EXPERIENCES AND ASSOCIATED FACTORS IN QUALITY OF DELIVERY CARE AT THE KENYATTA NATIONAL HOSP`ITAL.

BY

JANE W. KABO

H56/68575/2011

A DESERTATION SUBMITTED IN THE PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE NURSING (MIDWIFERY AND OBSTETRIC NURSING) OF THE UNIVERSITY OF NAIROBI.

AUGUST, 2013

DECLARATION

I JANE W. KABO declare that this research is my own original work and has not been presented for a degree at any other University.

Registration number H56/68575/2011

Signature ……Date……

SUPERVISORS' APPROVAL

This research work has been submitted with our approval as university supervisors:

Prof. Anna Karani
Professor of Nursing
University of Nairobi
School of Nursing Sciences
Signature……Date……

Dr. Jennifer Oyieke
Lecturer University of Nairobi
School of Nursing Sciences
Signature……Date……

DEDICATION

This work was dedicated to my husband Peter and two lovely children Perpetua and Lennox for their love, support and encouragement throughout the entire period. May the almighty God bless you for your love and support.

ACKNOWLEDGEMENT

I would like to express my sincere appreciation to the people who assisted me in this project. My supervisors Prof. Karani and Dr Oyieke for their guidance support and follow up of my research work. The University of Nairobi, School of Nursing Sciences, Master of Science in Nursing lecturers and classmates for the encouragement and support.

God bless you all.

Table of Contents

LIST OF ABREVIATIONS AND ACRONYMS

KNH	Kenyatta National Hospital
MMR	Maternal Mortality Rate
WHO	World Health Organization
UNICEF	United Nations International Children's Emergency Fund
SPSS	Statistical Package for Social Sciences
BFHI	Baby Friendly Hospital Initiative
MDG	Millennium Development Goals
ANC	Antenatal Care
KDHS	Kenya Demographic Health Survey
UNFPA	United Nations Fund for Population Activities

OPERATIONAL DEFINITIONS

Quality of care- The degree to which health care services for individuals and populations increase the likelihood of desired health outcomes and is consistent with current professional knowledge.

Labor - Process by which fetus, placenta, membranes are expelled through birth canal, covers not only physical event but also psychological

Client perception– This refers to the client's view or perspective, feeling or impression.

Experience - The process or fact of personally observing, encountering, or undergoing something.

Mother - Woman who has, given birth to a child or is pregnant.

LIST OF FIGURE

LIST OF TABLES

ABSTRACT

The fifth Millennium Development Goal calls for a reduction in the maternal mortality ratio by 75% between 1990 and 2015, with a key indicator being the proportion of births attended to by skilled health personnel (United Nations 2007). In Sub-Saharan Africa approximately 40% of women deliver with a skilled attendant. In Sub-Saharan Africa, little research has been carried out on the experience of quality in facility-based delivery care and factors associated with delivery care. This was a cross sectional descriptive study that focuses on experience and associated factors of delivery care by postnatal mothers in the Kenyatta National Referral Hospital in Nairobi, Kenya.

The main objective was to describe the experience of quality in delivery care among women who delivered in the health facility; and their perception of the care. Systematic sampling was employed to recruit post-natal mothers who delivered in KNH labour ward and four postnatal wards. A total of 109 participants were recruited into the study, postnatal wards were purposely selected. Training of research assistant was done before data collection. Data was collected using structured and semi-structured questionnaires to respondents within 48 hours after delivery. Qualitative data was collected by use of case studies and key informant interviews. Data was analyzed using ANOVA. Research results were presented in frequency distribution tables, graphs and charts. P-values were used to calculate the statistical significance of the results obtained

The average age of the participants was 26 years (SD 4.5), close to thirty eight percent (37.6%) of the participants had a parity of three. Most (95.4%) of the deliveries were uncomplicated and five (4.6%) participants had complicated births. Views and experiences of recently delivered women were elicited using a five-point Likert scale questionnaire focusing on four dimensions of participants' intrapartum experience. The participants attending KNH for second delivery viewed providers as respectful ($p = 0.043$), effective in explaining labor and delivery ($p = 0.019$) and seeking patient consent before procedures ($p = 0.008$).

Most participants (87.7%) agreed that they were treated respectfully, accorded privacy and asked to consent to procedures, prior to the initiation of these procedures. Ninety percent of participants agreed that the health providers explained what to expect during labor, listened to participants concerns and clearly explained to clients their condition. However 8% of the respondents disagreed with this statement. Most participants ($n = 102$, 93.6%) said they would recommend delivery services at KNH to friends or family, although 6% of them said they would not recommend.

In conclusion, the study showed majority of the participants rated most of the delivery care aspects highly and therefore had a good experience of delivery care though few aspects were rated poorly. There is need for the hospital management to increase the staff patient ratios in labour ward to care for

women in labour especially with the increase in numbers of mothers delivering in the institution following provision of free maternity services by the government. The management also needs to plan on increasing the number of beds in labour rooms and also delivery rooms as well provision of privacy in these rooms.

CHAPTER 1: INTRODUCTION

1.1 Background information

Pregnancy and childbirth have a profound effect on a woman's life along with that of her spouse and family. Yet often in poor communities the joy which should accompany such a momentous experience is overshadowed by obstetric complications, serious illness and disability and in some cases untimely maternal or perinatal death, (Zaers S., et al. 2008). Millions of women do not have access to good quality health services during pregnancy and childbirth especially women who are poor, uneducated or who live in rural areas (Gill k. et al. 2007). Less than half of the women in developing countries receive adequate healthcare during and soon after childbirth, despite the fact that most maternal deaths occur during these periods (Abouzahr J., 2005). The World Health Organization (WHO) estimated that over half a million women in developing countries die each year from causes related to pregnancy and childbirth, leaving atleast one million children motherless (Bradley A., *et al*.,2002).

Vouri P., (2000) defines quality care as the degree of application of currently available scientifically based medical knowledge in patient care. This implies that when health care providers employ current medical knowledge in the management of patients' conditions, the care provided is most likely to be of a high quality and this is very necessary in the delivery of maternity services.

Lawrence M., *et al*. (2004) reported from their study of satisfaction with pregnancy and newborn care that satisfaction with care is an important measure of quality of care. Patient satisfaction is considered to be an outcome of the delivery of health care services as well as a measure of its quality. In addition, a known relationship exists between satisfaction and the use of care (Handler B., *et al*. 2006).

Key amongst the demographic targets set by the government of Kenya is to increase the proportion of deliveries attended to by qualified personnel from 45 to 90% by the year 2015 and improvement of the quality of care at all levels of the healthcare delivery system (KDHS, 2007-8).To ensure that high quality care is present during labor and delivery, the service delivery system must pay regard to clients' expectations and rights to access safety, comfort, dignity, privacy and confidentiality and the right to express opinion about the services offered.

The study was conducted at the Kenyatta National Hospital (K.N.H.) maternity unit. This aimed at assessing the experiences and perceptions of women regarding the quality of care and associated factors, so that recommendations can be made based on empirical findings.

1.2 Problem statement

Women may not access delivery care or delay in reaching the care due to their prior experience of quality in delivery care, or their perceptions of the experience. Health services often fall short of acceptable standards and cannot be assumed to be effective (Ronsmans C., 2003).

There has been some debate about using the client's perspective in the evaluation of the quality of services. While many stakeholders have viewed the client's perspective as a meaningful indicator of health services quality, others have dismissed the views of clients as too subjective. For the later point of view, how a client feels is important, even though the provider's assessment of reality may be different. This is because at a minimum, the subjective assessment of quality by clients can still provide useful input to help the provider understand and establish acceptable standards of services (Lavender T., et al.2005).Therefore; this study's intent was to capture the experiences of mothers during labor from their own perspective.

1.3 Justification

While many qualitative studies have been carried out on women's experiences in maternal health internationally, few have focused on experiences of women during labor in Kenya. Qualitative data provide women's descriptions of their experiences in their own words. Moreover, little is known about the factors **t**hat affect patient-provider interactions in delivery care, and whether delivery care quality differs by women's and service delivery characteristics. Also such research had not been carried out at the Kenyatta National Hospital which is a regional referral hospital. The results were to be used to initiate measures of upgrading or maintaining quality of care given during labor. It would also serve as baseline information for further study.

1.4 Research question

The study sought to answer the following question.

1) What are the experiences and associated factors regarding delivery care among women who deliver at the Kenyatta National Hospital maternity unit?

1.5 Study Objectives

1.5.1 General objective

To determine experiences and associated factors regarding the quality of delivery care among women who deliver at the Kenyatta National Hospital maternity unit.

1.5.2 Specific objectives

1) To determine the experience of mothers in delivery care with a focus on service provider interactions.
2) To establish if socio-economic and demographic factors are associated with mothers' experiences.
3) To assess the quality of service in delivery care to mothers in KNH.
4) To describe the satisfaction level of quality of delivery care in KNH.

1.6 Theoretical Framework

The experience of quality in delivery care is theoretically described as having four Components: a) human and physical resources; b) cognition; c) respect, dignity and equity; d) emotional support. (Hulton, Matthews and Stones 2007)

Figure 1: conceptual framework adapted from (Hulton, Matthews & Stones 2007).

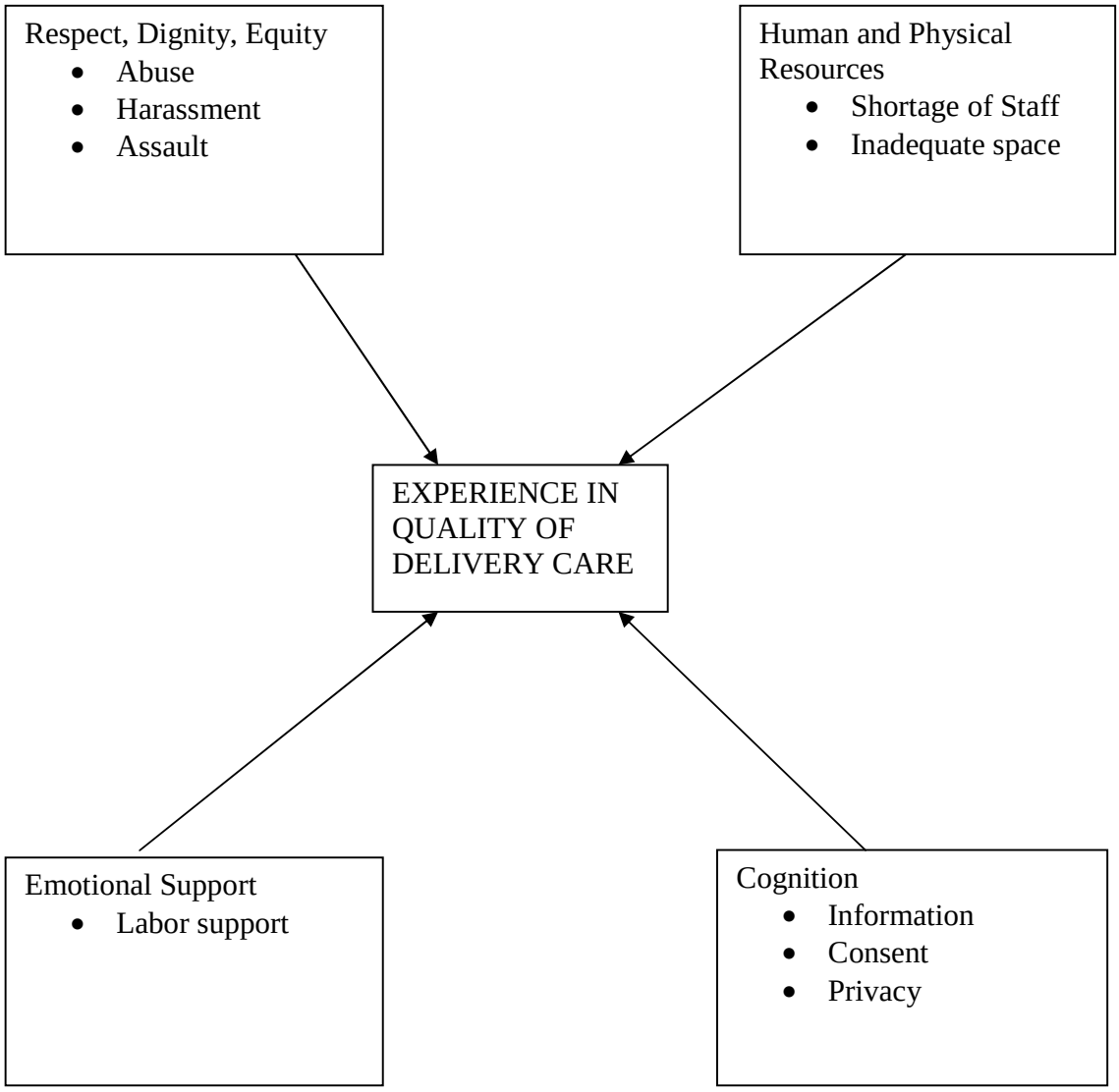

Figure 2: Conceptual framework

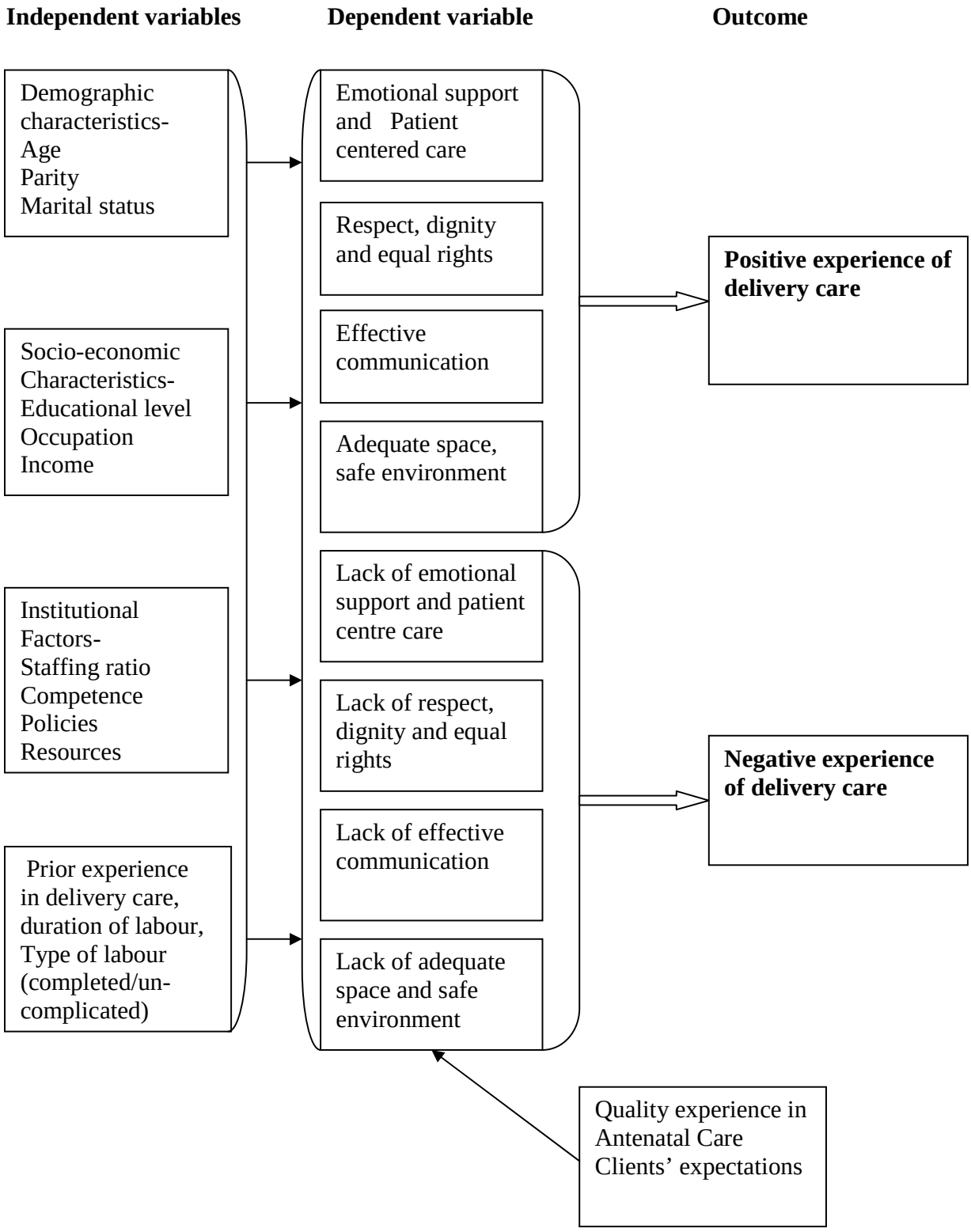

Figure 2: Conceptual framework

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

Pregnancy and childbirth have a profound effect on a woman's life along with that of her spouse and family. Yet often in poor communities the joy which should accompany such a momentous experience is overshadowed by obstetric complications, serious illness, and disability and in some cases untimely maternal or perinatal death, (Zaers S., et al. 2008). For women from poor communities who give birth in 'Western' health facilities, these hardships are often compounded by care from health professionals who impose unnecessary, uncomfortable and humiliating medical procedures, lack respectful communication and are even on occasions abusive.

Although the cornerstone of international efforts to reduce maternal mortality in poor countries is 'skilled attendance at birth', little attention has been paid to the fact that women avoid attending services where they receive disrespectful care.

Financial costs are not the only barrier to women's use of maternal health care, when services are available (Koblinsky M.et al, 2006). Women may not access delivery care or delay in reaching the care due to their prior experience of quality in delivery care, or their perceptions of the experience. Health services often fall short of acceptable standards and cannot be assumed to be effective (Ronsmans C., 2003). The Making Pregnancy Safer Department of the World Health Organization (WHO) highlights among its core principles the assurance of high quality services (WHO, 2007).

The current emphasis on quality of care in maternal health, including women's experience of care offered, follows a decade or more of studies on the influence of quality of care in family planning programs on contraceptive use (Zaers S., et al. 2008). Definitions of quality of care in the literature generally focus on the provision of care according to evidenced-based, clinical standards, and women's "experience of care." The latter refers to client-provider interactions, and other aspects of the health care experience, such as privacy and confidentiality (Hulton, et al. 2007).

According to WHO (2007), the required skills for skilled birth attendants include the ability "to cultivate effective interpersonal communication skills and an attitude of respect for the woman's right to be a full partner in the management of her pregnancy, childbirth, and postnatal period."

The rationale for studying the experience of quality in maternal health care relates to human rights and women's health-seeking behavior. The United Nations affirmed that quality of care is an essential element of the right to health (UN, 2007). Rights related to maternal health care have been adapted from conceptual frameworks related to family planning and reproductive health (Huezo C. and Diaz S. 2003). Women in obstetric care have rights to information, access to services, informed choice, safe services, privacy and confidentiality. Rights also encompass the notions of dignity, comfort, expression of opinion and continuity of care. The needs of health care providers also have been specified. To ensure that high quality care is present in labor and delivery, the service delivery system must pay regard to clients' expectations and rights to access, safety, comfort, dignity, privacy and confidentiality and the right to express opinion about the services offered. Second, women's reluctance to use obstetric care in developing countries stems from cultural inappropriateness of care, disrespectful and inhumane services, lack of emotional support, as well as high costs (Koblinsky, 2006).

In Sub-Saharan Africa, poor experience of quality in delivery care and the fear of being ridiculed have deterred women from delivering in government health facilities (Pearson et al, 2000). In studies in Ghana and Morocco, although women acknowledged the efficacy of modern obstetric care; nurses' denigrating attitudes toward women motivated many to deliver at home or to not reach the referral hospital (Moore M. et al, 2002).

2.2 Women's Experience of Care in Maternal Health

The childbirth experience is multidimensional and, therefore, difficult to describe and explain. Studies of it have produced inconsistent findings, and the phenomenon is often confused with satisfaction with the care provided, (Zaers S., et al. 2008). According to Hulton L., et al.(2007), the experience of quality in delivery care is conceptualized as having four components: a) human and physical resources; b) cognition; c) respect, dignity and equity; and d) emotional support. The literature describes deficiencies in these areas. First, human and physical resources are often inadequate, resulting in neglect or lack of attention to women. In qualitative studies in Sub-Saharan Africa and Latin America (Stanton C.et al 2007), researchers documented women delivering unattended or being left alone for long periods of time. In South Africa, delivery care providers neglected women who had not attended antenatal care, (Moore M. et al. 2002). Inadequate physical space also compromised women's comfort and privacy in Tanzania (Vouri

P., et al. 2000). The second component of the experience of care, cognition, refers to whether a mother received sufficient information about her health status or procedures, knows what is happening, and has her questions answered (Hulton, et al. 2007). In Lebanon, women in ANC wanted to know more about what to expect during delivery (Carroli G.et al. 2008). In studies in Mexico and Uganda, laboring women did not understand the medical terminology used by providers, did not have the opportunity to ask questions, or wanted more information about their condition (Lavender T. et al. 2005). In the Dominican Republic, women were not informed or asked to consent prior to providers' performing routine episiotomies (Miller *et al*. 2003).

Quality of care is often reported as particularly deficient for the third component of the experience of care, respect, dignity, and equity. Across settings, it is not uncommon for some health providers' manner to be authoritarian, brusque, and unsympathetic. In studies of ANC in Sub-Saharan Africa and India, nurses scolded women for talking; moving too slowly; were being viewed as "deviant" or dirty; and arriving late in labor (Gage A. and Mill J., 2007). In delivery care, women were reprimanded, "harassed", or insulted for not having an ANC card, for not knowing what to do at various stages of delivery, or for delivering in a squatting position (Andaleeb S.2003). Women viewed midwives as "rude, proud, negligent, and vulgar". Verbal abuse, slaps and beatings to women during labor and delivery have been reported in several studies, including in Kenya (Hodnet E.et al.2006).The fourth component of experience of care in maternal health, emotional support to the laboring woman, is often absent, although research has shown that it has health benefits (Huezo C. and Diaz S. 2003). In studies in Turkey and India, women were not allowed to have the companion of their choice with them during labor and delivery (Moore et al. 2002). Special initiatives in China, Zimbabwe, and South Africa have encouraged companionship during labor to improve maternal and infant health (Hodnett et al. 2006).

The interpersonal aspect of care represents the humane aspect of care and the socio-psychological relationships between the patient and the health care providers. This involves explanations of illness and treatment, the availability of information, courtesy and the warmth received. Internal checks on quality are not evident to patients. Patients cannot judge the technical competence of the hospital and its staff; i.e. patients have no "skill" to evaluate exactly the service's technical reliability, (Moore et al. 2002). This result is also consistent with Lawrence M. et al (2004), that patients often are in no position to assess care process technical

quality and they are sensitive to interpersonal relationships. Hence, a patient makes a judgment of a hospital based on the interpersonal aspect of care that he receives, the manner in which medical care is delivered. Therefore the patient may use nontechnical characteristics (such as the length of time waiting for a procedure or the pain they experience) to evaluate service quality. These aspects of the service are directly experienced, and their evaluation requires no technical expertise.

2.3 Factors associated with women's experience of care

The factors associated with women's experience of care in maternal health in developing countries can be studied at the individual-level and the health-system level. At the health-system level, low quality of care is often the result of structural conditions, such as a shortage or uneven distribution of health providers (Hulton, et al. 2007). Quality of care is also affected by inadequacies in the "enabling environment", such as low salaries, late payments, long hours and heavy workloads, difficult working conditions, poorly equipped facilities, and unclear job descriptions (Koblinsky M. *et al.* 2006).

In addition, poor quality may stem from an underlying lack of accountability among health providers and health systems for sub-standard treatment of patients. In Tanzania, villagers believed that their leaders could not stop the corruption and misuse of drugs in health centers, even though village committees were engaged in monitoring drug use (Gage A. and Mill J. 2007). In Niger, researchers found that poor quality of care resulted from a lack of dialogue and mutual understanding between providers and women regarding pregnancy and birth practices (Laurence M. et al 2004). In the Cape Town obstetrical service, researchers documented verbal abuse from nurses, scolding, rudeness, and lack of respect for women's autonomy. They concluded that these phenomena were due to notions of professional identity that emphasized the social and cultural distance between providers and patients (Handler B. et al 2004). At the health system-level, therefore, many influences affect the work of the health providers and the operations of the health facilities and subsequently, women's experiences of care. At the individual level, quality of delivery care may differ by women's background characteristics. However, few studies have examined this potential link. In a bivariate analysis of data from slums of Mumbai, India, Muslim women delivering in health facilities reported that providers explained to them what was happening less often than Hindu and Buddhist women did, while Hindus and Buddhists reported more often being left alone when it worried them to be alone

(Carroli G., et al. 2008). The authors found that this may have been due to cultural expectations and also actual service delivery. Ethnic differences were also observed in women's satisfaction with the physical environment of Sri Lankan maternity hospitals (Magadi M.et al 2007)

Good quality of care aims at meeting women's needs by providing services that are safe and effective, sensitive to cultural and social norms, for example preference to privacy and confidentiality. Staff should be respectful, non-judgmental and responsive to clients, offer information and treat women as active participants in their own health. Poor quality of care is one of the most common reasons women give for choosing not to use available maternal health services (Abouzahr J., 2005)

A systematic review examining factors associated with woman's satisfaction with the child birth experience suggest that quality of care during labour can make a substantial contribution to its satisfaction. Evaluation of their experience evolve around the amount of support from care givers, quality of relationships with care givers, being involved in decision making, having high expectations or experiences that exceed expectations (Hodnett E.et al, 2006).

2.4 Elements of care associated with experience during labor.

Common elements of care during labor include continuous assessment, comfort measures, information on progress of labor and coping techniques, pain relief in labor, involvement in decision making, birthing environment, nutrition, labor support and provider skills. (Hodnett E., 2006).

2.4.1 Labor support

Historically and cross-culturally, women have been attended to and supported by other women during labour and child birth. However, since the middle of the 20th century, in many countries (high income, middle and low income countries) as the majority of women gave birth in the hospital rather than at home, continuous support during labour has become the exception rather than the routine (Hodnett E., et al. 2006).Concerns about the consequent dehumanization of women's birth experiences have led to calls for a return to continuous one-to-one support during labor. In a study of randomized controlled trials comparing continuous support during labor with the usual care (Koblinsky M., et al, 2006), women who received continuous labour support were less likely to use pain medication and were more likely to have been satisfied and give birth

spontaneously. Supportive care during labor may involve emotional support, information and comfort measures. In several low and middle income countries the Better Births Initiative promotes labor companionship (doula/labor companion) as a core element of care for improving maternal and infant health (WHO, 2007). Hiring a doula can help one avoid an episiotomy, especially if one plans on a hospital birth. Research has found that having a doula cuts requests for epidural by 60% and has a 40% reduction in forceps deliveries; both procedures are major contributors to high episiotomy rates (Silber L., 2007).In a randomized controlled trial of 314 women delivering at a California health maintenance organization evaluated past experience with and without a doula and found out that women under care of a "doula" were more likely to report that they coped well during labour and their experience was good at 47% and 82% respectively(Stuebe and Barbieri, 2005).

2.4.2 Birthing environment

Every effort should be made to ensure that women's birth environment is empowering, non-stressful, afford privacy, communicate respect and not characterized by routine interventions that add risk without clear benefit (Hodnett E. *et al*, 2006). During labor women may be uniquely vulnerable to environmental influences; modern obstetric care frequently subjects women to institutional routines, high rates of interventions, unfamiliar personnel, lack of privacy and other conditions that may be experienced as harsh. These conditions may have an adverse effect on the progress of labour and on the development of feelings of competence and confidence which may in turn impair adjustment to parenthood and establishment of breastfeeding.

2.4.3 Positions in labor and birth

Enhanced feto-pelvic relationship may be accomplished by encouraging mobility and effective use of gravity, supporting women to assume their preferred position and recommending specific positions for specific situations (Hodnett E., 2006). Some of the recommended birthing positions include; squatting, lying on the left side and use of water birth, which reduce tearing .Koblinsky M. et al. (2006) in their study to find out whether upright postures (sitting, birthing stools, chairs, squatting) have advantage over lying down (supine or lithotomy), found out several possible benefits for upright posture with the possibility of increased risk of blood loss greater than 500mls. Women should be encouraged to give birth in the position they find most comfortable.

2.4.4 Episiotomy

Based on their randomized control trial, (Moore M. et al 2002) indicated that a rate above thirty percent could not be justified. They indicated that it should be about 10 percent for primiparas and 5 percent for multiparous. In a randomized controlled trial of restricted versus liberal use of episiotomy during spontaneous vaginal deliveries, Pearson A et al (2000) found no evidence that trauma was more extensive in women without an episiotomy and no significant difference in neonatal outcome between the groups. Stanton C. et al (2007) compared women who had an episiotomy with women with spontaneous tears. They found that women with episiotomies had more pronounced and prolonged side effects and complications than those with spontaneous tears. Moore M. et al (2002) concluded that routine episiotomies should be abandoned.

The suggested maternal beneficial effects of episiotomy are; reduction in the likelihood of third degree tears, reservation of the muscle relaxation of the pelvic floor and perineum, leading to improved sexual function and a reduced risk of fecal and or urinary incontinence, being a straight, clean incision, an episiotomy is easier to repair and heals better than a laceration.

For the neonate, it is suggested that the prolonged second stage of labour could cause fetal asphyxia, cranial trauma, cerebral hemorrhage and mental retardation. During delivery it is also suggested that episiotomy may reduce the possibility of fetal shoulder dystocia.

On the other hand, hypothesized adverse effects of routine use of episiotomy include; extension of episiotomy either by cutting the anal sphincter or rectum or by unavoidable extension of the incision, unsatisfactory anatomic results such as skin tags, asymmetry or excessive narrowing of the introitus, vaginal prolapse, recto-vaginal fistula and fistula- in-ano, increased blood loss and hematoma, pain and oedema in the episiotomy region, infection, dehiscence and sexual dysfunction. There is evidence to support the restrictive use of episiotomy compared with routine use of episiotomy (Carroli G. et al 2008).

2.5 Effect of socio-demographic characteristics

Socio-demographic variables showing positive association with patient satisfaction Include: age education, health status, race, marital status and social class (Hulton L.et al, 2007). Results, however, are inconsistent and sometimes contradictory, other than the finding that older patients consistently tend to report higher levels of satisfaction than do younger ones (Magadi M.et al.,2007). They found significance of patient's demographic variables in moderating their satisfaction. Consistent with previous studies, patient age was found to have been the most

frequent predictor of satisfaction of all the socio-demographic factors considered (Gage A. and Mill J. *et al*., 2007). Older patients tend to be higher in rank, more educated, and married. Individual factors positively associated with patient satisfaction are health status and education. Younger, less educated, lower ranking, married, poorer health and high-service use were associated with lower satisfaction. Abouzhar J., (2005) found that patients in private hospitals were more satisfied than patients in public hospitals. Stanton C. et al (2007) found gender and age significantly predicted patients' quality perceptions, but on only one dimension – facilities. Handler B.et al (2004) found that from socio-demographic characteristic (age, gender, occupation, employment status, education and income) only income influenced patient satisfaction. Huezo C. and Diaz S. (2003), integrative patient evaluation model shows how caring, empathy reliability, responsiveness, access, communication and outcome dimensions predict satisfaction and quality as moderated by the patients' socio-demographic characteristics.

CHAPTER 3: METHODOLOGY

3.1 Study area

The study was carried out in Kenyatta National Hospital which is the largest referral public hospital in Kenya situated in Nairobi. It attends to a majority of middle and low income class. It is one of the two referral hospitals in Kenya. It is also the biggest referral hospital in East and Central Africa. It has a bed capacity of 1,800, has a total of 50 wards, 24 operating theatres. Kenyatta National Hospital also has a 208 bed capacity private wing and 1 renal unit. The maternity unit attends to approximately 900d deliveries in a month of which about 2/3 come in first stage of labor. The unit has 65 qualified midwives/ nurses.

3.2 Research Design

The study was descriptive cross-sectional hospital based survey that was carried out at the Kenyatta National Hospital Post-Natal Wards. The research explored the experiences of women and associated factors in delivery care.

3.3 Study population

The study target population comprised of women who delivered in the institution during the study period, and met the criteria for selection.

3.4 Inclusion criteria

All mothers who came for admission in first stage of labor, and eventually deliver in the hospital were included, after consenting to the study.

3.5 Exclusion Criteria

Mothers who came in second stage of labor or gave birth before arrival to the hospital. Mothers, who underwent caesarian section, delivered through vacuum assisted delivery and who delivered still births were excluded from the study. Women below twenty years and above forty years were excluded. Those who came to deliver for the first time and those who did not consent were not included.

3.6 Sample size determination

A sample of 176 mothers was estimated using the formula as recommended by Cochran (1963). Local prevalence rates of experiences in quality of delivery care are unavailable and thus an estimate of 50% based on anecdotal evidence was used.

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

Where

n = Desired sample size (when population is greater than 10,000)

z = Standard Normal Deviation which is equal to 1.96 corresponding to 95% confidence interval

p = Prevalence of the issue under study, 50% p = 0.5

q= 1-p

d = confidence limit of the prevalence (p) at 95% confidence interval 1-0.95 = 0.05

Degree of accuracy desired for the study is hence set at 0.95.

Substituting the figures above in the formula.

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

n = 384

Since the target population is less than 10,000 the sample size was adjusted using the formula.

nf = n/[1+ (n/N)]

Where;

nf – Desired sample size (when the population is less than 10,000).

n – Sample size (when population is more than 10,000) calculated 384.

N – Average number of mothers who deliver in K.N.H in a month

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

$$= \frac{384}{1 + (384/327)}$$

= 108.65

=109

Thus the approximate sample size was 109 participants.

3.7 Sampling Method

Systematic sampling technique was used to select the participants. The first subject was selected randomly. A random number was obtained between 1 and 10 to determine the first subject to be

recruited. The eligible participants as calculated earlier (sampling frame of 327), the k^{th} number will be, 327/109 =3.Therefore every participant was selected as the third till the desired sample size was reached.

3.9 Data collection tools and methods

Data was collected for a period of one month. The study employed both qualitative and quantitative data collection methods which included use of semi-structured questionnaires, key informant interview and case studies.

3.9.1 Questionnaires

The study utilized semi-structured interviewer administered questionnaires to mothers on discharge in to post-natal wards of the hospital.

3.9.2 Case studies

Three mothers were selected as case studies purposively. This enabled the researcher explore mothers experiences. Information given was recorded and interviewer also took notes.

3.9.3 Key informant interview

This was carried out with one senior nurse and three other nurses with at least two years of experience in the labour ward.

3.10 Data quality control

3.10.1 Training of research assistants

Research assistants were trained on how to administer the questionnaires and utilized in pre-testing the questionnaire and data collection**.**

3.10.2 Pretesting of questionnaires

The study tool was pre-tested on postnatal mothers in Pumwani Maternity Hospital. This was because the Pumwani Maternity Hospital has similar characteristics to KNH like it is also a public hospital, has well trained midwives, nurses and doctors as KNH. This gave feedback to the researcher if all the areas required in the study had been captured well, omissions or need for addition of some items for adequate information gathering on experiences in quality of care during labor.

3.10.3 Reliability and validity

A questionnaire was administered to each respondent and questions read out for participant, and indicated the correct responses on the questionnaire. Each questionnaire was then evaluated for completeness after filling in the responses.

3.11 Data analysis and presentation

For comparison of means where two groups of data are continuous observations, T-test and ANOVA tests or the corresponding non-parametric tests were used to calculate the statistical significance of results obtained. For cases of categorical data, and logistic regressions was used to test on correlation and association between the variables. Statistical significance was set at $p<0.05$ so that the results had universally accepted levels of accuracy. Data was presented using frequency and percentage distribution tables, graphs (bar and line) and pie charts.

3.12 Ethical considerations

Ethical clearance was acquired from the University of Nairobi and Kenyatta National Hospital Ethics Committee to conduct the study. Participation of the subjects was voluntary and written informed consent was obtained from all participants. The researcher and the research assistants by systematic random sampling identified respondents, explained the purpose of the study to the respondents and requested their participation. A signed consent form was required after explanation of the purpose of the study and voluntary acceptance to participate on the part of the respondent. Confidentiality and anonymity of patient information was strictly upheld.

Confidentiality was assured by not recording any subject identities in study documents or reports.

3.13 Limitations

Labor is usually an overwhelming situation and mothers therefore may not have been very accurate in their assessment of what was done by the health care givers.

The nurses may have changed the practice the moment they found out that a study was being conducted and this might have interfered with the actual findings.

3.14 Dissemination of findings

Presentation of research study was made to fellow colleagues and peers in the university. This will also be done to a panel of members of the faculty at the University. Such presentation will

also be done to the institution's management and during medical education sessions. A copy of the report of recommendations from the study will be submitted to the head of the institution. The work will also be published in journal and presented in conferences.

CHAPTER FOUR

RESULTS

4.0 Introduction

This chapter presents the findings of the analysis based on study objectives. A total of 109 postnatal mothers who had delivered at KNH were recruited in the study. The analyses of demographic and socio-cultural characteristics are presented in Table 1 and Table 2.

4.1 Demographic characteristics

4.1.1 Age

The average age of the participants was 26 years (SD 4.5), range 20 to 40 years. Most (45.9%) mothers were aged between 20 and 24 years while 4.6% (n = 5) mothers were aged 35 years and above (Table 1).

4.1.2 Parity

Parity among the participants ranged from 2 to 7. Most participants were either Para 2 or Para 3. Table 1 shows that 37.6% of the participants had a parity of three and 33.9% were Para 2.

4.1.3 Marital status

As shown in Table 1, 78 (71.6%) participants were married and a further 9.2% of participants were in a relationship and cohabiting with a partner. The remaining participants were single or divorced/ widowed.

4.1.4 Formal education

Nearly half of the mothers (48.6%) had attained primary education while over a third (37.6%) attained secondary education. None of the participants reported not having attended any formal education.

Table 1: Demographic characteristics of postnatal mothers at KNH

	Frequency (n)	Percent (%)
Age in years		
20-24 years	50	45.9
25-29 years	35	32.1
30-34 years	19	17.4
35-40 years	5	4.6
Marital status		
Married	78	71.6
Single	15	13.8
Cohabiting	10	9.2
Divorced/ widowed	6	5.5
Level of formal education		
Primary	53	48.6
Secondary	41	37.6
College/University	15	13.8
Parity		
Para 2	37	33.9
Para 3	41	37.6
Para 4	17	15.6
Para 5 and above	14	12.8
Total	**109**	**100**

4.2 Socio-Economic characteristics

4.2.1 Occupation

As shown in Figure 3, 45% of participants reported that they were self employed, and engaged in small-scale businesses or farming. House wives constituted 26.6% of the participants.

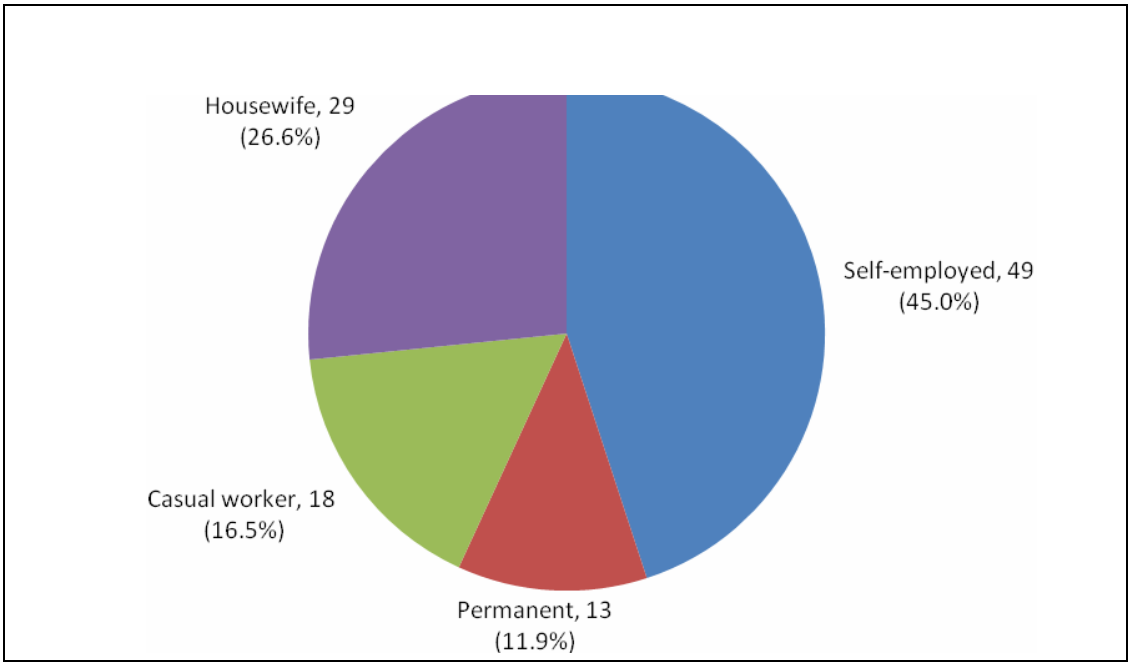

Figure 3: Occupation of postnatal mothers at KNH

4.2.2 Income

The range of income reported was between KSh 2,000 and KSh 27,000 per month. The median income (inter quartile range) KSh 7,000 (KSh 5,250 to 9,750). Table 2 presents the percentage distribution of income. Most participants earned between KSh 5,000 and 9,999 per month. Most of the housewives (25 out of 29) did not report any income.

Table 2: Percent distribution of monthly income among postnatal mothers at KNH

	Frequency (n)	Percent (%)
Income category		
Ksh 2000-4999	19	22.6
Ksh 5000-9999	44	52.4
Ksh 10000-14999	16	19.1
Ksh 15000-27000	5	6.0
Total	**84**	**100**

4.2.3 Ethnicity

Most (n = 49, 45%) participants were Kikuyus, followed by Luos, Kambas and Luhyas participants who accounted for 12.8%, 10.1% and 9.2% of all participants, respectively (Figure 2).

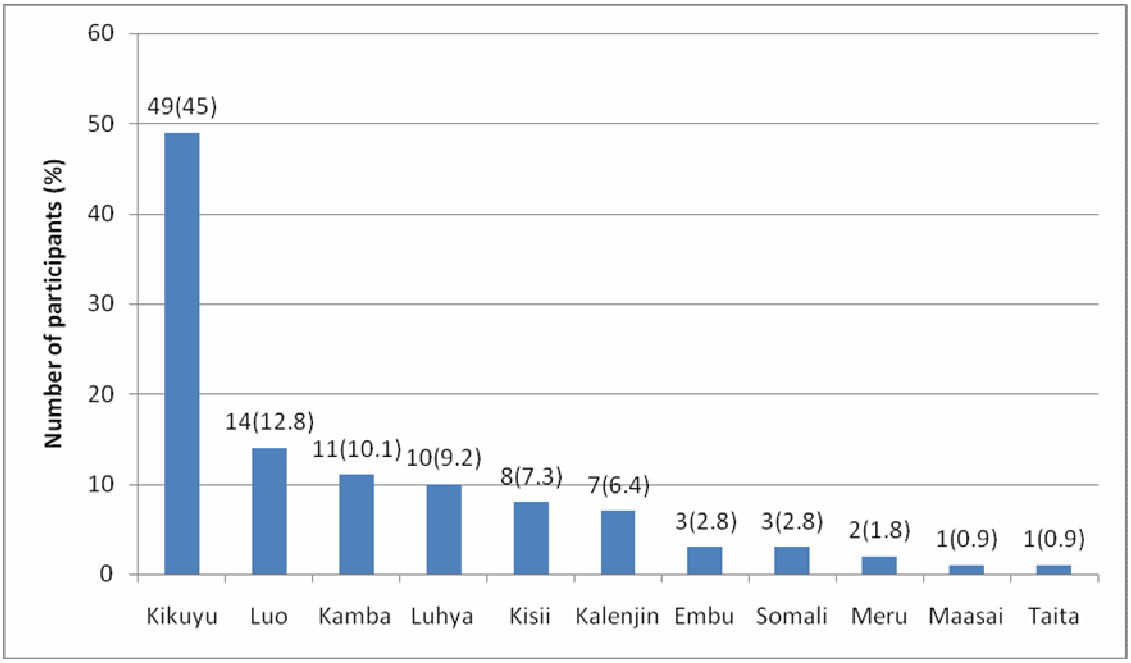

Figure 4: Ethnicity of postnatal mothers at KNH

4.3 Antenatal care and delivery

Of the 109 participants, 73(67%) had attended antenatal care and 107 (98.2%) reported that they preferred to have normal delivery (Table 4). Most (95.4%) of the deliveries were uncomplicated and five (4.6%) participants had complicated births. Of the five participants with complicated births three stayed in hospital for over 72 hours postpartum, while the remaining two were in hospital for less than 48 hours.

In most of the participants (52.3%) labour lasted for durations of between 2 and 6 hours but there were seven (6.4%) participants reporting prolonged labor (over 12 hours), Table 3. Forty-two (38.5%) participants had delivered in KNH previously.

Table 3: ANC attendance and delivery reported by postnatal mothers at KNH

	Number	%
ANC booking		
Yes	73	67.0
No	36	33.0
Birth preference		
Normal delivery	107	98.2
Caesarian	2	1.8
Type of birth		
Uncomplicated	104	95.4
Complicated	5	4.6
Duration of labor		
2-6 hours	57	52.3
7-11 hours	45	41.3
12-16 hours	7	6.4
Previous deliveries at KNH	42	38.5

4.4 Delivery care experience

Views and experiences of recently delivered women were elicited using a five-point Likert scale questionnaire focusing on four dimensions of participants' intrapartum experience. The analysis of each dimension is summarized below:

4.4.1 Respect, dignity and equity

In general, participants rated experiences of quality of care based on perceived respect, dignity and equity by health workers highly. As shown in table 4, most participants either strongly agreed or agreed that they were treated respectfully, accorded privacy and asked to consent to procedures, prior to the initiation of these procedures.

Table 4: Participants experience on quality of delivery care related to respect, dignity and equity

	Response				
	Strongly agree	Agree	Disagree	Strongly disagree	Don't know
The health providers were **respectful** of you.	16(14.7)	88(80.7)	4(3.7)	0(0)	1(0.9)
The health providers **scolded or shouted** at you.	0(0)	1(0.9)	85(78.0)	22(20.2)	1(0.9)
You were given adequate **privacy** during the examinations by the nurse or doctor.	11(10.1)	73(67.0)	21(19.3)	1(0.9)	3(2.8)
The health providers **asked for your agreement** before doing clinical procedures.	12(11.0)	87(79.8)	8(7.3)	0(0)	2(1.8)

4.4.2 Emotional support

Most patients felt that health workers accorded them adequate emotional support. Table 5 shows that approximately three-quarters of patients disagreed that provider left them alone for most periods, 80.7% agreed and 8.3% strongly agreed that health workers offered compassionate care and similar proportions of participants felt health workers were genuinely interested in patient well-being.

Table 5: Participants experience on quality of delivery care related to emotional support

	Response				
	Strongly agree	Agree	Disagree	Strongly disagree	Don't know
The health providers **left you alone** for long periods of time.	1(0.9)	12(11.0)	81(74.3)	14(12.8)	1(0.9)
Overall, the health providers offered **compassionate** care.	9(8.3)	88(80.7)	11(10.1)	0(0)	1(0.9)
The health providers showed a **genuine interest** in your well-being.	10(9.2)	87(79.8)	10(9.2)	0(0)	1(0.9)

4.4.3 Effective communication

Health worker and client communication appeared to be effective with approximately 91% of participants agreed that health providers explained what to expect during labor, listened to participants concerns and clearly explained to clients their condition.

Table 6: Participants experience on quality of delivery care related to effective communication

	Response				
	Strongly agree	Agree	Disagree	Strongly disagree	Don't know
The health providers explained what **to expect during labor** and delivery.	16(14.7)	84(77.1)	9(8.3)	0(0)	0(0)
The health providers **listened** to your questions or concerns.	17(15.6)	85(78.0)	7(6.4)	0(0)	0(0)
The health providers **explained your health status** with terms that were understandable.	14(12.8)	83(76.1)	10(9.2)	0(0)	2(1.8)

4.4.4 Adequate space and equipments

Figure 5 presents participants response on the adequacy of space and resources for providing intrapartum maternity care. Most participants (79%) reported that waiting rooms, examination rooms and delivery rooms were adequate while (17%) participants disagreed with this statement.

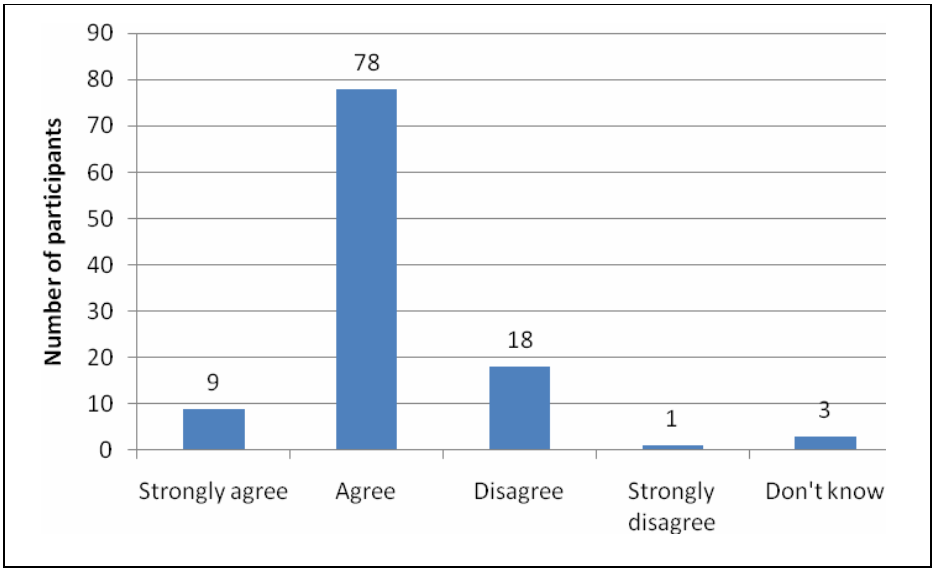

Figure 5: Participant rating of adequacy of space in delivery room and examination room

4.5 Factors associated with quality of delivery care

4.5.1 Socio-economic and demographic factors

4.5.1.1 Participant age and experience of quality of care

Based on ANOVA results a similar experience of quality of delivery care was shared by participants across the four age groups (Table 7). Except for the perception that health providers commonly scold or shout at patients (mean = 3.5-3.8) there was a strong feeling of respect, care and dignity by participants in all ages with mean scores between 3.9 and 4.2. A single aspect of communication, namely health provider explanation of health status with understandable terms was poorly rated (mean 1.8 to 2.2) as was the level of genuine interest in patient well-being (mean = 1.7 to 2.0).

Table 7: Average rating for quality of care experience during delivery at KNH according to participants' age

	Age in years				P value
	20-24 y	25-29 y	30-34 y	35-40 y	
Respect, care and dignity					
The health providers were respectful of you.	4.1(0.6)	4.0(0.6)	4.2(0.4)	4.2(0.4)	0.688
The health providers scolded or shouted at you.	**3.7(1.0)**	**3.5(0.9)**	**3.8(0.9)**	**3.8(1.1)**	**0.754**
You were given adequate privacy during the examinations by the nurse or doctor.	4.0(0.7)	3.9(0.5)	3.9(0.6)	3.8(1.1)	0.980
The health providers asked for your agreement before doing clinical procedures.	4.0(0.8)	3.9(0.7)	4.2(0.4)	3.8(1.1)	0.885
Effective communication					
The health providers explained what to expect during labor and delivery.	4.0(0.7)	4.0(0.6)	4.2(0.4)	3.8(1.1)	0.931
The health providers listened to your questions or concerns.	4.0(0.7)	3.9(0.8)	4.0(0.6)	3.8(1.1)	0.950
The health providers explained your health status with terms that were understandable.	**2.2(0.9)**	**2.1(0.8)**	**1.8(0.4)**	**2.2(1.1)**	**0.753**
Emotional support					
The health providers left you alone for long periods of time.	3.8(0.8)	3.8(0.6)	4.1(0.3)	3.8(1.1)	0.773
Overall, the health providers offered compassionate care.	3.9(0.7)	3.8(0.7)	4.1(0.3)	3.8(1.1)	0.787
The health providers showed a genuine interest in your well-being.	**1.8(0.5)**	**1.8(0.5)**	**1.7(0.5)**	**2.0(0.0)**	**0.821**

4.5.1.2 Parity and experience of quality of care

The participant's parity (table 8) did not have a significant association with the rating of experience of quality of care during delivery (Table 8). Participants of different parities similarly rated aspects of respect (mean 4.0 to 4.2), privacy (3.8 to 4.2) and consenting to procedures (3.9 to 4.3) strongly. For communication and emotional support patients were concerned about the inability of providers to communicate in understandable terms (1.8 to 2.3) and lack of genuine interest in patient well being (1.7 to 1.9), respectively.

Table 8: Average rating for quality of care experience during delivery at KNH according to parity

	Parity				
	Para 2	Para 3	Para 4	≥ Para 5	P value
Respect, care and dignity					
The health providers were respectful of you.	4.1(0.5)	4.0(0.6)	4.2(0.7)	4.1(0.3)	0.969
The health providers scolded or shouted at you.	3.7(0.8)	3.6(1.1)	3.9(1.0)	3.6(0.9)	0.898
You were given adequate privacy during the examinations by the nurse or doctor.	3.8(0.7)	4.0(0.7)	4.2(0.4)	3.9(0.7)	0.455
The health providers asked for your agreement before doing clinical procedures.	4.0(0.6)	3.9(0.9)	4.3(0.5)	3.9(0.6)	0.876
Effective communication					
The health providers explained what to expect during labor and delivery.	4.0(0.6)	4.0(0.8)	4.3(0.5)	3.9(0.6)	0.892
The health providers listened to your questions or concerns.	3.8(0.7)	3.9(0.8)	4.3(0.5)	3.9(0.6)	0.249
The health providers explained your health status with terms that were understandable.	**2.2(0.8)**	**2.1(1.0)**	**1.8(0.4)**	**2.3(0.7)**	0.823
Emotional support					
The health providers left you alone for long periods of time.	3.7(0.7)	3.9(0.8)	4.2(0.4)	3.9(0.5)	0.475
Overall, the health providers offered compassionate care.	3.8(0.7)	3.9(0.8)	4.2(0.4)	3.9(0.5)	0.501
The health providers showed a genuine interest in your well-being.	**1.9(0.5)**	**1.8(0.5)**	**1.7(0.5)**	**1.9(0.4)**	0.751

4.5.1.3 Education and experience of quality of care

Table 9 shows that there was no significant patients' education did not have significant influence on the quality of care experience during delivery. Irrespective of the level of formal education participants rated provider performance low with regards to explaining health status in understandable terms (mean 1.9 to 2.3) and level of interest in the patient well-being (1.7 to 2.9).

Table 9: Average rating for quality of care experience during delivery at KNH according to participants' level of formal education

	Level of education			
	Primary	Secondary	Tertiary	P value
Respect, care and dignity				

The health providers were respectful of you.	4.1(0.5)	4.0(0.7)	4.1(0.4)	0.744
The health providers scolded or shouted at you.	3.6(0.9)	3.7(1.0)	3.9(0.6)	0.642
You were given adequate privacy during the examinations by the nurse or doctor.	3.8(0.7)	4.1(0.6)	4.1(0.3)	0.196
The health providers asked for your agreement before doing clinical procedures.	3.9(0.7)	4.0(0.8)	4.2(0.4)	0.455
Effective communication				
The health providers explained what to expect during labor and delivery.	3.9(0.7)	4.1(0.6)	4.2(0.4)	0.243
The health providers listened to your questions or concerns.	3.8(0.8)	4.0(0.7)	4.2(0.4)	0.200
The health providers explained your health status with terms that were understandable.	**2.3(0.8)**	**2.0(0.9)**	**1.9(0.4)**	**0.169**
Emotional support				
The health providers left you alone for long periods of time.	3.8(0.8)	4.0(0.7)	4.1(0.3)	0.287
Overall, the health providers offered compassionate care.	3.8(0.8)	4.0(0.7)	4.1(0.3)	0.318
The health providers showed a genuine interest in your well-being.	**1.9(0.4)**	**1.8(0.5)**	**1.7(0.5)**	**0.327**

4.5.2 Prior delivery care experience

Prior delivery at KNH was significantly associated with several aspects of quality of delivery care including perception of respect, care and dignity and also effective communication (Table 10). Participants who had previously delivered at KNH reported consistently higher quality compared to those who had not previously delivered at the facility. The participants attending KNH for second delivery were more likely to view providers as respectful ($p = 0.043$), effective in explaining labour and delivery ($p = 0.019$) and seeking patient consent before procedures ($p = 0.008$).

Table 10: Average rating for quality of care experience during delivery at KNH according to participants' previous delivery

	Pervious delivery at KNH		
	Yes	No	P value
Respect, care and dignity			
The health providers were respectful of you.	4.2(0.7)	4.0(0.4)	**0.043**
The health providers scolded or shouted at you.	3.6(1.0)	3.7(0.9)	0.188
You were given adequate privacy during the examinations by the nurse or doctor.	4.0(0.7)	3.9(0.6)	0.596
The health providers asked for your agreement before doing clinical procedures.	4.1(0.8)	3.9(0.7)	**0.008**
Effective communication			
The health providers explained what to expect during labor and delivery.	4.2(0.7)	3.9(0.6)	**0.019**
The health providers listened to your questions or concerns.	4.0(0.8)	3.9(0.7)	0.175
The health providers explained your health status with terms that were understandable.	2.0(0.7)	2.2(0.9)	0.720
Emotional support			
The health providers left you alone for long periods of time.	4.0(0.7)	3.8(0.7)	0.380
Overall, the health providers offered compassionate care.	4.0(0.7)	3.8(0.7)	0.448
The health providers showed a genuine interest in your well-being.	1.7(0.5)	1.9(0.4)	**0.052**

4.6 Client satisfaction level of quality of delivery care in KNH

One hundred and two participants (93.6%) said they would recommend delivery services at KNH to friends or family (Figure 4). A similar proportion was likely to deliver in KNH again.

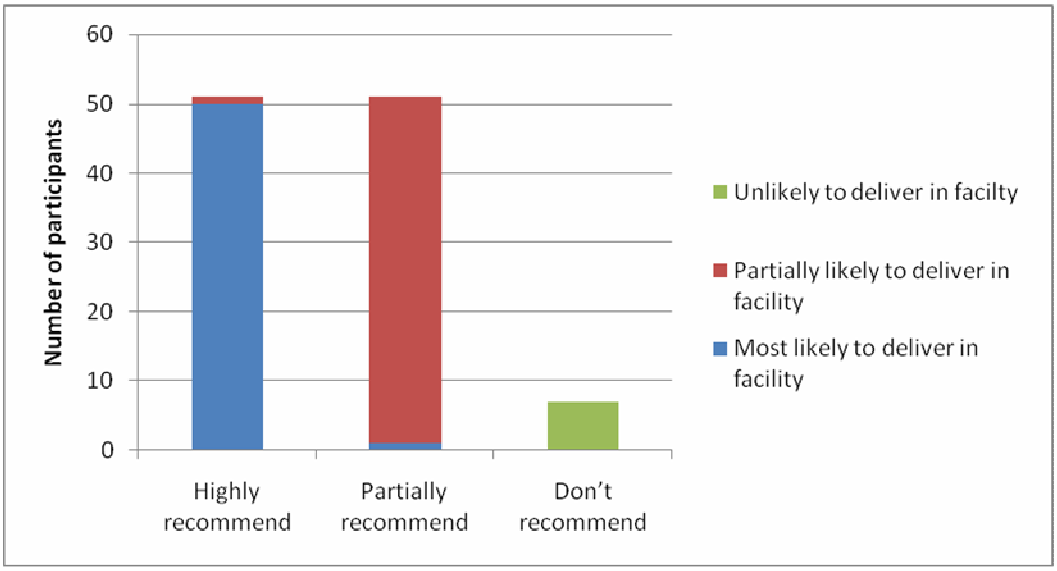

Figure 1: Participant recommendation of delivery services at KNH and future intention to deliver at KNH

CHAPTER FIVE

DISCUSSION

5.0 Introduction

Standards for maternal health care in Kenya indicate that a woman has a right to dignity, privacy, and information, and every woman should have access to satisfying care at delivery (National Joint Steering Committee for Maternal Health Kenya 2002). The criteria towards realizing these rights include that provider seek women's opinions; allow women to ask questions; explain procedures and diagnoses, and offer information in an open-and friendly manner. This study of women's experiences in Kenyatta National hospital reveals some deficiencies in the quality of delivery care, although there are many positive aspects, as well.

The qualitative data reveal that some women had a positive experience with aspects of delivery care, such as continuity of care, patient provider interactions, and the environment, while other women experienced sub-standard care.

5.1 Characteristics of the respondents

The average age of the participants was 26 years (SD 4.5); this differs slightly with average age of mothers giving birth in Kenya as indicated by Carroli G, et al (2008) though on a different kind of study. The findings are however close to that of Bradley A et al, (2002) which was 25.1 in America.

Close to thirty eight percent (37.6%) of the participants had a parity of three, which indicates a figure below the approximate number of births per woman of 4.7 according to the World Bank (2011).Majority of the participants (71.6%) participants were married and (86.2%) of them had attained formal education.

Forty five percent (45%) of participants reported that they were self employed, and engaged in small-scale businesses or farming. House wives constituted 26.6% of the participants. The median income (inter quartile range) KSh 7,000 (KSh 5,250 to 9,750).

Of the 109 participants, 73(67%) had attended antenatal care and 107 (98.2%) reported that they preferred to have normal delivery. Most (95.4%) of the deliveries were uncomplicated and five (4.6%) participants had complicated births. Of the five participants with complicated births three stayed in hospital for over 72 hours postpartum, while the remaining two were in hospital for less than 48 hours.

Labor most commonly (52.3%) lasted for durations of between 2 and 6 hours but there were seven (6.4%) participants reporting prolonged labor (over 12 hours). Forty-two (38.5%) participants had delivered in KNH previously.

5.2 Delivery care experience

Views and experiences of recently delivered women were elicited using a five-point Likert scale questionnaire focusing on four dimensions of participants' intrapartum experience. The analysis of each dimension is summarized.

5.2.1 Respect, dignity and equity

In general, participants rated experiences of quality of care based on perceived respect, dignity and equity by health workers highly. Most participants (76%) agreed that they were treated respectfully, accorded privacy and asked to consent to procedures, prior to the initiation of these procedures. This differs with research carried out in the Dominican Republic, where women were not informed or asked to consent prior to providers' performing routine procedures (Miller et al. 2007). Also in studies of Sub-Saharan Africa and India, nurses scolded women for talking; moving too slowly; being viewed as "deviant" or dirty; and arriving late in labor. In delivery care, women were harassed, or insulted for not knowing what to do at various stages of delivery, (Mills and Bertrand, 2005). Verbal abuse, slaps and beatings to women during labor and delivery have been also been reported in studies, in Kenya (Behague, Victora and Barros 2006). In Sub-Saharan Africa, poor experience of quality in delivery care and the fear of being ridiculed have deterred women from delivering in government health facilities, as cited by Pearson A. et al, (2000).

5.2.2 Emotional support

Most patients felt that health workers accorded them adequate emotional support. Eighty seven percent of patients disagreed that the providers left them alone for most periods, 89% agreed that health workers offered compassionate care and similar proportion of participants felt health workers were genuinely interested in patient well-being. This however differs with Hodnett, (2000); Hodnett et al. (2007), who cited that emotional support to the laboring woman, is often absent, although research has shown that it has health benefits. Also, Miller et al. (2006) reported that women were delivering unattended or being left alone for long periods of time. One key informant confirmed this by saying *"Sometimes due to shortage of staff and the overwhelming numbers of client especially now that maternity care is free, we are not able to monitor mothers in labour and some deliver alone on their labour beds."One mother during an in-depth interview*

also said," The nurses were too busy and only came to my room once even when I continually called for help. The next time she came to my room the baby was already out."

5.2.3 Effective communication

Health worker and client communication appeared to be effective with 89.7% of participants agreeing that health providers explained what to expect during labor, listened to participants concerns and clearly explained to clients their condition. This however differs with studies done in Mexico and Uganda, which indicated that laboring women did not understand the medical terminology used by providers, did not have the opportunity to ask questions, or wanted more information about their condition (Weeks et al. 2005).

5.2.4 Adequacy of space

Most participants (81%) reported that waiting rooms, examination rooms and delivery rooms were adequate while 18 (16.5%) participants disagreed with this statement, which concurs with (Center for Reproductive Law and Policy, Latin American and Caribbean Committee for the Defense of Women's Rights (1999), which indicated that human and physical resources are often inadequate, resulting in neglect or lack of attention to women in Sub-Saharan Africa and Latin America. During an in-depth interview a participant revealed inadequacy of space," *I was made to stay on the corridor for one hour during labor as all labor rooms were occupied. Also after delivery I shared a bed with someone else together with our babies; things were really bad for me.*

5.3 Factors associated with quality of delivery care

5.3.1. Participant age and experience of quality of care

Similar experience of quality of delivery care was shared by participants across the four age groups. There is a strong feeling of respect, care and dignity by participants in all ages. This finding was different from work done by (Magadi, Agwanda and Obare (2007), who found that age was a significant predictor of experience in labor.

A single aspect of communication, namely health provider explanation of health status with understandable terms was poorly rated (mean 1.8 to 2.2) as was the level of genuine interest in patient well-being (mean = 1.7 to 2.0) which was significant in the study.

5.3.2 Parity and experience of quality of care

The participant's parity did not have a significant association with the experience of quality of care during delivery. Participants of different parities similarly rated aspects of respect (mean 4.0 to 4.2), privacy (3.8 to 4.2) and consenting to procedures (3.9 to 4.3) highly. This was contradicted through an in-depth interview with one participant who said, *"they simply did not like me because a have delivered many times (six children) they kept telling me not to shout like a mother giving birth the first time because I have the experience."*

For communication and emotional support patients were concerned about the inability of providers to communicate in understandable terms (1.8 to 2.3) and lack of genuine interest in patient well being (1.7 to 1.9), respectively. One key informant agreed with this saying, *"When it is very busy you don't want mothers to ask many questions especially from those who have delivered several times as you may lack time to answer them, this sometimes may not go down very well with clients."*

5.3.3 Education and experience of quality of care

Patient education did not significantly influence the care experience during delivery. Irrespective of the level of formal education participants rated provider performance low with regards to explaining health status in understandable terms (mean 1.9 to 2.3) and level of interest in the patient well-being (1.7 to 2.9).

5.3.4 Prior delivery in KNH and experience of care

Prior delivery at KNH was significantly associated with several aspects of quality of delivery care including perception respect care and dignity and also effective communication. The participants attending KNH for second delivery were more likely to view providers as respectful ($p = 0.043$), effective in explaining labour and delivery ($p = 0.019$) and seeking patient consent before procedures ($p = 0.008$). This is also confirmed by Koblinsky et al (2006) who found out in their study that women may seek or fail to seek delivery services at a health facility due to their prior experience of quality in delivery care, or their perceptions of the experience.

5.4 Client satisfaction level of quality of delivery care in KNH

Most participant would either highly (n = 51, 46.8%) or partially (n = 51, 46.8%) recommend delivery services at KNH to friends or family. Of the 51 participant's highly recommending KNH 98% were highly likely to deliver in KNH again, while a similar percentage of participants

partially recommending KNH were partially likely to deliver at the facility again. Higher satisfaction with maternal health care may be related to women's future use of maternal health care, as well as women's sharing of information about their experience with other community members (Handler E. et al 2006). In a qualitative study in Ghana, women indicated they would return to deliver in a facility (a measure of satisfaction) where they had previously been treated well, (Bradley A. et al 2000)

However 7.4% of the participants were unlikely to deliver in the same institution again or recommend anyone therefore denoting dissatisfaction with care. Ronsmans, (2007) also cited that health services often fall short of acceptable standards according to clients and cannot be assumed to be satisfying.

CONCLUSION

1. From the study, it was clear that majority of the participants had a positive experience of quality in delivery care. This was evidenced by the fact that majority of then stated that they would come to deliver in the same institution again or recommend a relative or friend.
2. Aspects of care such as health providers communicating to clients in understandable terms and showing genuine interest in patients well being was rated poorly.
3. Institutional factors such as inadequate space and shortage of staff were also noted to be significantly contributing to negative experience of delivery care in the study.

RECOMMENDATIONS

- The study recommends the maintenance of good delivery care practices that contributes to positive experience by mothers who deliver in the institution.
- The management also needs to plan on increasing the number of beds in labour rooms and also delivery rooms as well provision of privacy in these rooms to enhance positive experience.
- There is need for health providers to improve on communication so that client can understand the information given to them during labour.

REFERENCES

1. Abouzahr J. (2005). Systematic review. *American Journal of Obstetrics and Gynecology*, **186** (5), pp. 160- 172.
2. Andaleeb S. (2001). Service quality perceptions and patient satisfaction: a study of hospitals in a developing country. *Social Science & Medicine,* **52,** pp. 1359–1370.
3. Bradley A.,Baltussen R., Ye Y., Haddad, S. and Sauerborn R.,(2002). "Perceived quality of care of primary health care services in Burkina Faso", *Health Policy and Planning,* vol. 17, no.1, pp. 42-48
4. Carroli G., Mwangi J. and Belizan J. (2008). Episiotomy during vaginal birth (Cochrane Review). In: *The Cochrane Library, Issue 1*. Chichester, UK: John Wiley & Sons Ltd; pp. 992-997.
5. Gage A. and Mill J. (2007). Barriers to the utilization of maternal health care in rural Mali, *Social Science and Medicine,* **65:** pp 1666-1682.
6. Gill K., Pande R., and Malhotra A. (2007). Women deliver for Development, *The Lancet,* **370** (2), pp. 9595-9598.
7. Handler B.,Harvey, S., Ayabaca, P., Bucagu, M., Djibrina, S., Edson W., Gbangbade, S., McCaw-Binns, A. and Burkhalter, B.R. (2004). Skilled birth attendant competence:,*International Journal of Gynaecology and Obstetrics,* vol. **87**, no. 2, pp. 203-210.
8. Hodnett E., Gates S., Hofmeyr G., and Sakala S. (2006). Continuous support for women during childbirth. In: The Cochrane Library, Issue 1, Oxford: Updates Software *http://www.figo.org/docs/AMDD-Dominican Republic:*. Retrieved on13/12/2012
9. Huezo C. and Diaz S. (2003). Family planning care: Clients' perspective, *Advances in Contraception,* vol. 19, no. 4, pp. 90-94.
10. Hulton L., Matthews Z., and Stones R. (2007). Applying a framework for assessing the quality of maternal health services in urban India, *Social Science and Medicine,* **64,** (10), pp. 2083-2095.
11. Kenya Health and Demographic Survey 2007-8.
12. Koblinsky, M., van Lerberghe, W., Hussein, J., Mavalankar, D., Mridha, M.K., Anwar, I., Achadi, E., Adjei, S., Padmanabhan, P., De Brouwere, V. (2006)."Going to scale with professional skilled care", *Lancet,* vol. 368, no. 9544, pp.1377-1386.
13. Lavender T., O'Brien P., and Hart A. (2005). Effect of partogram use on outcomes for women in spontaneous labor at term. *The Cochrane Database of Systematic Reviews,* Issue 3, pp.1131-1134.
14. Lawrence M., Ershof D., Mendez C., and Petitti D. (2004). Satisfaction with pregnancy and newborn care: development and results of a survey in a health maintenance organization *British J. Obstetrics and Gynaecol*ogy, **90**(12): 1176-1179.
15. Magadi M., Agwanda O., and Obare F. (2007). A comparative analysis of the use of maternal health services between teenager and older mothers in sub-Saharan Africa

evidence from Demographic and Health Surveys (DHS), *Social Science and Medicine,* vol**. 64**: (6) pp. 1311-1325.

16. Moore M., Copeland R., Chege I., Pido D.and Griffiths, M.. (2002). A Behavior Change Approach to Investigating Factors Influencing Women's Use of Skilled Care in Homa Bay District, Kenya, *the CHANGE Project,* Washington D.C. pp. 105-108.

17. Pearson A, Vaughan B, and Fitzgerald M. (2000). *Nursing models for practice in maternal health*. (3rd edition) Philadelphia: Elsevier. pp. 208-215.

18. Ronsmans, C. 2003, "How can we monitor progress towards improved maternal health?" *Studies in Health Services Organization and Policy*, vol. 17, pp. 313-338.273

19. Stanton C, Blanc A, Croft T, and Choi Y. (2007). Skilled care at birth in the developing world: progress to date and strategies for expanding coverage, *Journal of Biosocial Science*, 39, (1)**,** pp.109-112.
20. UNFPA, (2007). *State of the World Population 2007: Unleashing the Potential for Urban*
    a. *Growth*, UNFPA, Geneva, Switzerland.
21. United Nations, (2007). *Millennium Development Goals Report*, United Nations, New York, NY, USA
22. Vouri P., Ramakrishna, J., Mahendra, S., Kilaru, A. and Ganapathy, S. (2000), "Birth rights and rituals in rural south India: care seeking in the intrapartum period", *Journal of Biosocial Science,* vol. **37**(2) pp. 185-231
23. World Health Organization and Ministry of Health 2007, *Service Availability Mapping (Kenya),* WHO, Geneva, Switzerland.
24. Zaers S, Waschke M, and Ehlert U, (2009). Symptoms of post-traumatic stress disorder in women after childbirth. *Journal of psychosomatic obstetrics and gynaecology*, **29**(1) pp.61-71

APPENDIXES

APPENDIX 1: INFORMED CONSENT IN ENGLISH

TITLE: EXPERIENCES ANDASSOCIATED FACTORS ON QUAITY OF DELIVERY CARE GIVEN IN KENYATTA NATIONAL HOSPITAL

RESEARCHER: JANE KABO

Sponsor: Self

The purpose

You are invited to participate in this study because you are one of the mothers who have delivered at Kenyatta National hospital.

The main objective of the study is to determine experiences and associated factors regarding quality in delivery care among women who deliver in Kenyatta National Hospital. The specific objectives include determining if social-economic and demographic factors are associated with the mothers' experiences, to assess quality of service in delivery care to mothers in KNH and determining the satisfaction level of quality of delivery care in KNH.

Procedure:

During the data collection, the questionnaire will either be self administered or you will be assisted by the researcher to fill in.

Risks:

There will be minimum risk to you for participating in this study however there is a possibility that some questions may make you uncomfortable. If so, know that you do not have to answer them if you don't want to.

Benefits:

There may be no direct benefits or compensation to you as an individual but the information generated will used by the administrators and other stakeholders to come up with strategies of improving or maintaining quality of delivery care.

Voluntary Participation and Withdrawal:

Your participation is entirely voluntary and should you change your mind you are free to opt out at any time. You may skip questions or stop participating at any time without any penalty.

Confidentiality:

I will not indentify you and no information that will make it possible for anyone to identify you will be required in this study. All information will be kept under key and lock and the electronic information will be under a password.

Contact persons:

I will give you my contact- *Jane Kabo 0722591518* as well as the contact of *The Ethics and Research Secretariat*, Tel:726300-9 Email:Uonknh-erc@uonbi.ac.ke

If you should have any questions or concerns about this study feel free to contact us directly.

Confirmation of Consent:

Are you willing to participate in this study?

Yes…… No…… If yes please sign…….

Principal investigator……..Time……Date……

KIAMBATISHO 2: FOMU YA MAELEZO KUHUSU IDHINI

Kwa Mhusika,

Jina langu ni *JANE W. KABO*. Mimi ni mwanafunzi katika Chuo Kikuu cha Nairobi ambapo ninanuia kuhitimu na shahada ya juu ya uuguzi. Nafanya utafiti kuhusu taswira na mambo yanayohusiana na ubora wa huduma ya uzalishaji katika hospitali kuu ya Kenyatta. Utafiti huu umeidhinishwa na kupitishwa na Kamatii ya Maadili ya Utafiti ya hospitali ya Kenyatta na chuo kikuu cha Nairobi.

Ili kupata habari kuhusu swala ninalo tafitia, nimeunda dodoso ama fomu ya maswali. Ombi langu kwa unyenyekevu ni kuwa utashiriki kwa kujibu maswali yaliyoko katika fomu hii. kushiriki kwako kutakuwa kwa hiari na hakuna adhabu kwa kudinda kushiriki. Hakuna hatari ya kushiriki katika utafiti huu. Majibu katika fomu hii yatashughulikiwa kwa siri kama inavyoruhusiwa kisheria. Haitaji kuandika jina lako au kitambulisho cha aina yoyote katika fomu hii. Pia, unaruhusa ya kujitoa katika utafiti huu katika hatua yoyote bila hofu ya uonevu. Ikiwa utapenda kujua matokeo ya utafiti huu unahaki ya kuyapata. Unaweza kuuliza maswali yoyote kuhusiana na haki yako kama mshiriki au kitu kingine chochote kuhusu utafiti huu ambacho unahisi si wazi. Shukran kwa kukubali kushiriki.

Ikiwa unamaswali, maoni au mapendekezo yoyote au ufafanuzi jisikie huru kuwasiliana na mpelelezi mkuu kwa nambari ya simu 0722591518 au wasiliana na Katibu wa KNH/UON- ERC kwa nambari ya simu 2726300/ 44,102.

Asante.

Jane Kabo (mtafiti).

Ridhaa ya kushiki utafiti

Nimesoma na kuelewa maelezo yote katika fomu hii kuhusu utafiti unaofanywa na ninakubali kwa hiari yangu kushiriki.

Sahihi ya mhusika _____ Tarehe_____

Mtafiti mkuu/mtafiti msaidizi_____ Tarehe_____

APPENDIX 3: QUESTIONNAIRE

Section1: Introduction

This questionnaire is to identify the perception of care among mothers who delivered at Kenyatta National Hospital. All the information you give in this questionnaire is **private and confidential**. Do not indicate your name or any form of identification. Kindly note that your contribution is important and will be used to serve you and others better.

PLACE OF INTERVIEW: ----------

NAME OF INTERVIEWER: _____

SECTIONONE

A. SOCIAL DEMOGRAPHIC CHARACTERISTICS

1. Age: …….
2. Marital status: Married ☐ Single ☐ Divorced ☐ Widowed ☐ Cohabiting ☐
3. Mother's parity ……..
4. Antenatal attendance Yes ☐ No ☐
5. Occupation: Self-employed ☐ Permanent ☐ Casual worker ☐ Other…….
6. Monthly income Ksh…….
7. Mother's education level: Never been to school ☐ Primary ☐ Secondary ☐ College/University ☐
8. Mother's ethnicity ……
9. Birth preference Normal delivery ☐ Caesarian Section ☐ Vacuum Delivery ☐

B. BIRTH INFORMATION

10. How long did your labor last? 2-6 hours ☐ 7-11 hours ☐ 12-16 hours ☐
    Others (Specify)……
11. What kind of labour did you have? Complicated ☐ Uncomplicated ☐
12. If complicated, how long were you kept in Hospital? <48 hours ☐ 48 hours ☐

72 hours ☐ >72 hours ☐

13. Have you ever delivered in this hospital before? Yes ☐ No ☐

If yes how many children?.....

SECTION TWO: QUALITY OF CARE EXPERIENCE

"Now I would like to ask you about your overall experience with delivery care. Please indicate how much you agree or disagree with the following statements. The responses are 'Strongly Agree,' 'Agree,' 'Disagree,' and 'Strongly Disagree.'"

	Strongly agree	Agree	Disagree	Strongly disagree	Don't know
The health providers explained what to expect during labor and delivery.					
The health providers **listened** to your questions or concerns.					
The health providers were **respectful** of you					
The health providers **scolded or shouted** at you					
You were given adequate **privacy** during the examinations by the nurse or doctor.					
The health providers **explained your health status** with terms that were understandable.					
The health providers **asked for your agreement** before doing clinical procedures.					
The health providers **left you alone** for long periods of time.					
Overall, the health providers offered **compassionate** care.					
The health providers showed a **genuine interest** in your well-being.					
The health providers commented on your sexual behavior in a way that **offended or embarrassed** you.					
In your opinion, the waiting rooms, examination					

rooms, and delivery rooms were adequate					

Thinking about your experience, how likely are you to recommend this hospital for delivery care to family/ friends?

Hs=hly recommend ☐ partially recommend ☐ don't recommend ☐

How likely are you to deliver in the same facility again?

Most likely ☐ partially likely ☐ Not likely ☐

Please tell us areas you would recommend improvement……

APPENDIX 4: KEY INFORMANT'S INTERVIEW GUIDE

I am going to ask you a few questions on what you think about mother's experiences during labour. I expect this session to be as interactive as possible. Be as truthful as you can. In the process of discussions tape recording of the proceedings may take place. In all issues respect, confidentiality, dignity and responsible behavior will be observed. All issues discussed will be only for the purposes of this research and will not be mentioned in any other forum. In case you don't understand any of the questions kindly seek clarification. Let us now discuss each of the following questions.

1. Do you think mothers in labour are treated with respect, dignity and equity? Please elaborate.

3. Do you think nurses use effective communication while taking care of mothers in labour?

4. Please tell me if mothers in labour are given emotional support during labour and how. What are the challenges

5. In your opinion are there institutional /Policy factors that affect the experience of care for the mothers in labour?

APPENDIX 5: In-depth interview

Introduction to interview

Hello. My name is Jane Kabo. We are carrying out a research that is looking at mothers experiences in care given during labour in Kenyatta National Hospital. The information collected will assess the effectiveness of the intervention given during labor, with the aim of giving care that is satisfying to clients. We would like to ask you a few questions about your experiences during labour and few hours after labour. The answers you give here will be confidential and whatever you say will not be linked or associated with you. No names will be written down. You are entitled to own opinion and will be respected. In addition, only the people working on this project will have access to the information from this discussion. The discussion will take about thirty minutes. Do you have any questions for us?

Do you agree to participate in this discussion? *(Check appropriate box)*

Yes ☐

No ☐

Do you agree to be tape recorded during the interview Yes ☐ No ☐

Participant signature (initials):_____ Date: _____

- z whether labour and delivery rooms were adequate.

- Based on your experience of care would you deliver or recommend another person to deliver in the same hospital? Please explain your answer