intra-partum care procedures.

1.4: BENEFITS OF THE STUDY

1. The needs of the mothers during intra-partum care will be better understood and therefore care will be tailored towards meeting these needs.
2. The mothers' perception on quality of intra-partum care will be better understood and this will help in restructuring service delivery in order to serve them better.

1.5: PURPOSE OF THE STUDY

The purpose of this study is to understand the mothers' perception on quality of intra-partum care so as to improve service delivery through evidence based practice.

1.7: KEY VARIABLES:

1.7.1: Independent variables:

- Demographic factors: age, parity, level of education, marital status, occupation.
- Institutional factors: physical facilities and cost of services.
- Resource factors: personnel, equipment and supplies.
- Service provider factors: interpersonal skills.
- Intra-partum care procedures: nursing independent role in client management i.e. support during labour, mother involvement in the care and health education.

1.7.2: Dependent variable:

Clients' expectations;

- Desired service quality; is the level of service the customer hopes to receive.
- Adequate service; is the minimum tolerable expectation' or bottom level of acceptable performance.
- Predicted service; is the level of service customers believe they are likely to get and implies some objective calculation of the probability of performance.

1.7.3: Outcome:

- Positive perception
- Negative perception

1.8: THEORETICAL STATEMENT:

The study adopted Zeithaml and Bitner's theory of disconfirmation and Parasuraman, Berry and Zeithaml's theory of service quality (SERVQUAL) (1991). Disconfirmation theory proposes that, all things being equal, the higher one's expectations, the less likely that service can meet or exceed them, the result being reduced satisfaction or even dissatisfaction; the higher the perceived level of quality of

service, the more likely that expectations will be exceeded, resulting in increased satisfaction. The theory also suggests that when perceptions of service quality only differ slightly from expectations, there is a tendency for people to displace their perceptions towards their expectations (assimilation effect). Studies have shown that expectations differ under different conditions, among different groups of clients and across different services. The theory suggests three types of expectations:

1. Desired service quality; as the level of service the customer hopes to receive.
2. Adequate service; minimum tolerable expectation' or bottom level of acceptable performance.
3. Predicted service; is the level of service customers believe they are likely to get and implies some objective calculation of the probability of performance.

Zeithaml and Bitner argue that customers recognise that service performance may vary and that the extent to which they recognise and are willing to accept this variation is called the *zone of tolerance* .The zone of tolerance is seen as the range or window in which customers do not particularly notice service performance. When performance falls outside the range (either very high or very low) the customer expresses satisfaction or dissatisfaction. Customer tolerance zones are thought to vary for different service attributes and the more important the factor, the narrower the zone of tolerance is likely to be. For example service outcome is more important than the process.

SERVQUAL theoretical model is used to assess the clients' perceptions of quality in service organizations including health. The theoretical model represents service quality as the discrepancy between a client's expectations for a service offered and the client's perceptions of the service received. The model uses a scale of five service notions to measure perceptions of quality of a service as follows:

1. Tangibles; these are the physical facilities, equipment, staff appearance. (Institutional factors)
2. Reliability; this is the ability to perform service dependably and accurately. (Availability of resources)
3. Responsiveness; this is willingness to respond to clients' needs. (Service provider factors).
4. Assurance; this is the ability of staff to inspire confidence and trust. (Service provider factors).
5. Empathy; this is the extent to which caring individual service is given. (Intra-partum care)

1.9: CONCEPTUAL FRAMEWORK

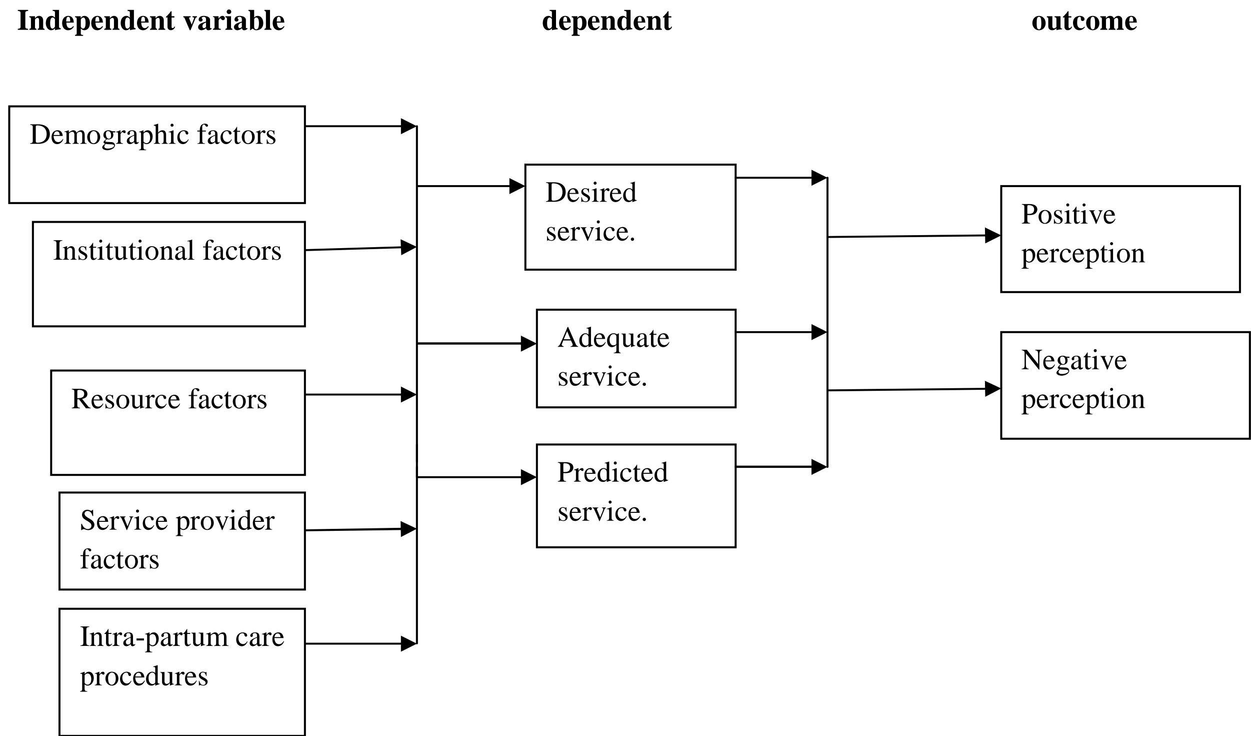


Figure 1: Conceptual framework

1.10: OPERATIONAL FRAMEWORK

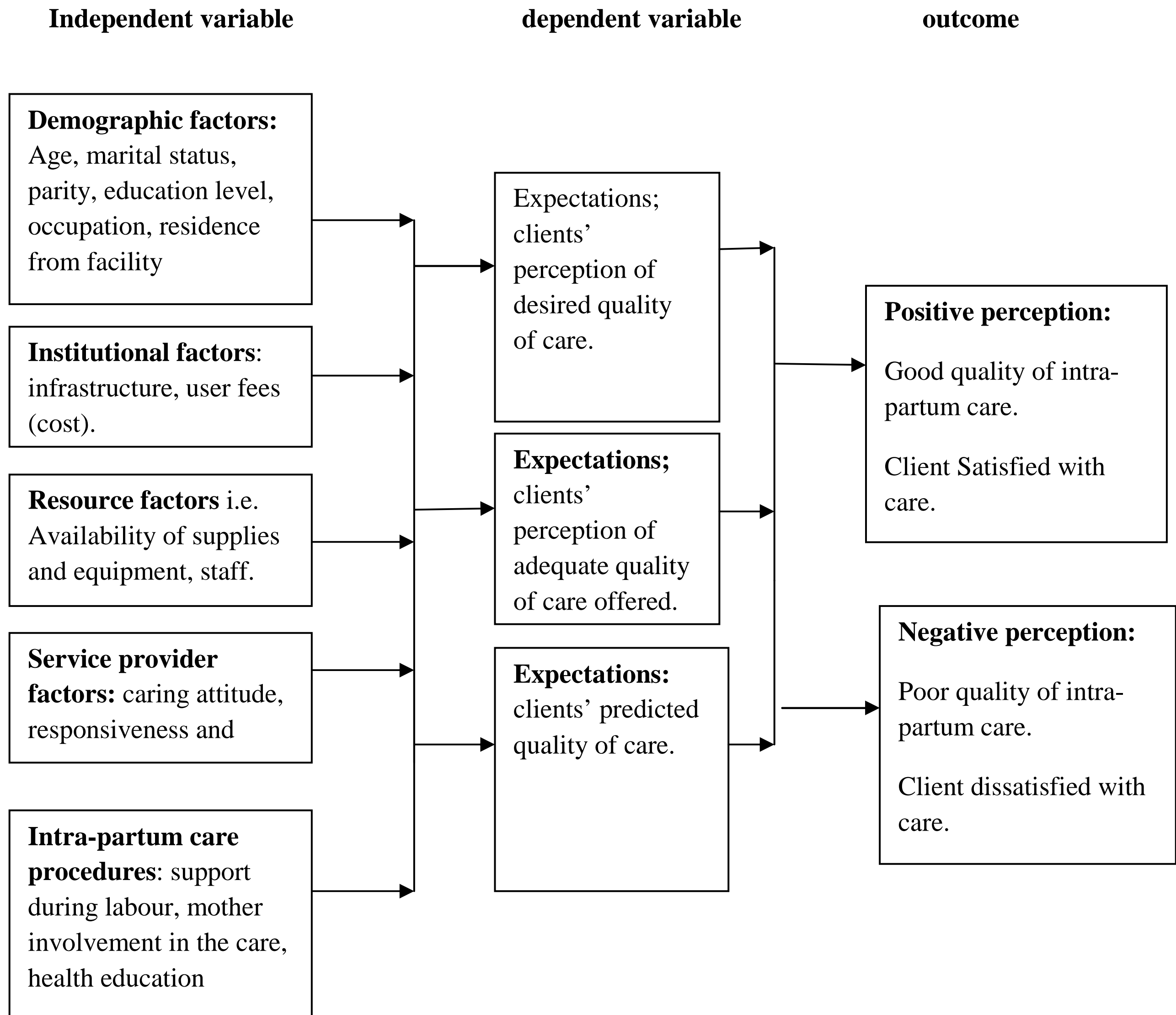


Figure 2: Operational framework

CHAPTER 2.0: LITERATURE REVIEW

2.1: Introduction:

The literature has been discussed based on studies that have been done and documented on mothers' perceptions on the quality of intra-partum care. The factors affecting the quality of intra-partum care as perceived by the mothers have also been discussed extensively. Some of the factors contributing to general quality in health care have been discussed. These are factors related to the inputs (the resources that are needed to offer intra-partum care), the process (these are the procedures carried out during the intra-partum period) and the outputs (the outcomes of intra-partum care).

Quality of intra-partum care has been defined in many ways. Quality of care may be almost anything anyone wishes it to be, although it is a reflection of values and goals current in the medical care system and in the larger society of which it is part (Donabedis 1998). A review of studies done by Luce et al (1994), in 'a brief history of health care quality assessment and improvement in the United States' show that defining quality of health care including intra-partum care require knowledge on how much people benefit from the health services. This can be measured through client's perception and the society's sense of well being.

Freedman et al (2007), emphasizes that the health care system is a core social institution made up of different sets of social relations and it is important to understand the dynamics between different groups and communities. Freedman et al explored women's experiences in hospital and results indicated women's dissatisfaction with overcrowding and lack of privacy.

Women's perception on quality of intra-partum care is characterized by satisfaction or dissatisfaction with the care. Customer satisfaction is an important indicator of good quality as indicated by many studies. One of the studies by Hundley V et al. (2001), 'assessing women's preferences for intra-partum care', indicate that women prefer maternity units that offer greater continuity of care, more methods of pain relief, continuous fetal monitoring, a homely appearance, and routine involvement for the woman in decision making. However, it has been noted that perceptions can occur without an individual having experienced the care.

2.2: Factors affecting postpartum mothers' perception on quality of intra-partum care

2.2.1: Demographic factors

Demographic factors affect the mothers' perception on quality of intra-partum care. These factors are age, occupation, level of education, social economic factors and parity. Christophe J, et al (2008), in their study carried out in informal settlements in Kenya, found out that women with at least secondary education were more likely to deliver in a health facility compared to those with primary education and on the contrary women with no education were more likely to deliver in health facilities. The study also showed that there were interactions between wealth index and perceived quality of care and higher autonomy was associated with better use of delivery services among the poorest, middle and least poor index.

Mathews Z, (2005), indicates that perceived quality of care is an important factor in health seeking behaviours as well as education and experience of problems in past pregnancy. If a woman experienced labour and delivery complications they would perceive the care as poor.

Culture is also a determinant in mothers' perception on the quality of care. In Kenya and many other countries in the world mothers prefer delivering at home. This can be confirmed by Hundley V et al (2001) in assessing women's preferences for intra-partum care who found out that the respondents preferred maternity units that offered greater continuity of care, homely appearance, routine involvement of staff and greater involvement for women in decision making process. Hundley and Ryan (2004) in 'are women's expectations and preferences for intra-partum care affected by the model of care on offer' also confirm that women prefer continuity of care.

Although many studies have been carried out on mothers' perceptions on quality of intra-partum care in various countries, there is still a need to determine the women's perceptions in various settings. This is because women's perception on quality of care may differ from one region to another due to socio-demographic and economic factors.

2.2.2: Institutional factors

Institutional factors play a major role in determining the quality of intra-partum care as perceived by the mothers (Dodwell and Newburn 2010). A review of studies by Dodwell and Newburn 2010, in normal birth as a measure of quality of care: *evidence on safety, effectiveness and women's experiences*, the

women's past experiences with a health facility may influence their perception on the quality care of that facility. The authors also found out that women who had pregnancy complications when admitted at a health facility were dissatisfied with the services of that facility and suffered from psychological risks.

D'Ambruoso et al (2005) point out that non medical factors such as cost determine the mothers' perception on quality of intra-partum care. However, many of the other studies do not indicate a relationship between the cost of labour and delivery services and perception on quality of these services. For example Fotso and Mukiira (2011) in their study in one of the informal settlements in Kenya indicated that mothers preferred private clinics which are costly compared to public hospitals. This was so regardless of the quality of care that these clinics offered.

The other important determinant of intra-partum care is the physical environment of the maternity/ labour ward. Rudman (2007) notes that physical environment both during and after delivery is associated with women's experiences of care. D'Ambruoso et al (2005) concurs that a reasonable physical environment is required for positive women's experiences. Hundley et al (2001) also agrees that women prefer a homely appearance of the delivery units.

2.2.3: Resource factors

Philpott H (2005) pointed out in his study '*the design and function of labour ward as it influences quality of care',* that availability of resources is an important determinant of good quality care. The study showed that the respondents did not like being transferred elsewhere when in second stage of labour and that the labour ward was overcrowded denying the mothers privacy.

Rogo et al (2001) in their study 'maternal mortality in Kenya: The state of health facilities in a rural District', found out that most mothers did not prefer hospital deliveries due to lack of facilities which forced the mothers to buy almost everything required for delivery. The health facilities studied were wanting in terms of staffing, equipment, essential drugs and supplies.

Another study by Kruk et al (2011) found out that Liberians valued technical quality of care over convenience and courtesy of the health care providers. Availability of equipment, drugs and supplies was more important than interpersonal relationship although respectful treatment showed significance.

Kruk et al (2010) in another study carried out in Ethiopia showed that the overall attributes with the greatest influence on the utility of a health facility for delivery were availability of drugs and equipment and receptive provider attitude.

In Kenya, lack of essential equipment, supplies and drugs in obstetric care have lowered the quality of public institutions' quality of care as perceived by the mothers (unpublished customer satisfaction surveys). Customer satisfaction surveys carried out in most public institutions indicate that women are dissatisfied with intra-partum care services offered because they have to buy everything including supplies and drugs in addition to paying user fees.

2.2.4: service provider factors

A hospital with caring health care workers is perceived to be offering quality intra-partum care services. Moore M, et al (2002), in assessing the caring behavior of skilled maternity providers during labour and delivery*; an experience from Kenya and Bangladesh*, identified eight provider caring behaviours which must be assessed in order to measure quality of intra-partum care. These are:

- attending to human needs
- Being accessible to clients
- Attending to emotional needs
- Respecting human dignity/rights
- Informing/ explaining/instructing
- Involving the family
- Incorporating the cultural context
- Minimizing negative behaviours.

The above behaviours are important in offering quality intra-partum care that is humanized. Behruzi R et al. (2011) also suggest that a humanized approach to birth care is important besides providing care tailored to the specific needs of women.

Rivers P. and Saundra H (2010), emphasize the importance of quality interaction between the service providers and clients. The authors state that clients' perception of quality of care will depend on quality of communication, service providers ability to maintain trust and ability to treat patient with concern, empathy, honesty, tact and sensitivity.

A household survey by Bazant et al (2009) indicates that women's satisfaction with delivery care is associated with greater provider empathy. D'Ambruoso also notes that women expect humane care, professional and courteous treatment from health care professionals. In their study staff attitudes was of great importance to women and this factor had a considerable influence on acceptability and utilization of services.

Rudman (2007) indicates that when taking all aspects of intra-partum care into account, emotional dimension of care of women is very important in addition to information and involvement in the care process. Other studies also concur that service provider attitude and interpersonal relationship between the women and staff is very important in determining the mothers' perception on quality of intra-partum care (Fotso and Mukiira 2011, Kruk et al 2011, Kruk et al 2010, Hundley and Ryan 2004).

2.2.5: Intra-partum care procedures

Rivers P and Saundra G. (2010), argue that technical aspects of quality of care consist of two sub-dimensions; the appropriateness of the services provided and the skill with which the care is provided. Appropriateness of the care requires that service providers make quality decisions about client care. This requires skills, judgments and timeliness of the execution. Involvement and support of the patient in the care is very important.

2.2.5.1: Involvement in the care process

There is evidence showing that women are satisfied with care when they are involved in decision making and work in partnership with their midwives (Freeman L, et al 2007). This is supported by a study by the obstetricians and gynaecologists of Canada (2008), whose aim was to learn about women's experiences and expectations around pregnancy and childbirth. Results from the study showed that the participants expected the health care professional to provide them with all relevant information about the pregnancy and delivery.

Wilde- Larsson B et al, (2011) also concur with the other studies that women perceive involvement in decision making as being essential in provision of quality intra-partum care. The investigators indicate that positive and negative feelings of women, who give birth strongly co-vary with the women' perception of quality of their intra-partum care. This pertained to provision of information, midwives commitment, being present during labour and allowing women to actively participate as much as they wanted to.

2.2.5.2: Support during labour

Vilneff S (2008), in her study, giving mothers a voice about their own health care, considered women's perceptions of health care services and one of the topics examined was satisfaction of service during delivery and after delivery. The mothers who participated in the focus group discussion identified supportive nursing care as being critical to their intra-partum experience.

Hodnett E. et al (2008), in a randomized control trial involving 5002 nulliparous women experiencing contractions, examined the effect of birth outcomes of a formalized approach to care versus usual care. Half of the women were allocated to structured care and the other half to usual care. Structured care consisted of a formalized approach to assessment of and interventions for maternal emotion, pain and fetal position. The results from this study indicated that few women allocated to structured care were disappointed and there was increase in the likelihood of spontaneous vaginal birth.

A meta-analysis of randomized control trials by Sauls D (2002), also indicate that augmented intra-partum social support is associated with improved outcomes for the laboring women. Dodwell M et al (2010) in their review of evidence based studies suggest that there is evidence that providing one to one midwifery care in established labour is safe, effective and results in positive experiences for women. The investigators also indicate that there is strong evidence suggesting that offering care which is more personalized and responsive to physiological, social and emotional needs of women increase the quality of care as perceived by women (Dodwell M. et al 2010).

2.3: Gaps in literature review

It is evident from the literature review that many studies have been carried out on mothers' perception on the quality of intra-partum care. However, few studies have considered examining the totality of features of intra-partum care as perceived by the clients. Client satisfaction has been extensively studied though it is an indirect measure of clients' perception on quality. This is because satisfaction encompasses all experiences with an organization while perceived quality is one of the antecedent factors during satisfaction. It has also been noted that perception on quality can occur in the absence of actual experience with an organization (Newborn and Wright 1999).

In 2006, the Ministry of Health, Kenya adopted policy measures to improve maternity client satisfaction through a charter of clients' rights with the aim of improving public perception that nurses in hospitals routinely ignored rights of clients to respective treatment (Ojwang O et al 2010). The client satisfaction survey tool used to collect this data is a questionnaire with open and closed ended questions. This tool

does not however, provide all the information on mothers' perception towards quality of intra-partum care. The surveys have also not considered the mix of methods in data collection in order to validate the information collected.

CHAPTER 3.0: MATERIALS AND METHODS

3.2: Study design:

This was a cross-sectional descriptive, qualitative study and quantitative study that sought to determine the post-partum mothers' perception on the quality of intra-partum care at Naivasha District Hospital labour ward. The study was carried out over a period of one and a half months after approval from the KNH/UON Research and Ethics Committee.

3.1: Study area:

The study was carried out in Naivasha District Hospital post-partum ward. The ward admits mothers who have delivered in the hospital labour ward. The ward has a bed capacity of 16. Approximately 400 mothers are delivered per month. The total number of nurses working in the labour ward is sixteen. There are at least two midwives taking care of the mothers each shift. There is one gynaecologist, one medical officer in charge of labour ward and medical officer interns.

The hospital is also a training institution and medical training colleges use their facilities to train their students.

3.3.0: Study population:

The study population included all consenting mothers who had delivered in Naivasha District Hospital Labour ward. It also included the nursing officer in charge of labour ward.

3.3.1: Inclusion criteria:

The study participants met the following criteria:

1. They were mothers who had delivered in Naivasha District Hospital labour ward.
2. They were mothers who had given informed consent.

3.3.2: Exclusion criteria:

Participants with any of the following characteristics were excluded from the study.

1. Mothers in postnatal ward who had not delivered in Naivasha District Hospital labour ward.
2. Mothers who had not given consent

3. Mothers who were not in Naivasha District Hospital postnatal ward.

3.4: Sample size determination:

The following formula by Fisher et al 1998 was used to determine the sample size based on the prevalence of hospital deliveries at Naivasha.

$n = Z^2pq/ d^2$

Where n= the desired sample size (if the target population is greater than 10,000).

Z= the standard normal deviate at 95% confidence interval (=1.96).

p= the proportion in the target population estimated to deliver in Naivasha District Hospital. Since no studies had been carried out on these subjects 50% based on anecdotal evidence was be used to determine the minimum sample size.

q= 1-p

d= level of precision (set at +/-5% or +/- 0.05)

Substituting these figures in the above formula:

$n= (1.96)^2 (0.5) (0.5)/(0.05)^2$

= 384

Since the target population is less than 10,000, the following formula was used to calculate the final sample size;

$$nf = \frac{n}{1+ (n/N)}$$

Where nf = the desired sample size when the target population is less than 10,000

n = the desired sample size when the target population is more than 10,000

N = the estimate of the population

$$\text{Therefore } nf = \frac{384}{1 + (384/400)}$$

= 195 mothers.

3.5: Sampling method

Systematic random sampling was used to select the participants. All mothers in the postnatal ward who had delivered in the last 24 hours in Naivasha District Hospital had their inpatient numbers serialized in the first day of study and from then onwards. A table of random numbers was used to select the first participant in the series. Thereafter every n^{th} client was included in the series where n was the sampling interval.

3.6: Sampling interval

$$\text{Sampling interval} = \frac{\text{Population}}{\text{Sample population}}$$

The sampling interval was determined using the following formula:

$$\text{Sampling interval (n)} = \frac{\text{Number of mothers delivering in Naivasha District Hospital per month}}{\text{Desired sample size}}$$

From the records the number of mothers delivering in Naivasha District Hospital labour ward was approximately 400 per month.

Therefore the sampling interval (n) = 400/195 =2.05 was used. This meant that every 2nd postpartum mother was selected from the serialized list of clients.

3.7: Study instruments

A questionnaire consisting of closed and open ended questions was used to collect data pertaining to perception on physical environment, availability of equipment and supplies, availability of staff and care during the intrapartum period . A focused group discussion guide was used to interview post-partum mothers who had delivered in Naivasha District Hospital labour ward on their perception of quality of intrapartum care. A key interview guide was used to get information from the nursing officer in charge of labour on his/her knowledge on mothers' perception on quality of intrapartum care.

3.8: Pretesting of the study tools:

A statistician reviewed the study tool which was then pretested by the principal researcher and research assistant for completeness and clarity at a level 4 facility i.e. (Mbagathi District Hospital). The purpose of pretesting the tools was to enable the researcher and research assistant to determine whether the questions were relevant to the study and valid. Findings were used to improve the study instrument to ensure validity and reliability.

3.9: Recruitment and training of research assistants

One nurse from Naivasha District Hospital was identified and trained on the purpose of the study, the objectives, how to use the instruments and how to check questionnaires for completeness to ensure accurate data was collected. The nurse then participated through the pretesting of the study questionnaire in order to familiarise herself with the questions.

3.10: Data collection, cleaning and entry

Data collection was carried out for a period of one month. The data collected using questionnaires was checked daily for completeness. The data was then entered into SPSS computer package version 17.0. A focus group discussion guide was used to collect information from the focus group discussion. Notes were taken and a tape recorder was used to record the proceedings of the focus group discussion.

3.11: Data analysis and presentation:

The collected data was analyzed using inferential and descriptive statistics. SPSS computer software version 17.0 was used to analyze the data. The chi square, fishers' formula and bivariate logistic regression methods were used to show the relationships between the study variables. The level of significance fixed at 0.05% for the cross tabulations. The data from focus group discussion was analyzed using content analysis. The findings from the focus group discussion helped to clarify, describe and validate quantitative data. The data has been presented using pie charts, bar graphs, tables and in narrative form.

3.12: Ethical considerations:

Approval to conduct the research at Naivasha District Hospital labour ward was sought from the Kenyatta National Hospital /University of Nairobi Research and Ethics Committee and it was granted.

Authority to conduct the study at Naivasha District Hospital labour ward was granted by the hospital administrators.

To ensure confidentiality of the information collected, data forms did not bear the clients' name or clinic number and the clients were only identified by study numbers. Informed consent was also sought from the participants.

All the information collected was treated with utmost confidentiality and used for the purposes of the study only.

3.13: Study Limitations:

The study was carried out in one district hospital. Therefore the generalizability of the results is limited to the area of study and surrounding health facilities within Nakuru County.

CHAPTER FOUR

4.0: RESULTS

The overall aim of the study was to determine the postpartum mothers' perception on quality of intra-partum care at Naivasha District Hospital labour ward. The sample size was 195 post-partum mothers who had delivered at Naivasha District Hospital labour ward.

One hundred and ninety five post-partum mothers were interviewed yielding an overall response rate of 100%. The response rates for individual question items varied from one question to the other but no item had a response rate lower than 95%. A focus group discussion involving post-partum mothers who had delivered at Naivasha District Hospital and an in-depth interview with the nursing officer in charge of maternity were held.

4.1: DEMOGRAPHIC FACTORS

The average age of participants was 25.06 years (SD± 5.73). The age range was 16 to 46 years. Majority of the mothers interviewed were between the age of 20 to 29years old (n=112, 57.4%) followed by mothers aged between 30 and 39 years (n=45, 23%). The mothers who were below 20 years were (n=36, 18.46%). There were only 2 mothers (1%) aged over 40 years old as shown in the figure 3 below.

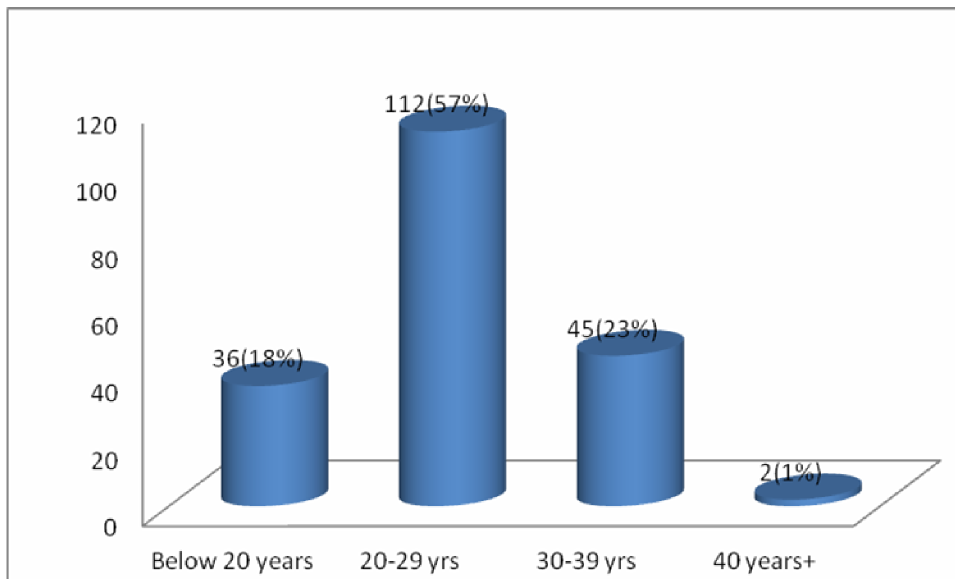


Figure 3: Age of the participants.

Majority of the mothers interviewed were married (n=152, 78%) while (n=38, 19%) were single and only (n=5, 3%) were separated.

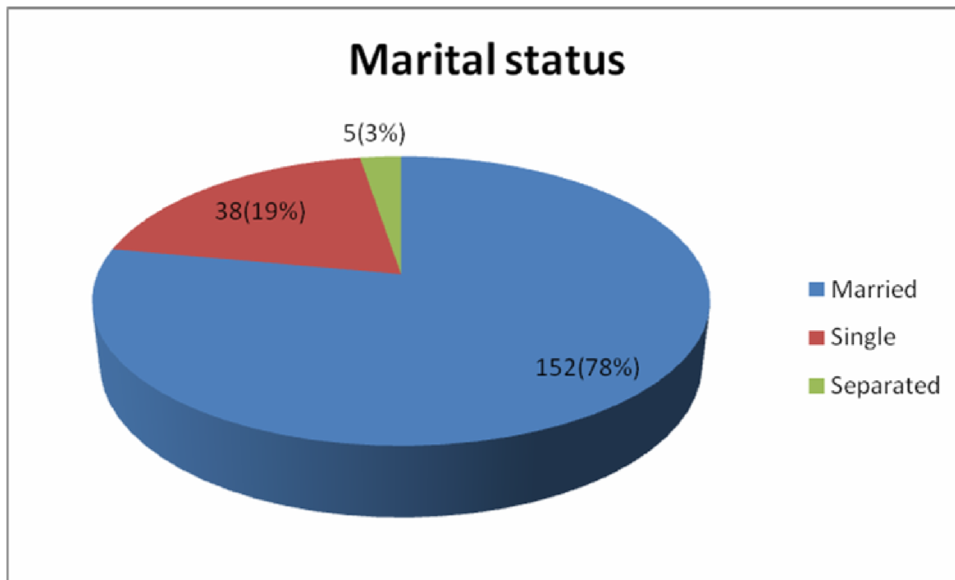


Figure 4: Marital status of the participants.

The total number of births per woman ranged from a single child (n=66, 33.9%), two children (n=62, 31.8%), three children and above (n=67, 34.4%) as shown in the figure 5 below.

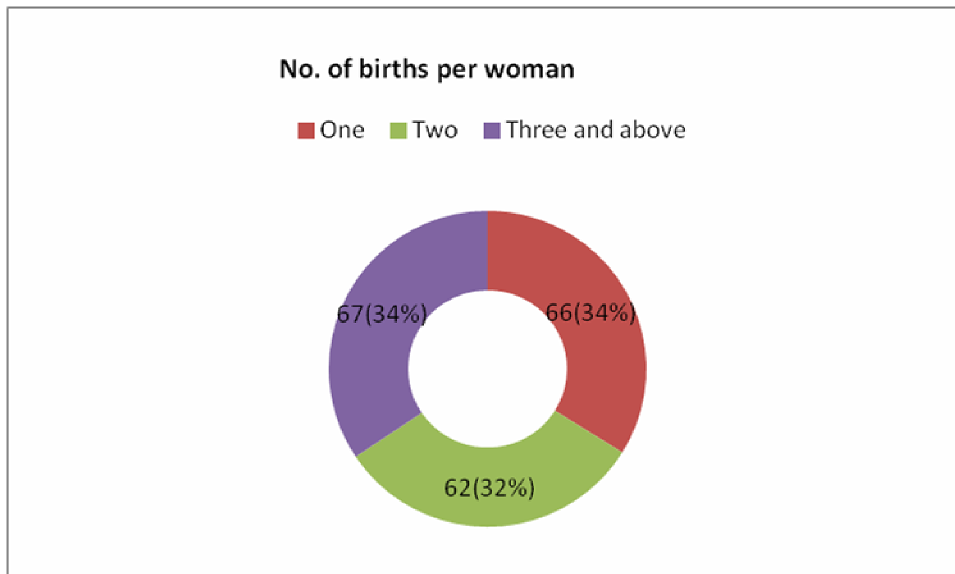


Figure 5: Total number of births per woman.

The distance from the health facility varied among the mothers. Some of the participants indicated that they lived more than 4km away from the hospital (n=72, 37%), (n=43, 22%) lived between 3 and 4km away, (n=40, 21%) lived between 1 and 2km away and (n=40, 21%) stated that they lived less than 1km away from the hospital.

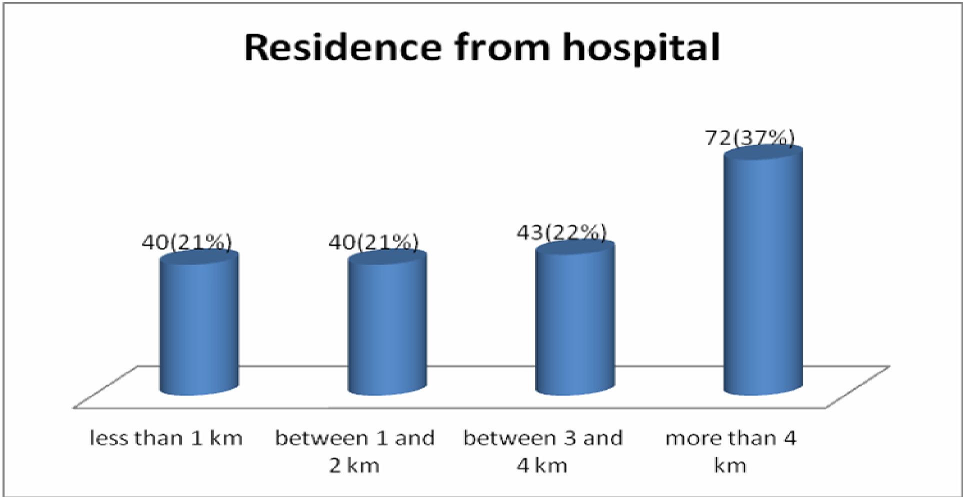


Figure 6: Residence of participants from hospital

Figure 7 below shows the occupations of participants interviewed. Farmers were the majority (n=60, 31%) followed by housewives (n=51, 26%). The rest were businesswomen (n=38, 19%), casual labourers (n=23, 12%) and others (n=23, 12%) were school teachers, laboratory technicians or self employed.

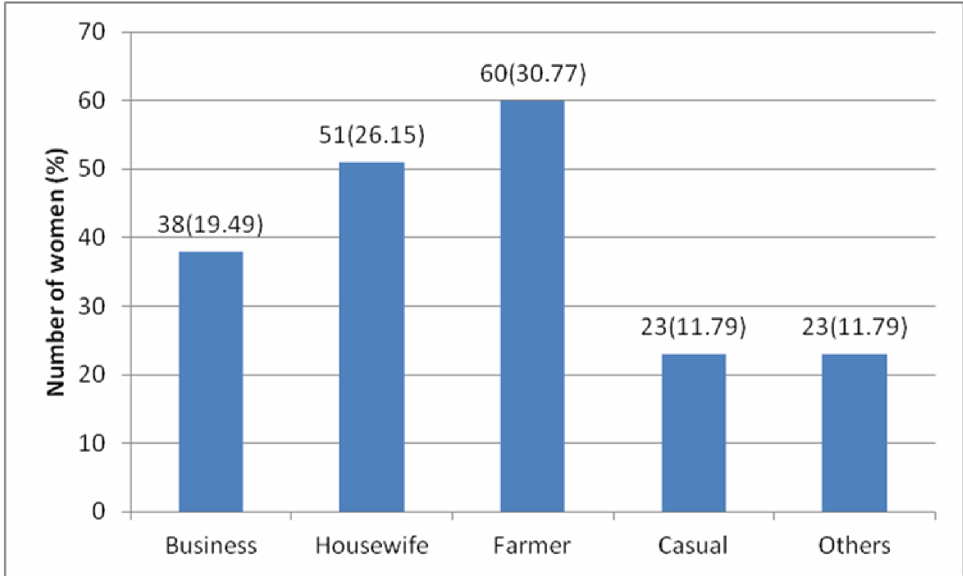


Figure 7: Occupation of participants.

Majority of the mothers had upper primary (from class five up to class eight) school education (n=116, 59.49%) as shown in figure 4 below. Among the 9 (5%) mothers with lower primary (below class five) or no education only one participant reported not having attended formal education while among those with secondary or tertiary education 5 had college level education.

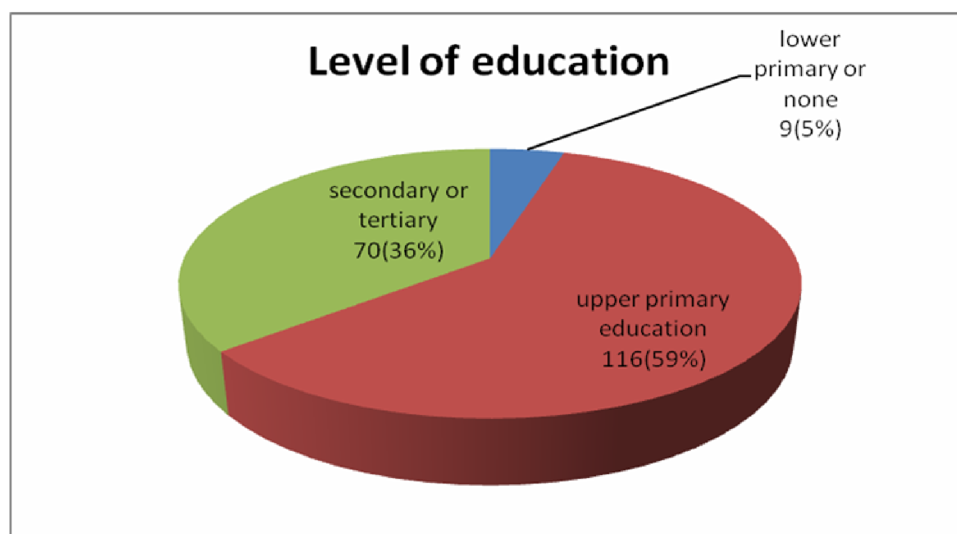


Figure 8: Level of education of participants

PATIENT RATING OF INTRA-PARTUM CARE OUTCOMES

Cumulatively the mothers who rated the explanation of the procedures during labour and delivery as good and above were (n=176, 90.7%) while (n=118, 60.7%) rated the methods of pain relief as good. On outcomes of labour and delivery, (n=187, 96%) of the mothers rated the outcomes as good and above. However, only (n=94, 47.9%) rated the nutritional care as good and above.

Table 1: Mothers' rating of intra-partum care at Naivasha District Hospital

	Poor	Fair	Good	Very good	Excellent
Item	n (%)	n (%)	n (%)	n (%)	n (%)
Explanation of the procedures done during labour and delivery	10(5.2)	8(4.1)	34(17.6)	92(47.7)	49(25.4)
Nutritional care during labour and delivery	28(14.7)	71(37.4)	62(32.6)	18(9.5)	11(5.8)
Outcomes of labour and delivery in the hospital	0(0.0)	8(4.1)	59(30.4)	70(36.1)	57(29.4)
Methods of pain relief	24(12.6)	51(26.7)	67(35.1)	31(16.2)	18(9.4)

The mothers' rating on the four variables on intra-partum care outcomes (explanation done on procedures, nutritional care, methods of pain relief and outcomes of labour and delivery) was used to determine the perception of the mothers on quality of intra-partum care. The four variables were chosen because satisfaction with service outcome is considered important by the clients than service process and its zone of tolerance is narrow (Zeithaml 1991).The mothers who scored poor in any of the four variables for intra-partum care outcomes were considered to have a negative perception on quality of intra-partum care. Those who scored fair and above in any of the four variables were considered to have a positive perception on the quality of intra-partum care.

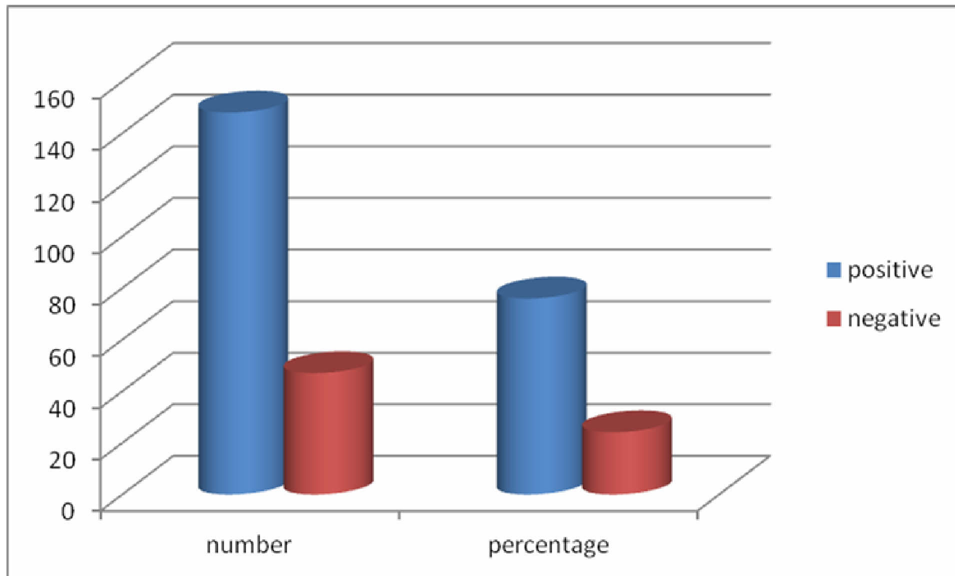


Figure 9: Perception of the mothers interviewed.

Demographic factors versus the perception on quality of intra-partum care

The table below shows the relationship between the demographic factors and the mothers' perception on quality of intra-partum care. It is noted from the cross tabulation using the chi square that there is a significant relationship between the mothers' perception and their residence from the hospital (P value of 0.03 with 3 degrees of freedom). This means that the probability of mothers who reside less than one kilometer away from the hospital having a positive perception is higher than those who reside more than four kilometers away.

The total number of children a woman had did not seem to influence their perception on quality of intra-partum care (P=0.398 with 2 degrees of freedom).

Table 2: The relationship between participants' demographic characteristics and their perception on quality of intra-partum care using the chi square.

Total number of children per woman	Positive	negative	Chi square	DF	P value
One	52(78.8)	14(21.2)	1.84	2	0.398
Two	49(79.0)	13(21.0)			
Three and above	47(70.1)	20(29.9)			
Residence					
< 1km	30(75.0)	10(25.0)	8.98	3	0.030
Between 1 and 2km	35(87.5)	5(12.5)			
Between 2 and 3 km	26(60.5)	17(39.5)			
> 4km	57(79.2)	15(20.8)			

The other demographic factors i.e. age, educational level and marital status cross tabulated using the fishers exact method did not show any significant relationship with the mothers' perception. Significance level was based on 0.05. This means that these factors did not influence the mothers' perception on quality of intra-partum care. Table 3 below shows the relationships.

Table 3: The relationship between participants' demographic characteristics and their perception on quality of intra-partum care using the fishers exact method

	Positive	Negative	Fishers exact P value
Age in years			
1	29(80.6)	7(19.4)	0.357
2	87(77.7)	25(22.3)	
3	31(68.9)	14(31.1)	
4	1(50.0)	1(50.0)	
Education			
2	6(66.7)	3(33.3)	0.71
3	89(76.7)	27(23.3)	
4	53(75.7)	17(24.3)	
Marital status			
1	113(74.3)	39(25.7)	0.510
2	30(78.9)	8(21.1)	
4	5(100.0)	0(0.0)	

4.2: INSTITUTIONAL FACTORS

The table below shows how the mothers rated the institutional factors influencing the quality of intra-partum care in the hospital. Majority of the mothers rated the cost of labour and delivery (n=104, 53.6%) and comfort within waiting rooms (n=98, 50.8%) as good. Responses on the effectiveness of medicines provided by the hospital were varied with some mothers saying that they are poor (n=6, 4.7%), fair (n=31, 24.2%), good (n=43, 33.6%), very good (n=40, 31.3%) and excellent (n=7, 5.5%). The mothers who reported that they did not know how to rate the institutional factors did not contribute to these findings.

Table 4: Institutional factors influencing the perception on quality of intra-partum care.

Item	Poor n (%)	Fair n (%)	Good n (%)	Very good n (%)	Excellent n (%)
cost of labour and delivery	5(2.6)	59(30.4)	104(53.6)	20(10.3)	5(2.6)
effectiveness of medicines	6(4.7)	31(24.2)	43(33.6)	40(31.3)	7(5.5)
the waiting rooms	2(1.0)	11(5.7)	98(50.8)	63(32.6)	19(9.8)

The study found out from the focus group discussion that the cost of labour and delivery in the hospital was fair. One of the participants in the focus group discussion had this to say about cost "*This hospital is cheaper as compared to other private hospitals in the region.*"

Another participant also contributed to the discussion by saying that she can recommend the hospital to other women because it is cheaper compared to other hospital within Naivasha District. During the key informant interview, the nursing officer in charge of maternity stated that the mothers do not complain about the cost of services. "*We have never had any complaint on the cost of services from our customer satisfaction surveys. The waiver system assists those mothers who are unable to pay*". This means that the mothers are comfortable with the cost of labour and delivery services as confirmed by the mothers' responses in the questionnaire, focus group discussion and from the key informant (nursing officer in charge of maternity).

Institutional factors versus perception on quality of intra-partum care.

Using the Fishers' exact cross tabulation, the cost of labour and delivery and comfort in the waiting rooms was seen to be significant with a P value of 0.007 and 0.025 respectively. The mothers who rated the cost

of labour and delivery as poor were likely to have a negative perception than those who rated it as good. Mothers who rated comfort within waiting rooms as poor were also likely to have a negative perception compared to those who rated it was good. However, the effectiveness of medicines provided by the hospital did not show any relationship with the mothers' perception on quality of intra-partum care and therefore it did not influence their perception. The table below shows the relationships as cross tabulated using the Fishers' exact method. Significance was based on a cut off value of 0.05.

Table 5: Institutional factors and mothers' perception of care

	Perception		
	Positive	Negative	Fisher's exact P value
Cost of labour and delivery			
Poor	1(20.0)	4(80.0)	0.007
Fair	40(67.8)	19(32.2)	
Good	82(78.8)	22(21.2)	
Very good	19(95.0)	1(5.0)	
Excellent	4(80.0)	1(20.0)	
Effectiveness of medicines			
Poor	5(83.3)	1(16.7)	0.296
Fair	20(64.5)	11(35.5)	
Good	35(81.4)	8(18.6)	
Very good	33(82.5)	7(17.5)	
Excellent	7(100.0)	0(0.0)	
Comfort within waiting rooms			
Poor	2(100.0)	0(0.0)	0.025
Fair	9(81.8)	2(18.2)	
Good	65(66.3)	33(33.7)	
Very good	52(82.5)	11(17.5)	
Excellent	18(94.7)	1(5.3)	

4.3: RESOURCE FACTORS

The table below shows how the respondents rated the resources available in the hospital for intra-partum care. Majority agreed that they were provided with a basin (n=110, 56.4%), sanitary pads (n=186, 95.4%) and warm water (n=105, 53.8%). However, the study revealed that (n=104, 53.3%) of the mothers interviewed were not provided with toilet paper.

During the focus group discussion the mothers reported that they were being provided with warm water, a basin and sanitary pads. However, the mothers did not know whether they were going to be charged for these commodities. One of the participants asked "*are we going to pay for the sanitary pads that we are*

being given?" The other participants also did not know the answer to the question and therefore we agreed that we were going to ask the nursing officer in charge of maternity.

During the key informant interview, it emerged that the mothers pay for the basins that they are provided with during their time in labour ward. However, she reported that the sanitary pads are free for all mothers.

Table 6: Resource factors influencing the perception on quality of intra-partum care.

Item	YES (%)	NO (%)
Basin provided	110(56.4)	84(43.1)
Sanitary pads provided	186(95.4)	9(4.6)
Toilet paper provided	91(46.7)	104(53.3)
Warm water provided	105(53.8)	90(46.2)

Most of the mothers agreed that the number of delivery beds were adequate (n=104, 53.3%), the drugs were available (n=138, 70.8%), necessary equipment were available (n=169, 86.7%), the number of service providers was adequate (n=119, 61%) and supplies were adequate (n=167, 85.6%). This is in contrast to the findings from the focus group discussion and key informant interview. It was noted that some of the mothers did not know how to rate the availability of these resources. It emerged during the focus group discussion that the mothers thought it was normal to share beds and have one nurse caring for twenty mothers.

During the focus group discussion, the participants had this to say on availability of beds and linen. *"The beds are not enough. We share beds most of the time. In the morning, dirty linen is removed from the beds with no replacement. We are forced to send our relatives to bring us blankets from home."*

"The delivery beds are few and mothers in labour have to wait to use them in turns. Sometimes a mother who is almost delivering is made to wait on another bed because all the delivery beds are occupied."

The participants also indicated that the service providers were not enough. Participant number one made the following comment.

"You will find one nurse attending to two mothers in labour and there is fear that a mother will deliver without the assistance of a nurse".

The key informant indicated that the beds and linen were few and the hospital was in a process of procuring more especially when the new maternity wing will be opened. She also reported that the hospital had essential drugs. She also stated that the service providers were very few and this impacted on the post natal care given to the mothers. She said that at any given shift there were two midwives taking care of approximately sixty mothers.

On the availability of supplies and equipment, some of the participants reported that they were enough while some of them were not sure. Some of them reported that they had been sent to buy drugs which were not available in the hospital pharmacy.

Table 7: Resource factors influencing the perception on quality of intra-partum care.

Item	Inadequate – no (%)	Adequate - no (%)	Very adequate- no (%)
The number of delivery beds	53(27.2)	104(53.3)	37(19.0)
Availability of drugs	34(17.4)	138(70.8)	9(4.6)
Availability of equipment	3(1.5)	169(86.7)	21(10.8)
The number of service providers	18(9.2)	119(61.0)	58(29.7)
Availability of supplies	7(3.6)	167(85.6)	17(8.7)

Resource factors versus mothers' perception on quality of intra-partum care.

The table below shows the relationship between the resources available in the hospital and the mothers' perception on quality of intra-partum care. There was a significant relationship between the mothers' perception on quality of intra-partum care and the number of delivery beds in the hospital (chi square P value of 0.017 df 2). The mothers who rated the number of delivery beds as inadequate were likely to have a negative perception on the quality of intra-partum care as compared to mothers rated them as adequate.

However, there is no significant relationship between mothers' perception on quality of intra-partum care and the number of service providers (P value of 0.106 with 2 df). This indicates that the number of service providers does not influence the mothers' perception.

Table 8: Resource factors versus mothers' perception on quality of intra-partum care

	Positive perception	Negative perception	Chi square	DF	P value
Number of delivery beds is:					
Inadequate	33(62.3)	20(37.7)	8.12	2	0.017
Adequate	82(78.8)	22(21.2)			
Very adequate	32(86.5)	5(13.5)			
Number of service providers is:					
Inadequate	10(55.6)	8(44.4)	4.49	2	0.106
Adequate	93(78.2)	26(21.8)			
Very adequate	45(77.6)	13(22.4)			

The table below showing Fishers'exact cross tabulation between resource factors and the mothers' perception on quality of intra-partum care shows that there is no significant relationship between the availability of drugs, supplies and equipment and the mothers' perception on quality of intra-partum care. With significance based on a cut off value of 0.05, these factors do not influence the mothers' perception.

Table 9: Resource factors versus mothers' perception on quality of intra-partum care

The drugs available are:	**Positive perception**	**Negative perception**	**Fishers exact P value**
Inadequate	22(64.7)	12(35.3)	0.118
Adequate	106(76.8)	32(23.2)	
Very adequate	9(100.0)	0(0.0)	
Equipment in labour ward are:			
Inadequate	3(100.0)	0(0.0)	0.140
Adequate	124(73.4)	45(26.6)	
Very adequate	19(90.5)	2(9.5)	
Available supplies are:			
Inadequate	5(71.4)	2(28.6)	0.559
Adequate	125(74.9)	42(25.1)	
Very adequate	15(88.2)	2(11.8)	

4.4: SERVICE PROVIDER FACTORS

The table below shows the rating of the respondents on service provider factors influencing their perception on quality of intra-partum care. The table shows that majority of the mothers were satisfied with their interaction with the service providers. Very few mothers (the numbers ranging from 2 to 9) reported that their interaction with service providers was poor. Nine mothers (4.6%) reported that the

information provided by the nurses was poor. All of the mothers (100%) reported that the nurses concern and caring, their skills and competence was fair and above.

Table 10: Service provider factors influencing the perception of on quality of intra-partum care

Item	Poor n (%)	Fair n (%)	Good n (%)	Very good n (%)	Excellent n (%)
Preparation for admission	2(1.0)	8(4.1)	46(23.7)	59(30.4)	79(40.7)
Efficiency of the admission procedure	5(2.6)	16(8.3)	51(26.6)	43(22.4)	77(40.1)
Attention of admitting staff to individual needs	2(1.0)	10(5.2)	47(24.4)	61(31.6)	73(37.8)
Provision of information by nurses	9(4.6)	18(9.2)	48(24.6)	75(38.5)	45(23.1)
Concern and caring by the nurses	0(0.0)	5(2.6)	33(16.9)	57(29.2)	100(51.3)
How well the nurses listened	3(1.5)	3(1.5)	46(23.7)	99(51.0)	42(21.6)
Nurses attention to mothers' condition	4(2.1)	8(4.1)	47(24.2)	62(32.0)	73(37.6)
Availability of nurses when needed	3(1.5)	10(5.1)	53(27.2)	87(44.6)	42(21.5)
Nurses response to mothers, calls	5(2.6)	10(5.1)	36(18.5)	57(29.2)	87(44.6)
Skills and competence of the nurses	0(0.0)	7(3.6)	27(13.8)	65(33.3)	96(49.2)

Findings from the researcher administered questionnaires the mothers sampled indicated service providers should be polite, kind, quick to respond and empathetic. During the focus group discussion the participants stated that service providers should be kind, empathetic, humane and appreciate their work for them to offer better services. One of the participants made the following comment *"Nurses have a lot of work. Even though the government does not pay them well, they should appreciate their work so as to offer better services"*.

Another participant said that the nurses should have a human heart and be ready to help the mothers whenever called upon to do so. Another participant continued the discussion further by saying, *"Sometimes you find a nurse who is not kind and this makes it difficult for the mother to open up about her problems"*.

The discussion continued with the participants saying that the service providers should also provide them with information on what happens during labour. This is because some of them have never experienced labour and do not know what to expect next. This is in keeping with findings from the researcher administered questionnaires which showed that most of the mothers did not know what to expect during labour and delivery.

The key informant said that the nurses were trying to offer the best they could even though they were understaffed. She said that they had not received any negative reports about the nurses working in labour ward.

Service provider factors versus the mothers' perception on quality of intra-partum care

Nurses' attention to client condition was significant in determining the mothers' perception on quality of intra-partum care as shown in the table below with Fishers' exact P value of 0.037. Mothers who rated the attention of nurses as poor were likely to have a negative perception as compared to those who rated it as good.

Significance was based on a cut off value of 0.05 and therefore the other factors i.e. level of concern and caring by nurses, how well the nurses listened and understood clients and their response to clients' calls did not seem to influence the mothers' perception.

Table 11: Service provider factors versus perception of care

	Positive	Negative	Fisher's exact p value
Level of concern and caring by nurses			0.279
Fair	4(80.0)	1(20.0)	
Good	27(81.8)	6(18.2)	
Very good	38(66.7)	19(33.3)	
Excellent	79(79.0)	21(21.0)	
How well nurses listened to and understood clients			
Poor	1(33.3)	2(66.7)	0.156
Fair	1(33.3)	2(66.7)	
Good	37(80.4)	9(19.6)	
Very good	73(73.7)	26(26.3)	
Excellent	34(81.0)	8(19.0)	
Attention of nurses to client condition			0.037
Poor	1(25.0)	3(75.0)	
Fair	5(62.5)	3(37.5)	
Good	35(74.5)	12(25.5)	
Very good	53(85.5)	9(14.5)	
Excellent	53(72.6)	20(27.4)	
Nurse response to client's calls			0.38
Poor	4(80.0)	1(20.0)	
Fair	6(60.0)	4(40.0)	
Good	24(66.7)	12(33.3)	
Very good	45(78.9)	12(21.1)	
Excellent	69(79.3)	18(20.7)	

4.5: INTRAPARTUM CARE

Most of the respondents reported that they spent most of their time in labour ward (n=104, 53.3%) while (n=91, 46.6%) revealed that they spent most of their time at home.

Most of the respondents felt that the care they received during labour and delivery was adequate (n=190, 97.44%). However, majority reported that they did not have someone with them during delivery (n=192, 98.4%) and this is because most of them did not want to.

From the focus group discussion, the mothers reported that provision of information was very important. This is because some of them did not know what to expect as it was their first time to deliver. They

needed to be given information on how to take care of the baby, how to breastfeed and how to clean the episiotomy wound.

The study also revealed that the most mothers were allowed to be mobile (n=146, 74.8%) and adopt any position during labour and delivery (n=106, 54.3%). Majority of the mothers (n=190, 98.4%) also reported that they were involved in the care process. The few mothers who reported that they were not involved indicated that they were very sick and were not aware of what was happening.

The mothers reported who reported that they did not have anything to eat or drink during labour were 124(64%), while 71(36%) reported that they were given food/drink during labour and delivery.

During the focus group discussion, participants also reported that the hospital does not provide utensils to mothers and this makes some of them to miss their meals. One of the participants made this comment.

The person who brings food stands at the door and calls out the mothers to come for their food. Some of the mothers are very weak after delivery and may not be able to get out bed therefore they end up missing the food. Some of the mothers have to borrow plates to use and sometimes they have to wait for their colleagues to finish eating. The person from the kitchen cannot wait for these mothers. It is so unfortunate and they should tell to buy plates during admission or provide us with plates and we pay for them.

From the researcher administered questionnaire and the focus group discussion; the sub themes that emerged indicated that mothers did not know what kind of service they expected during labour and delivery. This is what they reported.

"I was expecting to be assisted and have a safe delivery without any complications".

A few of the mothers elaborated further and said that they expected to be served fast.

The key informant reported that they mothers were satisfied with intra-partum care although they had challenges with human resource.

Table 12: Intra-partum care

INTRAPARTUM CARE	No.	%
Patient spent most of time in labour at:		
Home	91	46.67
labour ward	104	53.33
Patient felt care was adequate		
Yes	190	97.44
No	5	2.56
Adopted any position during labour		
Yes	106	54.36
No	89	45.64
Allowed to move around during labour		
Yes	146	74.87
No	49	25.13
Presence of birth partner		
Yes	3	1.54
No	192	98.46
Participation in care		
Yes	190	97.94
No	4	2.06
Received anything to drink or eat during labour		
Yes	71	36.41
No	124	63.59

BIVARIATE LOGISTIC REGRESSION ANALYSIS OF MOTHERS' PERCEPTION

The results of the logistic regression of independent factors identified in bivariate analysis are shown in table 13 below. The results indicate that mothers who reported that cost of delivery was "good" ($p = 0.04$) or "very good" ($p = 0.01$) were likely to have a positive perception of care compared to those who reported that cost of delivery was "poor". Compared to mothers living within a kilometer of the hospital, residing 3 to 4 kms away from the hospital was associated with a 67% (odds ratio 0.33) reduction in the odds of reporting a positive perception of the care provided within the hospital ($p = 0.04$).

Receiving food or drink during labor and perception of comfort within the waiting rooms were both not significantly associated with a positive perception of care at a cut off P value of 0.05. This means that the perception of the mothers was not likely influenced by whether they ate or drank during labour and delivery and the comfort within the waiting rooms.

Table 14: Bivariate logistic regression analysis

			95% CI	
	Odds Ratio	P value	Lower	Upper
If mother ate or drank	0.44	0.06	0.19	1.03
Residence from the hospital				
>1 and 2km	1.84	0.35	0.51	6.58
Between 3 and 4 km	**0.33**	**0.04**	0.11	0.96
More than 4km	1.26	0.66	0.45	3.54
Comfort of the waiting rooms				
good	0.40	0.50	0.03	5.87
Very good	0.12	0.06	0.01	1.09
excellent	0.24	0.21	0.03	2.24
Cost of labour and delivery				
fair	5.16	0.17	0.50	53.76
good	11.40	**0.04**	1.12	116.35
Very good	48.94	**0.01**	2.25	1066.18
excellent	6.10	0.31	0.19	195.90

CHAPTER FIVE

5.0: DISCUSSION

5.1: Demographic factors

Four variables on outcomes of intra-partum care (outcome of labour and delivery, pain relief methods, nutritional care and explanation of procedures) were used as a measure of determining the perception on quality of intra-partum care at Naivasha District Hospital. Zeithaml and Bitner (1991) state that customers recognize that service performance may vary and the extent to which they are willing to accept this variation is referred to as the zone of tolerance. The authors indicate that the zone of tolerance is seen as the range in which customers do not particularly notice service performance. Customer tolerance zones differ for different service attributes and the most important factors have narrower zones of tolerance. Service outcome is considered very important as compared to service process. Therefore the rating on service outcome may indicate the perception on quality of intra-partum care.

It was evident from the findings that the mother's age was not significantly related to their perception on quality of intra-partum care. Some studies have shown that young mothers especially adolescent mothers are likely to have a negative perception on quality of intra-partum care (Vilneff 2008, Peterson 2010, Atuyambe et al 2008). The attitude of the service providers has been cited by these studies to be the cause of the negative intra-partum care experiences of the adolescents. Furthermore, the adolescents experience stigma of unplanned pregnancies and fear being ridiculed by the older nursing staff. Therefore it means that in Naivasha District Hospital labour ward, the staff attitude towards all the mothers seeking intra-partum services is good. These findings are also supported by the focus group discussion findings which revealed that the nurses' attitude towards clients is good.

It was also noted that the rating of outcomes on intra-partum care was not associated with the number of children a mother had. This is contrast to a study by Mathews Z. (2005) which revealed that previous experience in childbirth influenced a mother's perception on the quality of intra-partum care.

It was noted from data analyzed that the educational level of the mothers did not influence their responses on the outcome of intra-partum care which was an indicator of their perception on quality of intra-partum care. This is in contrast to a study by Christophe J. et al (2008) which indicated that educational level influenced women's perceptions on quality of labour and delivery care.

However, the residence of the mothers' from the hospital was a significant factor in determining the mothers' perception on quality of intra-partum care. The study revealed that residing 3 to 4km away from the hospital is associated with reduction in the reporting of positive perception of the care provided in the hospital. This is supported by a study carried out by Birugi et al (2009), which found out that geographical accessibility is a significant factor in mothers' perception on quality of intra-partum care.

Therefore ensuring that services are geographically accessible will ensure quality of intra-partum care that is offered and WHO (2010) recommends that services should be accessible and responsive to clients' needs.

5.2: Institutional factors

The study revealed that the cost of labour and delivery services was fair as compared to other private hospitals. There was a significant relationship between the mothers' perception on quality of intra-partum care and the cost of labour and delivery. This means that those mothers who thought the cost was good were more likely to have a positive perception than those who thought the cost was poor. This is supported by various studies which indicate that if the mothers are able to afford intra-partum care, then they are more likely to have positive birth experiences (Birugi et al 2009, Christophe et al 2008).

The focus group discussion revealed that the mothers preferred more spacious rooms. The quantitative data indicated a relationship between the mothers' reporting on their perception on quality of intra-partum care and the comfort within the waiting rooms. This indicates that the mothers considered comfort in the waiting rooms as important and this can be supported by other studies which found out that mothers prefer more spacious rooms and a homely appearance of the rooms (Hundley et al 2004, Rudman 2007).

There was no relationship between the number of previous deliveries at the hospital and rating of outcome of intra-partum care. This indicates that the care the mothers received previously at the hospital was good and that is why they came back for the same services. Dodwell and Newburn (2010) agree that, the women's past experiences with a health facility may influence their perception on the quality of care of that facility.

5.3: Resource factors

During the interview the mothers reported that the number of general beds and delivery beds were adequate. However, during the focus group discussion the mothers revealed that they were dissatisfied with the number of general beds and delivery beds. The key informant also confirmed that the beds were

inadequate. The same also applied to the other resources like linen/beddings and the number of service providers.

It was noted that there was a relationship between the rating on delivery beds and outcomes of intra-partum care. This indicated that the availability of delivery beds was considered as important by the mothers. On the contrary, it was noted that there was no relationship between mothers' perception on quality of intra-partum care and the other resources. These resources were; drugs and supplies, equipment and service providers.

This indicated that the mothers did not consider the availability of these resources as being important in service delivery. However, it was evident from the focus group discussion that availability of resources was an important factor. The mothers noted that some of the resources like equipment and number of service providers were inadequate. These findings are in contrast to studies carried out by (Rogo et al 2001, Kruk et al 2011, Kruk et al 2010) who found out that availability of resources are very necessary in determining positive women's experiences during the intra-partum period.

It was noted that most mothers agreed that the number of service providers was adequate but on further enquiry through the focus group discussion, it was noted that the number was not adequate. It was later found that the mothers were unable to differentiate between the qualified nursing staff and the students. This was one of the weaknesses of the study.

5.4: Service provider factors

The mothers revealed that service providers should be kind, helpful, quick to respond and empathetic. It was evident from the study that mothers who rated outcomes of intra-partum care highly did the same for staff helpfulness during admission and considered nurse communication very important. This concurs with a study carried out by Vilneff S. (2008) which revealed that supportive nursing care is critical during intra-partum care. Bazant et al (2009), D'Ambruoso et al (2005) and Rudman (2007) also agree that staff attitude determine the mothers' perception on quality of intra-partum care and whether they will recommend the health facility to others.

The study also revealed that information provided during the intra-partum period is very important. There was a significant relationship between the rating on nurses' attention to individual client's condition and the mothers' perception on quality of intra-partum care. This is supported by a study by (Freedman et al 2007, Obstetricians and Gyneacologists of Canada 2008 and Wilde- Larsson et al 2011, Birugi et al 2009,

Peterson 2010, Vilneff 2008) who concluded from their studies that nurses need to recognize clients' individual needs to enable positive client experiences.

5.5: Intra-partum care

Majority of the respondents felt that the care was adequate. However, it was noted that most of the mothers did not have someone with them during delivery and they reported that it was because they did not want to. This is in contrast to a meta-analysis of randomized control trials by Sauls D (2002) who indicates that augmented intra-partum social support is associated with improved outcomes for the laboring women.

During intra-partum care most of the mothers were dissatisfied with their nutritional care. However it was noted that there was no significant relationship between the rating on outcomes of intra-partum care and nutritional care. Murray C et al (2002), state that experiences of mothers outside the duty of service are usually excused according to respondents' perception. The mothers may have perceived nutritional care as not important in intra-partum care.

When the mothers were asked about their expectations of care during labour and delivery, most of them did not know what they expected specifically. They reported that they expected to be assisted during delivery and have a safe delivery. This shows that the mothers did not have clear expectations and this may have resulted in a high rating for outcomes on intra-partum care and satisfaction with the care. Murray C et al (2002) states that by defining for the mothers a universal norm of expectations, enables them to compare their own experiences more accurately.

5.6: CONCLUSION

The study reveals that the mothers delivering in Naivasha District Hospital labour ward perceive the quality on intra-partum care as good. However, the study revealed that there was a discrepancy between the quantitative data and the qualitative data. This is attributed to lack of awareness of what the mothers should expect from a health facility.

The study clearly shows that the major demographic factor influencing their perception on quality of intra-partum care is their residence from the hospital. Residing more than 3 to 4 km from the hospital was more likely to lead to a negative perception of the quality of intra-partum care of the mothers (P value 0.03). This means that it is important to provide care that is geographically accessible to the community so as to improve skilled deliveries. This could explain why the skilled deliveries in Nakuru County are low at below 50%.

On institutional factors, cost and comfort within the waiting rooms were considered to be determinants of the mothers' perception on quality of intra-partum care (P values of 0.007 and 0.025 respectively). If intra-partum is not affordable, the mothers are likely to perceive it negatively because they may not benefit from it. Providing affordable intra-partum care services will ensure quality services as perceived by the mothers.

On availability of resources, delivery beds were significant in determining the perception on quality of intra-partum care (P value of 0.017). Availability of resources has been cited by many studies as a determinant of quality care and from this study it is evident.

With regard to service providers nurses' attention to individual needs was significant in determining the mothers' perception on quality of intra-partum care (P value of 0.037). In order to ensure that the clients receive quality care, good nurse-client relationships are mandatory. This is because nursing is a caring science which requires interaction between the nurse and the client. The nurse client interaction enables the nurse to make a correct diagnosis of the client condition and therefore ensure the right interventions.

A significant factor during intra-partum care was whether mothers were able to drink and eat during labour (p value of 0.05). Nutritional care during the intra-partum care is essential for the mothers to ensure that they get the energy that is required during delivery. Mothers will have positive birth experiences if their nutritional care is considered.

Ensuring quality of intra-partum care enables mothers to come back for the same services and are able to recommend the services to others. This will in the long run improve maternal health. Mothers should be

recognized as unique individuals and it is important to listen to what they have to say with regard to intra-partum care services. Their lay contribution enables the health care providers offer services that take into account the perspectives of the client.

It has been noted from customer satisfaction surveys that when clients are exposed to the same constraints of the health care system they tend to perceive these conditions as normal and therefore lower their expectations when it comes to services offered. The zone of tolerance increases except for the outcome of these services (Zeithml 1991).

One of the limitations with the study was that the clients did not know what they expected from the health facility during labour and delivery. This made it difficult to determine their perception on quality of intra-partum care. Therefore it is important to define the universal norms of what the mothers should expect from the health facility. This will enable them to compare their own experiences more accurately. It will also enable the health facility to design their service delivery with the client's needs in mind.

5.7: RECOMMENDATIONS

1. Qualitative household studies should be carried out to determine the mothers' perception towards the quality of intra-partum care offered in health facilities. This is important in determining their expectations and therefore tailoring hospital services to their needs to improve hospital deliveries.
2. It is important that the clients' rights are explained to the patient or information on their rights displayed well for all to see. This enables them to judge the care they receive accurately.
3. The hospitals should define the universal norms of what the mothers should expect from their facility during the intra-partum period.
4. The government should strengthen the referral system and antenatal care offered at the health centres to enable the mothers reach health facilities in time during labour.

REFERENCES

Alfirevica Z., Edwards G., Platt M.J. (2004*; The impact of delivery suite guidelines on intra-partum care in 'standard primigravida;* European Journal of Obstetrics & Gynecology and Reproductive Biology, 115 28–31.

Bazant E. S., Koenig M.A. (2009); *Women's satisfaction with delivery care in Nairobi's informal settlements.* International Journal of Quality Health Care. 21(2): 78 - 86

Behruzi R., Halem M., Goulet L., Fraser W. (2011); *The facilitating factors and barriers encountered in the adoption of a humanized birth care approach in a highly specialized university affiliated hospital.* BMC Women's Health 11:53.

Christophe J, Rhoune F, Ochako A, Ezeh A. (2008); *Interplay between women's perceived quality of, and access to care and household wealth on the utilization of maternity services among the urban poor.* Kenya.

Sofaer S,and Firminger K, (2005); *Patient perceptions of the quality of health services*, Birth vol. 26: 513-559

Clow S. (2005); *Clinical decision making in labour by registered midwives Division of Nursing and Midwifery.* University of Cape Town

Donabedian A., (1986); *Evaluating the Quality of Medical Care*; The Milbank Memorial Fund Quarterly, Vol. 44, No. 3, Part 2.

D'Ambruoso L., Abbey M., Hussein J., (2005); *Please understand when I cry out in pain: Women's accounts of maternity services during labour and delivery in Ghana*. BMC Public Health 22; 5:140.

Dorlands' medical dictionary for health consumers, (2007). Elsevier.

Farrel E., Pattinson B., (2005); *Intra-partum care in South Africa, Review and Guidelines*. South Africa.

Freedman L., Adair V., Timberly H., and West S., (2007); *The influence of the birth place and models of care on midwifery practice for the management of women in labour*. Journal of women birth. 19(4) 97-105.

Freedman L., Graham W., Brazier E., Smith J et al. (2007*); Practical lessons from global safe motherhood.* Lancet 370, 1381-1391.

Fotso J., Mukiira C. (2011); *Perceived quality of and access to care among the poor urban women in Kenya and the utilization of delivery care: Harnessing the potential of private clinics.* Health Policy Plan (E pub ahead of print).

Gill L., Lesley W., (2009); *A critical review of patient satisfaction*. Leadership in health services vol. 22 no.1 pp 8-9. www.emeraldinsight.com/1751-1879.htm

Hodnett E., Stremler R., William A., Weston J., Lowe N et al. (2008); *Effect of birth outcomes of a formalized approach to care in hospital labour assessment units: international randomized control trial.* BMJ 28, 337.

Hundley V., Ryan M., and Graham W., (2001*); Assessing women's preferences for intra-partum care.* Birth vol. 28(4), pp.254-263.

Hundley V., Ryan M., (2004); *Are women's expectations and preferences for intra-partum care affected by the model of care on offer.* BJOG 111(6):550 -60

Kenya Ministry of Public Health and Sanitation, (2009); *National Reproductive Health Strategy*. Division of Reproductive Health Nairobi, Kenya.

Kenya Ministry of Public Health and Sanitation, (2010)*; Kenya Reproductive Health Research Agenda.* Division of Reproductive Health, Nairobi Kenya.

Kenya Ministry of Public Health and Sanitation. (2010); *Reproductive Health Policy*. Division of Reproductive Health. Nairobi. Kenya.

Kenya National Bureau of Statistics (KNBS) and ICF Macro. (2010*;. Kenya Demographic and Health Survey 2008-09.* Calverton, Maryland: KNBS and ICF Macro.

Kruk M., PacZkowski M., Tegen A., Tessema F., et al (2010); *Women's preferences for obstetric care in rural Ethiopia: A population based discrete choice experiment in a region with low rates of facility delivery.* Journal of epidemiology Community Health 64(11): 984 - 8

Kruk M., Rockers P., Tormorlah V., Macauley R., (2011); *Population preferences for health care in Liberia: Insights for rebuilding a health system.* Health service Res. 46(6): 2057 - 78

Luce M., Bindman B., Lee P., (1994); *A brief history of health care quality assessment and improvement in the United States.* West J. Med 160 263-268.

Mathews Z., Ramakrishna J., Mahendra S., Kilaru A et al. (2005*); Birth rights and rituals in rural India: care seeking in the intra-partum period.* Journal of biosocial sciences 37, 385-411.

Mirkuzie A., Hinderaker S., Sisay M., Moland M., Morkve O., (2011); *A cohort study on obstetric care for HIV positive women in Addis Ababa: Intra-partum transfers and associated delays.* Journal of Public Health and Epidemiology Vol. 3(6), pp. 275-283.

Mrisho M., Obrist B., Schellenberg J., Haws R., et al, (2009); *The use of antenatal and postnatal care: perspectives and experiences of women and health care providers in rural Southern Tanzania,* BMC Pregnancy and Childbirth 9:10

Muga R., Kizito P., Michael M., and Gakuruh T., (2006); *Overview of the health system in Kenya*. Population Council. Nairobi Kenya.

National Institute for Health and Clinical Excellence. (2007*); Intra-partum care*. London. www.nice.org.uk.

Newborn P., Wright G., 1999; Patient Management: *A review of patient satisfaction*. British Dental Journal, 186, 161-165.

Parasuraman A., Berry L., Zeithaml V., (1991); *Refinement and reassessment of the SERVQUAL scale.* Journal of retailing. 67(4); 420-450.

Philpott H., (2005*; The Design and Function of the Labour Ward as it influences Quality of Care,* Department of Public Health Medicine, South Africa.

Philpott H., Mzolo N., Nyasulu D., and Connolly C., (2005); *Improving the quality of observations, recordings and decisions during labour.* Department of Public Health Medicine, South Africa.

Pitchforth E., Lilford R.J., KebedeY. and Asres G. Stanford C., Frost J. (2010); *Assessing and understanding quality of care in a labour ward: a pilot study combining clinical and social science perspectives in Gondar, Ethiopia. Social science & medicine*,71 (10). pp. 1739-1748. ISSN 0277-9536.

Rivers P., Saundra H., (2010); *Health Competition, Strategic Mission and Patient Satisfaction: research model and propositions.* Journal of Health Organization Management. 22(6); 627-641

Rogo K., Oucho J., and Mwalali P., (2006); *Maternal Mortality*, International Bank for Reconstruction and Development/World Bank.

Rogo K., Aloo-Obunga C., Ombaka C., Ogutu M., et al (2001*); Maternal mortality in Kenya: The state of the health facilities in a rural district.* EAMJ. 78(9): 468 – 72.

Rudman A., (2007); *Women's evaluations of intra-partum care and post-partum care*. Karolinska Institutet, Stockholm.

Ruminjo J. C., Cordero K.J., Beattie M.N., Wegner M., (2001); *Quality of care in labor and delivery: a paradox in the Dominican Republic;* commentary EngenderHealth, New York, NY, USA, International Journal of Gynecology and Obstetrics 82 (2003) 115–119.

Russel G., and Miles P., (1998); *The definition of perception of quality in ISO-9000 firms*, Review of Business, vol. 19

Sandin-Bojo A. K., Hall-Lord M. L., Axeisson O., Larsson B. W., (2007); *Intra-partum care in a Swedish Maternity unit after a quality improvement programme.* Division of Health and Caring.Karlstad University, Sweden. Journal of midwifery 23(2): 113-122

Sauls D., (2002); *Effects of labour support on mothers, babies and birth outcomes*. Journal of obstetrics and gynaecology and neonatal nursing 31(6) 733-741.

Vilneff S., 2008; "Giving Young Mothers a Voice about their own care". *Open Access Dissertations and Theses.* Paper 4819. http://digitalcommons.mcmaster.ca/opendissertations/4819

Wamwana E. B., Ndavi P. M., Gichangi P. B., Karanja J. G., Muia E. G., Jaldesa G.W., (2007); *Quality of record keeping in the intra-partum period at the provincial general hospital, Kakamega, Kenya*, vol 84(1)

WHO. (2009);*Making pregnancy safer; an assessment tool for quality of hospital care for mothers and newborn babies,* Regional office for Europe. http://www.euro.who.int/pubrequest.

WHO, (2004);10th revision. *International classification of diseases (ICD)*, Geneva.

WHO, (2004); *Maternal mortality estimates developed by WHO, UNICEF and UNFPA*. Geneva.

Wilde-Larsson, B., Sandin-Bojö, A.-K., Starrin., B.Larsson, G., (2011); *Birthing women's feelings and perceptions of quality of intra-partal care: a nationwide Swedish cross-sectional study*. Journal of Clinical Nursing, 20: 1168–1177.

APPENDICES

APPENDIX 1: QUESTIONNAIRE FOR PATIENTS

Section 1: Demographic data

1. What is your age in completed years? --------------
2. What is your marital status? ☐Married ☐Single ☐Divorced ☐Separated ☐Widowed.
3. What is your parity?
4. What is your highest level of education? ☐ None ☐Lower primary ☐Upper primary ☐Secondary
5. What is your residence from hospital (km); ☐less than 1 km ☐between 1 and 2 km ☐between 3 and 4 km ☐more than 4km
6. What is your occupation?

   Institutional factors

7. In your opinion how can you rate the following in labour ward?

	excellent	Very good	good	fair	Poor	Don't know
Comfort in waiting rooms, examination and delivery rooms are;						
Effectiveness of medicines supplied by the hospital are for labour and delivery are;						
The cost of labour and delivery services in the hospital are;						

8. How can you rate the following in labour ward?

	Fully satisfied	Satisfied	Somewhat dissatisfied	Dissatisfied
Cleanliness				
Availability of beds and linen				
State of sanitary facilities				
Privacy				
confidentiality				

Resource factors

9. Were the following provided during labour and delivery?

	yes	no
Warm water		
Sanitary pads/cotton wool		
Toilet paper		
Basin		

10. How can you rate the following ;

	Very adequate	adequate	More or less adequate	Inadequate
The equipment available in the labour ward are;				
The supplies available are;				
The drugs available are;				
The number of delivery beds is;				
The number of service providers is;				

Service provider factors

11. In your own opinion what qualities should service providers have in order to provide quality intra-partum care?
12. How can you rate the following?

	excellent	Very good	good	fair	poor	Don't know
Preparation for admission; helpfulness and concern of the admitting staff.						
Efficiency of admitting procedure; how long did it take.						
Attention of the admitting staff to your individual needs						
Skill and competence of the nurses; how well were things done						
Attention of the nurses to your condition; how often the nurses checked on you and how well they kept track of how you were doing.						
Nursing response to your calls. How quick they were to help						
Concern and caring by the nurses; courtesy, respect, friendliness and kindness						
Information given by nurses; How well they communicated with you, your family and relatives.						
Availability of the nurses. How easy was it to get the nurse when needed?						
How well the nurses listened to what you						

had to say and how well they understood what you thought was important.						

Intra-partum care procedures

13. How many times have you delivered in this hospital?

14. Where did you spend most of your time in labour? 1) at home 2) in the corridor 3) in another ward 4)in the labour ward
15. List the care you expected to receive during labour and delivery?
16. List the care that you received?
17. Did you feel the care was adequate?
18. Were you allowed to adopt any position during labour and delivery? Yes …………. No…………
19. Were you allowed to move around and get out of bed during labour? Yes……….. No…………..
20. Did you have someone with you during labour and delivery? Yes ………….. No…………..
    If not, was it because: 1)you were not allowed by the staff 2)you preferred not to have someone with you 3)you had no-one to ask to be with you in labour ?
21. Did you participate in the care that was provided? Yes …………. No…………….
    If you did not participate, what were the reasons?
22. Did you receive anything to eat or drink while you were in labour?
    YES …………..NO……………
23. How can you rate the following?

	excellent	Very good	good	fair	poor	Don't know
How are the outcomes of intra-partum care in this hospital						
How were the methods of pain relief						
How was the nutritional during labour and delivery						
How was the explanation of the procedures done during labour and delivery						

APPENDIX 2: CONSENT FORM FOR FOCUS GROUP DISCUSSION

My name is Zillah Moraa Malachi. I am a student at the University of Nairobi, College of Health Sciences undertaking a master's degree course in obstetrics nursing/midwifery. I am carrying out a study on mothers' perception on quality of intra-partum care at Naivasha District Hospital labour ward. This is a study for the award of the degree of Masters' in Nursing (Obstetric Nursing/Midwifery). I encourage you to participate freely and contribute your views and ideas as much as possible. All information collected will be treated as a group contribution and will be strictly confidential. The information collected will be highly valuable to the research and will help in improving the quality of intra-partum care. The will to participate is absolutely voluntary without any compulsion or inducement. All rights will be guaranteed.

In case you will want to know the results from this study or have any complaints, please do not hesitate to contact the following:

1. Zillah Malachi on cell phone number 0721450190
2. Chairman KNH/UON-ERC Box 20723 KNH, Tel 2726300-9, ext 44102

We do hereby provide informed consent to take part in this study. We have been explained to the nature of the study and purpose.

Participants' Signatures

1. ………………………………………….
2. ………………………………………….
3. ………………………………………….
4. ………………………………………….
5. ………………………………………….
6. …………………………………………..
7. …………………………………………..
8. …………………………………………..
9. …………………………………………..
10. …………………………………………..

Principle investigator/Research assistant

Name …………………………………..

Signature ……………………………

APPENDIX 3: FOCUS GROUP DISCUSSION INTERVIEW GUIDE

1. What are the demographic factors influencing your perception of labour and delivery?
2. What institutional factors do you perceive as important in determining the quality of labour and delivery care?
3. What resource factors do you perceive as important in provision of quality labour and delivery care?
4. What service provider factors do you perceive as important in provision of quality labour and delivery care?
5. What are the labour and delivery care practices by the service providers that you perceive as being important in the provision of quality intra-partum care?

APPENDIX 4: PARTICIPANTS' CONSENT FORM

This is a study aimed at determining the postpartum mothers' perception on the quality of intra-partum care in Naivasha District Hospital labour ward. It is a study for the award of a master's degree in Nursing Sciences (obstetric nursing/ midwifery). You are kindly requested to participate voluntarily without any compulsion or inducement and to be honest and truthful as much as possible. The stated facts shall be strictly confidential and shall only be used for the purpose of the research. No name shall be mentioned anywhere in the forms to promote confidentiality. Your participation will contribute to the improvement of quality labour and delivery care in Naivasha District Hospital. You are free to refuse or withdraw from participating in this study if you find it necessary. This will not in any way affect the quality of care that you will receive.

In case you want to know the results from this study or have any complaints, dissatisfaction or disagreements please do not hesitate to contact the following:

3. Zillah Malachi on cell phone number 0721450190
4. Chairman KNH/UON-ERC Box 20723 KNH, Tel 2726300-9, ext 44102

I have been clearly explained to and fully understand the purpose of this study and freely consent to participate. I have signed below to confirm this.

Signature …………………………… Date ………………………………….

I, the undersigned, have fully explained the relevant details of this study to the person whose signature has been appended above.

Name of Principle Investigator/Research assistant……………………………………………….

Signature……………………………….. Date………………………….

Witness ……………………………….. Signature ……………….. Date…………………..

APPENDIX 5: KEY INFORMANT CONSENT FORM

My name is Zillah Moraa Malachi. I am a student at the University of Nairobi, College of Health Sciences undertaking a master's degree course in obstetrics nursing/midwifery. I am carrying out a study on mothers' perception on quality of intra-partum care at Naivasha District Hospital labour ward. It is a study for the award of the degree of masters in Nursing Sciences (obstetrics nursing/midwifery). Your free participation in the study will be highly appreciated. The study is aimed at improving the quality of intra-partum care in Naivasha District Hospital labour ward.

In case you will want to know the results from this study or have any complaints, dissatisfaction or disagreements please do not hesitate to contact the following:

1. Zillah Malachi on cell phone number 0721450190
2. Chairman KNH/UON-ERC Box 20723 KNH, Tel 2726300-9, ext 44102

I have been clearly explained to and fully understand the purpose of this study and freely consent to participate. I have signed below to confirm this.

Signature …………………………… Date ………………………………….

I, the undersigned, have fully explained the relevant details of this study to the person whose signature has been appended above.

Name of Principal Investigator/research assistant ……………………………………………….

Signature……………………………….. Date………………………….

APPENDIX 6: KEY INFORMANT INTERVIEW GUIDE

1. What are the demographic factors influencing the mothers' perception on quality of intra-partum care?
2. What institutional factors do you think are influencing the mothers' perception on quality of intra-partum care?
3. What do you think is the perception of the mothers' on availability of resources in provision of quality intra-partum care?
4. What do you think is the mothers' attitude towards service providers in the labour ward?
5. What do you think is the mothers' attitude towards intra-partum care services offered in the labour ward?

APPENDIX 7: LETTER TO KENYATTA NATIONAL HOSPITAL RESEARCH AND ETHICS COMMITTEE

Zillah Moraa Malachi
University of Nairobi,
School of Nursing Sciences,
P. O. Box 19676
Nairobi.

The Director,
KNH/UON Research and Ethics Committee,
P. O. Box 20723,
Nairobi.

RE: APPROVAL TO CONDUCT A STUDY IN NAIVASHA DISTRICT HOSPITAL

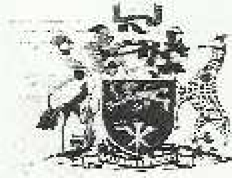
I am a second year master of science in nursing student at the University of Nairobi. I am seeking your approval to carry out a study on 'mothers' perceptions on quality of intra-partum care at Naivasha District Hospital labour ward'. The study is part of fulfillment for the award of Masters of Science in Nursing Degree in obstetric nursing/midwifery.

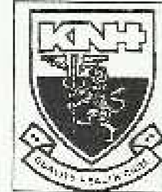
I would be very grateful if you considered my request. With this letter is the research proposal for the study.

Yours faithfully,

Zillah Moraa Malachi

APPENDIX 8: LETTER FROM UON/KNH ERC





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

KNH/UON-ERC
Email: uonknh_erc@uonbi.ac.ke
Website: www.uonbi.ac.ke
Link:www.uonbi.ac.ke/activities/KNHUoN

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

Ref: KNH-ERC/A/106

9th May 2012

Zillah Malechi
School of Nursing Sciences
College of Health Sciences
University of Nairobi

Dear Zillah

Research proposal: "Postpartum mothers perception on Quality of intra-parium care in Naivasha District Hospital Labour Ward" (P81/02/2012)

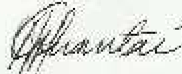
This is to inform you that the KNH/UoN-Ethics & Research Committee (ERC) has reviewed and **approved** your above revised research proposal. The approval periods are 9th May 2012 to 8th May 2013.

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 severe 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 or 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-Ethics & Research Committee 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 **www.uonbi.ac.ke/activities/KNHUoN**

Yours sincerely



PROF A.N. GUANTAI
SECRETARY, KNH/UON-ERC

c.c. The Deputy Director CS, KNH
The Principal, College of Health Sciences, UON
The Director, School of Nursing Sciences, UON
Supervisors: Dr. Blasio Osogo Omuga, School of Nursing Sciences, UON
Dr. Waithira Mirie, School of Nursing Sciences, UON

APPENDIX 9: MAP OF STUDY AREA

Hospital Location map