

**QUALITY OF POSTPARTUM CARE AMONG TEENAGE MOTHERS AT KENYATTA  
NATIONAL HOSPITAL**

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## **ABSTRACT**

**Introduction:** Teenage mothers constitute a high risk group for poor outcomes in pregnancy. Better pregnancy outcomes can be achieved through improving care provided to teenage mothers attending care in health facilities that provide skilled health provider assisted delivery. To date a limited number of studies have focused on assessing quality of care provided to teenage mothers in the postpartum period.

**Objective:** To determine the quality of postpartum care amongst teenage mothers in Kenyatta National Hospital.

**Study design:** A cross-sectional study involving assessment of the care provided to teenage mothers in the postpartum period.

**Setting:** The postnatal clinics, postnatal wards and youth clinic at Kenyatta National Hospital, Nairobi.

**Methods:** A sample of 150 adolescent mothers was obtained from among 240 teenagers delivering in KNH during the 3-month study period using consecutive sampling technique. A structured questionnaire for assessment of quality of postpartum care was administered to participants during an interview conducted after recruitment of eligible mothers who provided informed consent. Quality of care was assessed using Donabedian framework for structure, process and outcome of care defined through standards in current national and international obstetric care guidelines.

Data analysis was conducted using the SPSS version 17. The sample characteristics were summarized using descriptive statistics including mean (SD) for continuous

variables and frequency distribution for categorical variables. The results were presented in narratives, tables, bars charts and pie charts.

**Findings:** The mean age of teenage mothers in KNH was 18.8 years (SD  $\pm$  0.87), range 13 to 19 years. Most mothers were married 81 (54.4%), and had either primary 48 (32.4%) or secondary 51 (34.5%) education. The mean age at menarche was 14.4 (SD  $\pm$ 1.3) and a mean age at coitarche was 15.5 (SD  $\pm$  1.6).

From the patient perspective most (85%) participants rated quality of postnatal care as good. Quality assessment from a clinical perspective reported relatively lower levels of overall quality of care reported across all the three areas of assessment namely, maternal observation (27.5%), maternal physical examination (25.5%) and newborn physical examination (19.5%). Following recent delivery 112 (76.2%) mothers reported that they intended to take up contraceptives.

**Conclusion:** The quality of postnatal care amongst teenage mothers was rated highly from a client perspective but clinical examination suggested that there were gaps and hence the need to improve process of care within the postnatal period.

## CHAPTER ONE

### 1.0 INTRODUCTION/BACKGROUND

The World Health Organization (WHO) defines quality healthcare as a multidimensional concept that incorporates effectiveness, efficiency, accessibility, acceptability, equity and safety of service provision. (1) Measurement of care within hospitals is complicated by its multidimensional nature. In obstetrical care the rapid changes occurring during labor and puerperium further add to the difficulties in assessing quality. The postnatal period is defined as the period from an hour after the delivery of the placenta to six weeks after birth is a critical transitional time for a woman and her newborn and is characterized by physiologic, emotional and social changes (2, 3, 4, 5). Teenage mothers aged 13 to 19 years who give birth to live infants are at particularly high risk of poor outcomes in the postnatal period and could significantly benefit from high quality obstetric care (5). Teenager mothers face greater adverse complications during pregnancy because they are not physiologically and biologically prepared for pregnancy due to gynecological immaturity and incomplete pelvic growth. Other underlying factors include smoking, substance abuse, anemia, malaria, HIV and AIDS as well as other sexually transmitted infections.

According to UNICEF teenage girls should have access to information on the negative impact of early pregnancy/marriage and those who become pregnant should have access to health services that are sensitive to their peculiarities and rights (2). Governments are duty bound to institute measures aimed at reducing child morbidity and mortality rates, particularly due to early pregnancy and unsafe abortion practices

and to support teenage mothers and fathers in their parenthood (2). Towards this end it is recommended that all governments should: a) develop and implement programs that ensure access to sexual and reproductive health services, including family planning, contraceptive methods and safe abortion services in circumstances where abortion is not against the law, adequate comprehensive obstetric care and counselling; b) foster positive and supportive attitudes towards teenage parenthood for mothers and fathers; and c) develop policies to ensure education of teenage mothers.

There is no clear clinical evidence explaining the different needs between pregnant teenagers and first time mothers but their age and inexperience are special factors that might predispose teenagers to poor pregnancy outcomes. Teenage mothers may lack support of the communities or even their families, have little or no experience of health services with little possibility of accessing services (6).

To promote equitable access to healthcare services by pregnant teenagers the WHO recommends provision of social support, information, access to ANC, and increasing coverage of skilled delivery, and emergency obstetric care. Even after accessing care, two fundamental concerns still persist for teenage mothers: greater risk of adverse pregnancy related outcomes and the quality of care provided within hospitals. Several studies have looked into risk factors of teenage related pregnancy complications but fewer studies have focused on quality of care in this age group. It is noteworthy that quality of care is a particular concern in pregnancy because it impacts significantly on outcome of labor.

Teenage pregnancy, whether intended or unintended, increases the risk of maternal mortality and morbidities including complications of unsafe abortion, prolonged labor during delivery and post-natal period. (7)

The intrapartum period is a crucial point in reducing maternal mortality rate. One in every four maternal deaths in developing countries occur during labor or delivery (8).

The WHO recommends assistance from a skilled birth attendant such as a midwife, doctor or nurse, who has been trained to manage pregnancy, delivery and immediate postnatal period, and to identify manage and refer women with complications and their babies (9).

The postnatal period offers an important opportunity for diagnosis and treatment of any complications and counselling on issues like contraceptive and infant feeding. In addition to influencing maternal outcomes, the quality of healthcare that mothers receive during postpartum period has an impact on neonatal outcomes. Most causes of neonatal deaths are preventable through quality provision of care to mothers during antenatal and postnatal periods. According to UNICEF (6) global causes of neonatal deaths were, preterm birth complication 35% intrapartum related complications 24% and sepsis at 15%. Factors attributed to poor utilization of maternal health services in the developing countries are, inadequate transport, inadequate of drugs and supplies, multiple demands on women, lack of decision making power in the family, poor quality of health services and poor attitudes of health care providers.

## CHAPTER TWO

### 2.0 LITERATURE REVIEW

#### **Global prevalence of teenage pregnancy**

Teenage pregnancy remains a worldwide concern due to the high maternal and child mortality rates associated with early pregnancies. About 16 million teenage girls aged 15-19 give birth each year, accounting for approximately 11% of all births worldwide. Most (95%) of these births occur in the developing countries which range from 2% in China to 18% in Latin America and the Caribbean (11).

Eurostat data 2014, reported that birth rate among teenage mothers aged 15 to 19 was 19.7 births per 1000 women. There has been a focus to prevent teenage pregnancy. In the United States a total of 305,388 babies were born to teenagers, translating to 29.4 births in 1000 women in this age group (12).

In the Indian subcontinent, early marriage has been linked to the high rate of teenage pregnancy, particularly in the rural areas as compared to the urban areas. The latest data shows that a rate of 62 pregnant teenagers per 1000 women.

#### **Regional prevalence of teenage pregnancy.**

WHO reports sub-Saharan Africa has the highest rate of teenage pregnancy in the world, and these can be attributed to early marriages. In Niger for example, its reported 87% of women surveyed were married and 53% had given birth to a child before the age of 18 years (13).

In South Africa the prevalence of teenage pregnancy remains high with over 3 in 5 of teenagers reporting to have been pregnant at some point during their teenage life (14). In deed in certain regions of sub-Saharan Africa there have been recent documented increases in the rate of teenage pregnancies. In Rwanda, for example, the demographic and health survey shows an increase in the percentage of teenage mothers from 4.10 per 1000 women in 2005 to 6.1 per 1000 in 2010. (13)

### **Local prevalence of teenage pregnancy.**

In common with other African countries the rate of teenage pregnancy in Kenya is high compared to that reported in other regions of the world including India (62 per 1000), the USA (29.5 per 1000) and Europe (19.5 per 1000). (12) There is limited population based age specific estimates of the teenage pregnancy rates in Kenya but it is estimated that 103 in every 1000 pregnancies are attributed to teenagers (15). Some factors which have been shown to contribute to the high prevalence rate include: peer pressure, rape, cultural practices, lack of sexual awareness and abuse of alcohol and drugs.

### **Guideline recommendation on maternal care in pregnancy**

Postnatal care is vital for the survival of both the mother and the baby. According to WHO recommendations on postnatal care, mothers should have at least four postnatal visits which are timed as: at least 24hours after birth, day 3 (48-72hours), between day 7-14 after birth and six weeks after birth, with specific activities being conducted at each visit. (5)



Based on the current WHO guidelines the following activities are vital during the specific visits and could form a standard for assessing the quality of care related to processes of care from the Donabedian perspective of quality of care.

### **First visit (First 24 hours after birth)**

All postpartum women should have regular assessment of vaginal bleeding, uterine contraction, uterine size, temperature and pulse rate routinely during the first 24 hours starting from the first hour after birth. Blood pressure should be measured shortly after birth. If normal, the second blood pressure measurement should be taken within six hours. Urine void should be documented within six hours.

### **Second visit (48-72 hours after birth)**

At each subsequent postnatal contact, enquiries should continue to be made about general well-being and assessments made regarding the following: micturition and urinary incontinence, bowel function, healing of any perineal wound, headache, fatigue, back pain, perineal pain and perineal hygiene, breast pain, abdominal pain and lochia. Breastfeeding progress should be assessed at each postnatal contact, women should be asked about their emotional well-being, what family and social support they have and their usual coping strategies for dealing with day-to-day matters. All women and their families/partners should be encouraged to tell their health care professional about any changes in mood, emotional state and behavior that are outside of the woman's normal pattern.

### **Third visit (At 7–14 days after birth)**

All women should be asked about resolution of mild, transient postpartum depression (maternal blues). If symptoms have not resolved, the woman's psychological well-being should continue to be assessed for postnatal depression. Women should be observed for any risks, signs and symptoms of domestic abuse and advised on whom to contact for management.

All women should be asked about resumption of sexual intercourse and possible dyspareunia as part of an assessment of overall well-being two to six weeks after birth. If there are any issues of concern at any postnatal contact, the woman should be managed and/or referred according to other specific WHO guidelines

### **Fourth visit (6 weeks after birth)**

All women should have a full physical examination including vital signs, breast examination for fissures, cracked nipples, wounds and teaching on self- breast examination, assessment of involution of pelvic organs, and perineal examination for perineal tears, assessment for both episiotomy and caesarean section wound healing, counsel on initiation of contraceptive and intentions, counseling on return to sexuality, counseling on importance for pap-smear and first pap smear done and teaching on pelvic floor exercises

### **Assessment of the baby**

According to WHO the following signs should be assessed during each postnatal contact and the newborn should be referred for further evaluation, if any of the signs is present: stopped feeding well, history of convulsion, fast breathing (breathing rate >

60breaths/minute), severe chest indrawing, no spontaneous movement, fever (temperature >37.5 degrees Celsius), low body temperature ( temperature <35.5 degree Celsius), any jaundice in the first 24 hours of life, or yellow palms and soles at any age. The family should be encouraged to seek health care early if they identify any of the above danger signs in between postnatal care visits.

### **International studies on quality of postnatal services**

A study done in China (16) revealed that among 90% of the women aged between 14 to 20 years who completed the postnatal care survey module, 8% received timely postnatal home visit (within one week after birth) and 24% received postnatal care within 42 days after delivery. Among women who received postnatal care, 37% received counseling or guidance on infant feeding, 32% on cord care while 24% of women reported that the service providers checked jaundice of their newborns. Of 991 mothers who did not seek postnatal care within 42 days after delivery, 65% of them said that they didn't know about postnatal care services and 24% of them thought it was unnecessary.

A study done in Netherlands in 2009 among pregnant women aged between 15 to 30 years revealed that 41.5% of respondents remained in primary care throughout pregnancy and labor, birth and postpartum period, receiving care from midwife or general practitioner and 31.3% of respondents gave birth at home (17).

### **Regional quality of care studies**

In South Africa in 2003, the national health care facilities survey reported that 84.1% of clinics were providing postnatal care to teenage women aged 13-19 years, however,

data on postnatal attendance was not routinely collected and some studies showed that women rarely attend postnatal care and that there was not a strong culture of rendering goal directed postnatal care. (18)

A study done in Nigeria (8) among postnatal women aged below 20 years showed that approximately 41.2% received postnatal care.

### **National studies on quality of postnatal care**

According to a Kenyan study done on quality of follow-up postpartum care in November 2002-January 2003, (22) postnatal clinic attendance was lower than the antenatal clinic 60.2% and 97.2% respectively.

The study assessed the quality of care provided at the postnatal clinic which was varied. The quality of advice mothers received was high, 91.3% of the mothers were taught on breastfeeding, 85% were advised on maternal nutrition, 92.4% were advised on contraception and 58.8% were started on contraception, these high rating is a show that most health care providers were keen on the health of the mother and the baby, however only 16.6% were advised on postnatal exercises and 19% on sexuality after childbirth, an area that health providers needed to have taught the mothers.

However, the health providers did not follow postnatal care guidelines only 19.4% had their temperatures taken, 9% had a pelvic examination done, 2.8% had a pap smear done and 34.7% had a breast examination, the health care providers showed they were keen in noticing postpartum hypertension because 91% of the mothers had their blood pressure reading taken.

In general, according to the researcher, majority 80.6% of the mothers were satisfied with the level of care at the postnatal clinics. Almost all women (99%) had a future intention on utilizing postnatal care on their subsequent pregnancy.

## **2.1 Problem statement**

Teenage girls between the ages of 13 to 19 are giving birth worldwide(4).The fact that around 45% of maternal deaths occur within the first 24 hours after child birth and over 60% of maternal deaths occur during the first week of the postpartum period, health care providers continue to advice on a first visit check up on 6 weeks postnatally .The postnatal period is also critical to the survival of the newborn with between 70% to 80% of life threatening newborn illness occurring in the first week of life.

Going by the current knowledge on the high teenage pregnancy rates around the world (23) and the poor utilization by the teenagers on the services offered at the postnatal clinics and also the fact that little or no data has been provided on the quality of services offered by the health providers in these facilities, great emphasis needs to be put on the need for teenage mothers to utilize these services and also there exists a need for the healthcare providers to adhere to guideline recommendations on postpartum assessment of mother and child.

In Kenya, the high maternal mortality rate of 360 per 100,000 live births (7) has raised concern on the quality of care given postnatally considering most of the maternal death causes can be managed or prevented.

It is against this background that this study was designed to establish the quality of postnatal care given to teenage mothers attending clinic at KNH.

## **2.2 Study Justification**

Due to the high teenage pregnancy rate in Kenya which stands at 103 per every 1000 live births (16) and the challenges/complications that come with early child bearing age, it is expected that most of these teenage mothers will not seek postnatal care services and the few who will, might get poor quality service at the health facilities offering these postnatal services. Few studies have been conducted globally and regionally on the quality of postnatal care these teenage mothers receive due to the fact that most health care providers are concerned on the health of the baby and most times neglecting the health of the mother which in many instances they are new to motherhood and most of them lack the knowledge of handling the small babies.

It is in this regard that the study focused on determining the quality of postnatal care among teenage mothers. The study showed the number of visits among teenage mothers, how the health care providers adhered to the guideline recommendations on postpartum assessment of mother-infant pairs and the uptake of postpartum family planning.

The study was intended to help health care providers in their delivery of postnatal care and help in changing their perception on delivery of care to teenage mothers. At the policy maker's level, it will assist to accord more focus on the maternal health programs post- delivery than the current emphasis on pregnancy and child health. Academically

the study will add an important research data base as well as open up fields for further research due to scarcity of similar studies both in Kenya and globally.

Although a lot has been done in terms of policy making to address the challenges of postnatal care, its utilization is still low as compared to antenatal care. It is with this background that it was important to focus on the quality of care received at the postnatal clinics so that interventions strategies are developed to address the related issues.

### **2.3 Research question.**

What is the quality of postnatal care services amongst teenage mothers aged 13 to 19 years attending KNH postnatal clinic?

#### **2.4.1 Broad objective**

To determine the quality of postnatal care amongst teenage mothers receiving postnatal care at Kenyatta National Hospital.

#### **2.4.2 Specific objectives**

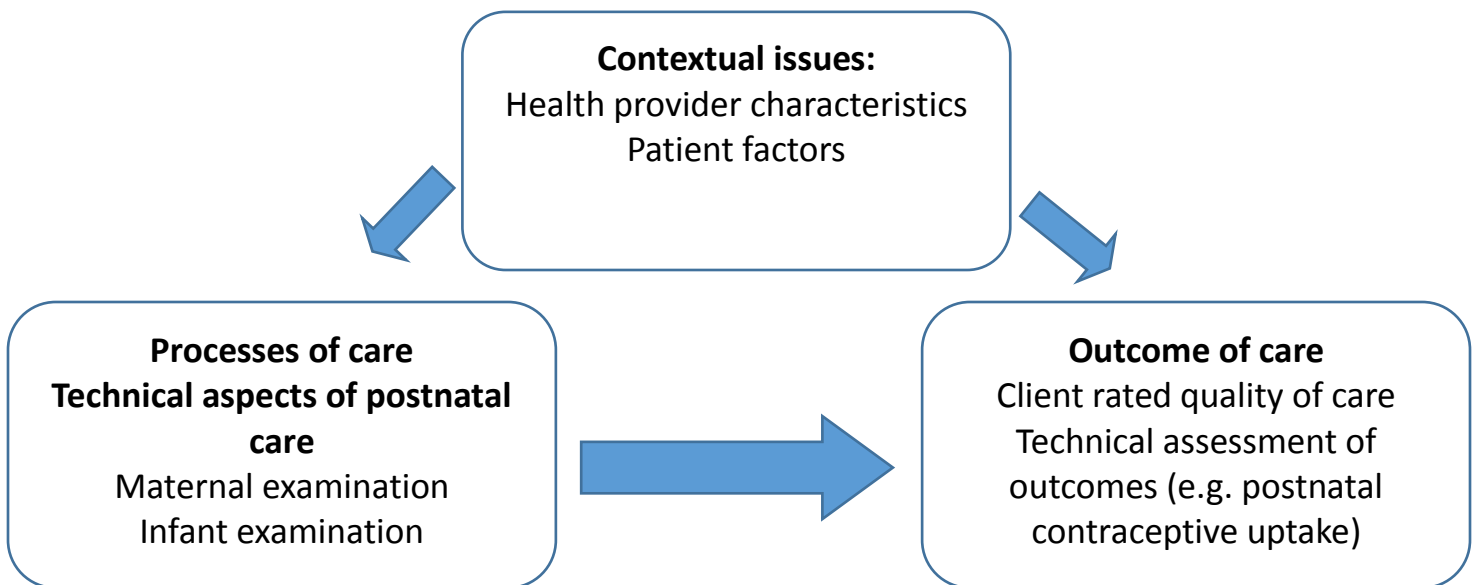
The specific objectives of the study were:

- i) To determine the socio-demographics and reproductive health characteristics of teenage mothers delivering at KNH
- ii) To assess the quality of postnatal clinical examination of teenage mothers and their newborns in KNH.
- iii) To determine the health education provided to teenage mothers delivering at KNH.
- iv) To assess the quality of patient perception of postnatal care provided in KNH

v) To determine postnatal family planning uptake as an outcome of postnatal care

## 2.5 CONCEPTUAL FRAMEWORK

Figure 1: Conceptual framework





## CHAPTER THREE

### 3.0 METHODOLOGY

#### 3.1 Study design

A cross sectional study design was used to assess the care provided to teenage mothers in the postnatal period at KNH.

#### 3.2 Study methods

Quality was assessed based on an assessment of the processes of care focusing on frequency of completion of guideline recommended maternal monitoring of vital signs i.e. temperature, pulse rate and blood pressure checks, maternal examination i.e. breast examination, general examination, abdominal examination, pelvic examination and wound/CS scar/episiotomy examination. Baby's vital signs i.e. temperature, general examination for (jaundice, pallor, breastfeeding and activity) and examination of the cord.

Health worker provision of maternal education in seven essential areas was assessed in the following areas, maternal danger signs, infant danger signs, breast care, breastfeeding, sexuality, maternal nutrition and alternative infant feeding.

#### 3.2 Study site

Kenyatta National Hospital is the oldest hospital in Kenya, located at the capital Nairobi, it was founded in 1901 with bed capacity of 40 as the native civic hospital. In 1952 it was renamed king George VI. It was later renamed Kenyatta National Hospital (after

Jomo Kenyatta) in 1963 after independence currently is the largest referral and teaching hospital in the country.

It covers an area of 45.7 hectares, within the complex there are college of health sciences (university of Nairobi) the Kenya medical training college, Kenya medical research institute and national laboratory service.

KNH has 50 wards, 22 outpatient clinics, 24 theatres (16 specialized) and accident and emergency departments. Total bed capacity 1800 of those 209 is private wing. It has a staff capacity of 6000 staff members. The postnatal clinic runs on Friday from 8a.m. to 2p.m. with 2 nurses and 2 doctors assigned. Youth clinic runs from Monday to Friday from 8a.m. to 5p.m. it is run by 1 nurse. In both the postnatal and youth clinics, mothers are educated on breastfeeding, breast care, cord care family planning options, both maternal and infant danger signs. The mother's vital signs are also taken, physical examination is done and treatment given where need arises.

### **3.3 Population**

The study participants were teenage mothers attending postnatal care at KNH.

#### **Inclusion criteria**

- ▶ Mothers attending postnatal clinic willing to participate in the study
- ▶ Those who delivered less than 43 days ago

#### **Exclusion criteria**

- Those who delivered more than 43 days
- Those not willing to consent in the study

### 3.4 Sample size determination.

Fishers formula for estimating sample size in prevalence studies was used with a finite population correction as suggested by Daniels (1999) to account for the limited number of potential subjects – teenage PNC mothers at KNH (maximum N = 240 during three-month study period).

$$n = \frac{NZ^2P(1-P)}{d^2(N-1) + Z^2P(1-P)}$$

Where n = sample size,

n = Total population of PNC teenage mothers estimated at 240 women in KNH during the proposed three-month study period

Z = 1.96 for a confidence level of 95%

P = the proportion of teenage PNC mothers receiving guideline recommended care at KNH (estimated at 50% because there are no existing estimates of percentage of PNC teenage mothers receiving guideline recommended care either at KNH or similar settings)

d = desired level of precision to be set at 5% for this study

$$n = \frac{240 \times 1.96^2 \times 0.5(1 - 0.5)}{0.05^2(240 - 1) + 1.96^2 \times 0.5(1 - 0.5)}$$

n = 148

Therefore, a total of 148 women were recruited in the study using consecutive sampling of postnatal teenage mothers attending KNH.

### **3.5 Data management**

Data was entered into SPSS using a personal computer held by the principal investigator. Data was coded prior to commencing data entry. The SPSS database was designed with skip patterns, range and validity checks to reduce data entry errors. Access to the data was restricted to the data collection and data entry clerks, the principal investigator, supervisors and analyst. Password protection was used to secure the data in the computer and data was also backed up in an external disk. The computer containing the data, the backup disk and the questionnaires was stored in a lockable cabinet. Questionnaires were retained for at least three (3) years or until the findings were published in a peer review scientific journal before they were destroyed.

### **3.6 Data Analysis and presentation (statistical analysis)**

Descriptive statistics were used to summarize the sample characteristics. For continuous variable e.g. age the mean (SD) and ranges were calculated. Percentages were used to present the proportions of teenage mothers who reported having had recommended care. Inferential analysis was conducted using chi square tests to compare distribution of categorical variables. Patient perception presented as either good or poor quality defined by a binary variable was used as the dependent variable in

the regression and health provider attitude (good, poor or not sure) as the independent variables. Odds ratio (95%CI) from the logistic regression were reported. A p value cut off value of 0.05 was used to determine the statistical significance.

**3.7 Data entry** – SPSS (IBM) software was used for database design. The database structure was done based on the coding in the study questionnaire and included valid range and values checks for data entry fields. The questionnaires were inspected for completion and missing data assigned a code prior to data entry process. The database was archived on a computer with password protection and data were backed up in external drives stored in a lockable cabinet alongside the physical questionnaires.

**3.8 Data quality assurance and control.** A manual for data collection was designed outlining the procedures to be used in the process of data collection and the details for each of the responses to be selected in each question. Inconsistent values that were detected in the database were counterchecked against the physical questionnaire to rule out data entry errors. The database also contained skip pattern and, pre-coded and valid field values, to minimize data entry errors. At the end of the data entry the investigator inspected the database to check for any inconsistency or invalid entries.

### **3.9 Ethical consideration**

The research process began by obtaining an approval from the Department of Obstetrics and Gynecology, University of Nairobi, research permit from the Kenyatta National Hospital research and ethical committee.

The procedures and the objectives of the study were explained to the postnatal clinic staff and patients. Signed informed consent was obtained from each participant prior to

recruitment into the study. The ethical principles of beneficence and justice were applied and it was explained to participants that no direct benefits were obtainable from participation. The potential impact of the findings on improving care for teenage mothers was highlighted. Confidentiality was ensured through collection of data with no patient names or identifiable information like hospital patient numbers. Data were also stored in secured cabinets and also digital information was protected using passwords. The head of the postnatal clinic was also explained to for facilitation of the participation.

### **3.9.1 Minors in research**

A written informed consent was sought from their guardians. The consent was explained in either English or Swahili, the two commonly spoken languages in the study areas, the consent covered on the nature of the study, voluntary participation and right to withdraw from the study.

## CHAPTER FOUR

### RESULTS

There were a total of 149 postnatal adolescent mothers recruited in the study. The characteristics of the participants are presented in Table 1 and 2.

#### **Socio-demographic characteristics of postnatal teenage mothers**

The mean age of the teenage mothers was 18.8 years (SD  $\pm$  0.87), range 13 to 20 years. Majority of the teenage mothers were aged 17-19 years (96%). Over half (54.4%) were married and reported that they were Christians (93.3%). Over 90% had attended some level of formal education and 70.4% had an income less than ksh. 10,000 per month (table 1).

**Table 1: Socio-demographic characteristics of postnatal teenage mothers**

	Frequency (n)	Percent (%)
<b>Age</b>		
13-15 years	6	4
18-20 years	143	96
<b>Marital status</b>		
Single/ divorced	68	45.6
Married	81	54.4
<b>Religion</b>		
Muslim	7	4.7
Christian	139	93.3
Others	3	2.0
<b>Highest level of formal education</b>		
Primary	48	32.2
Secondary	52	34.9
College/ University	37	24.8
None	12	8.1
<b>Occupation</b>		
Employed	25	17
Self-employed	45	30.6
Student	33	22.4
Unemployed	44	29.9
<b>Monthly income in Ksh</b>		
Less than 10,000/-	81	70.4
More than 10,000/-	34	29.6

**Reproductive health characteristics of postnatal teenage mothers**

Over 60% of the mothers were first time mothers with majority of the mothers (72.9%) having only one sexual partner and over 60% desired the pregnancy. The median age at coitarche for 14 years for the younger mothers aged 13-16 years and 16 years for those aged 17- 19 years, (table 2).



**Table 2: Reproductive health characteristics of postnatal teenage mothers**

	<b>Frequency (n = 149)</b>	<b>Percent (%)</b>
<b>Parity</b>		
Para 1+0	90	60.4
Higher order parity	59	39.6
<b>Number of life time sexual partners</b>		
One	105	72.9
More than one	36	25
Don't know	3	2.1
<b>Was the pregnancy desired?</b>		
Wanted	92	62.6
Unwanted	52	35.4
Not sure	3	2
<b>Median age at coitarche in years (IQR)</b>		
13-16 years	14	(14 to 14)
17-19 years	16	(16 to 17)

### **Quality of postpartum care administered to teenage mothers**

#### **a) Processes of postnatal care**

Blood pressure, temperature and pulse monitoring is recommended for mothers during all three postnatal visits. Table 3 shows that all vital signs were obtained in 43.4% (33/76) mothers during first postnatal visit and 12.5% (8/ 64) during second visit. Vital sign documentation was low for temperature (46.1% in first visit, 23.4% and 25% for second and third visits, respectively) compared to blood pressure (73-93.5%) and pulse (37.5-82.9%) assessment (table 3).

Of the postnatal mothers in the study all the three physical examinations that are recommended for each postnatal visit (breast, pelvic and general examination) were conducted in between 12.5 and 37.5% of cases (table 3). Breast examination was

conducted less frequently (25% and 62.5% during visit 2 and 3, respectively) compared to pelvic (50% and 86.8% for visit 3 and 1, respectively) and general physical (46.9% and 62.5% for visit 2 and 3, respectively) examination.

During the initial postnatal visit teenage mothers reported that the baby's cord was checked in 47 (61.8%) cases, general examination was conducted in 49 (64.5%) cases and temperature taken in 30 (39.5%) babies. All three examinations were conducted in 22 (28.9%) babies (table 3).

**Table 3: Quality of postnatal clinical examination of mothers and newborns as per visits**

	<b>1st visit</b>	<b>2nd visit</b>	<b>3rd visit</b>
	<b>n=76</b>	<b>n=64</b>	<b>n=8</b>
	<b>n (%)</b>	<b>n (%)</b>	<b>n (%)</b>
<b>Maternal vital signs</b>			
Temperature reading taken	35(46.1)	15(23.4)	2(25.0)
Pulse reading taken	63(82.9)	48(75.0)	3(37.5)
Blood pressure reading taken	71(93.4)	52(81.3)	6(75.0)
All three maternal observation done	33(43.4)	8(12.5)	0(0.0)
<b>Maternal examination</b>			
General examination*	68(89.5)	30(46.9)	5(62.5)
Breast examination*	29(38.2)	16(25.0)	5(62.5)
Abdominal examination*	66(86.8)	33(51.6)	4(50.0)
Pelvic examination	15(19.7)	5(7.9)	3(37.5)
Wound/ CS scar/ episiotomy examination	23(30.3)	48(75.0)	4(50.0)
All three required examinations done*	27(35.5)	8(12.5)	3(37.5)
<b>Baby examination</b>			
General examination	49(64.5)	17(26.6)	1(12.5)
Temperature taken	30(39.5)	22(34.4)	4(50.0)
Cord examination	47(61.8)	39(60.9)	8(100.0)
All three examinations done	22(28.9)	7(10.9)	0(0.0)

Table 4 shows the areas of health education that were reported to have been provided to teenage mothers in KNH during the postnatal period. The health education areas covered in most cases were: breastfeeding 99 (66.4%); breast care 62 (41.6%) and maternal danger signs in puerperium 56 (37.6%).

Teenage mothers reported that health education related to sexuality was provided in 10 (6.7%) cases.

**Table 4: Maternal health education provided during postpartum**

	<b>Yes</b>	<b>No</b>
	<b>n (%)</b>	<b>n (%)</b>
Maternal danger signs in puerperium	56(37.6)	93(62.4)
Infant danger signs	32(21.5)	117(78.5)
Breast care	62(41.6)	87(58.4)
Breastfeeding (correct attachment and position)	99(66.4)	50(33.6)
Sexuality	10(6.7)	139(93.3)
Nutrition (maternal nutrition)	49(32.9)	100(67.1)
Alternative infant feeding	41(27.5)	108(72.5)

#### **b) Outcomes of postnatal care**

##### **Outcome of postnatal care assessed through client rating of care**

The outcome of postnatal care was first assessed based on patient rating of care. Table 5 shows that 130 (88.4%) teenage mothers thought that the information included in postnatal health education session was helpful. Most mothers also felt that healthcare providers had a positive attitude 125 (85%) and 130 (88.4%) reported that postnatal care provided in KNH was of good quality.

**Table 5: Outcomes of postnatal maternal care provided to teenage mothers in KNH**

	<b>n</b>	<b>%</b>
<b>Was the information the health provider gave helpful?</b>		
Yes	130	88.4
No	8	5.4
Not sure	9	6.1
<b>How was the attitude of the healthcare provider towards you?</b>		
Good	125	85
Poor	13	8.8
Not sure	9	6.1
<b>Do you think the care rendered to you was of good quality?</b>		
Yes	130	88.4
No	12	8.2
Not sure	4	2.7

**Client reported outcomes of care and association with processes of care**

There was no significant association between client rating of quality of postnatal care and the documented care in medical records (Table 6). Client did not rate postnatal care quality based on technical aspects of care for example vital sign monitoring ( $p = 0.094$ ), maternal examination ( $p = 0.517$ ), examination of the baby ( $p = 0.851$ ) and health education provided ( $p = 0.303$ ).

Table 6: Postnatal mother rating of care and its association with processes of care

	Client rated quality of care as good		OR (95% CI)	P
	Yes	No		
<b>Monitoring of maternal vital signs conducted</b>				
Yes	39(30.0)	2(10.5)		
No	91(70.0)	17(89.5)	0.27(0.06-1.25)	0.094
<b>Recommended maternal examination conducted</b>				
Yes	32(24.6)	6(31.6)		
No	98(75.4)	13(68.4)	1.41(0.50-4.02)	0.517
<b>Recommended examination of baby conducted</b>				
Yes	25(19.2)	4(21.1)		
No	105(80.8)	15(78.9)	1.12(0.34-3.67)	0.851
<b>Health education provided</b>				
Yes	103(79.2)	17(89.5)		
No	27(20.8)	2(10.5)	2.23(0.48-10.24)	0.303

### Outcome of postnatal care assessed through uptake of postpartum contraceptives

There were 112 (76.2%) mothers who reported that they intended to take up contraceptives in the postnatal period. Table 7 shows that family planning uptake was not significantly associated with maternal age ( $p = 0.835$ ), marital status ( $p = 0.454$ ), or religions ( $p = 0.154$ ).

Postnatal clients who rated care as good quality did not differ in family planning uptake when compared to those who rated care quality as poor ( $p = 0.722$ ). Family planning uptake did not depend on client assessment of how usefulness of health education information provided ( $p = 0.553$ ).

Table 7: Factors associated with postnatal FP uptake

	FP uptake		OR (95% CI)	P
	Yes	No		
<b>Age</b>				
13-16 years	4(3.8)	2(4.5)		
17-19 years	101(96.2)	42(95.5)	1.20(0.21-6.82)	0.835
<b>Marital status</b>				
Single/ divorced	50(47.6)	18(40.9)		
Married	55(52.4)	26(59.1)	0.76(0.37-1.55)	0.454
<b>Religion</b>				
Christian	100(95.2)	39(88.6)		
Non-Christian	5(4.8)	5(11.4)	0.39(0.11-1.42)	0.154
<b>Level of education</b>				
Primary	37(35.2)	11(25.0)		
Post primary	59(56.2)	30(68.2)	0.58(0.26-1.31)	0.191
Not stated	9(8.6)	3(6.8)	0.89(0.21-3.88)	0.879
<b>Number of sexual partners</b>				
One	72(68.6)	33(75.0)		
More than one	27(25.7)	9(20.5)	1.38(0.58-3.25)	0.468
<b>Previous pregnancy</b>				
Wanted	67(63.8)	25(56.8)		
Unwanted	36(34.3)	16(36.4)	0.84(0.40-1.77)	0.646
Not sure	1(1.0)	2(4.5)	0.19(0.02-2.15)	0.178
<b>Was the information provided by health workers useful?</b>				
Yes	36(81.8)	94(89.5)		
No	3(6.8)	5(4.8)	0.64(0.15-2.81)	0.553
Not sure	3(6.8)	6(5.7)	0.77(0.18-3.23)	0.716
<b>Do you think care provided was of good quality?</b>				
Yes	37(84.1)	93(88.6)		
No	4(9.1)	8(7.6)	0.80(0.23-2.80)	0.722
Not sure	1(2.3)	3(2.9)	1.19(0.12-11.85)	0.88

## CHAPTER FIVE

### DISCUSSION

The aim of this study was to describe among postnatal mothers the perceived quality of postnatal care as relates to clinical examination, health education, FP intention and contraceptive uptake. The mean age of teenage mothers was 18.8 years and this mean is similar to a mean age at first pregnancy of 18.2 years reported among unmarried young women in five Kenyan urban areas (including Nairobi). (27) The current study recruited 6.7% teen mothers below 18 years and this is comparable to 8.4% the proportion of mothers reporting first birth before 16 years of age in recent Kenya Demographic Health surveys. (28) The age range of participants in the study (13-19 years) confirms reports in national surveys and other studies that there are teenagers who become mothers at very young ages. (27, 28) Separately, the females who end up becoming pregnant and delivering in adolescence become sexually active at a mean age of 16.5 years with a mean age of 14.4 years at menarche. This finding highlights the need to assess and focus on addressing reproductive health needs of young teenager's whenever they present for care in hospitals and also strengthen the existing outreach and youth friendly reproductive health initiatives among other reproductive health programmers.

Approximately 54% were married, in self-employment (30.6%) or unemployed (29.9%) and 70.4% had monthly incomes of Kshs 10,000 or less. The finding of generally low socio-economic status in the sample is consistent with that found in the catchment population served by KNH and other Kenyan public hospitals.

Due to the subsidized costs of healthcare in public facilities patients with low socioeconomic status prefer to attend public hospitals. Analysis of nationally representative data also suggests that teenage births are particularly concentrated among the poorest in Kenya. (27)

Quality of care was assessed using two approaches: patient appraisal and technical evaluation of the level of adherence to reproductive health care guidelines particularly during the postnatal period. From the patient perspective most mothers (85%) rated the quality of postnatal care provided in KNH as good. Patient rating of quality of care was significantly associated with patient perception of staff attitude and how useful patients found the information provided by health workers on reproductive health.

From the technical assessment of adherence to guideline recommendations of reproductive healthcare relatively lower levels of overall quality of care was reported across all the three areas of assessment namely, maternal observation (27.5%), maternal physical examination (25.5%) and newborn physical examination (19.5%). The poor overall performance was explained by application of stringent standards of care required in existing reproductive health guidelines for example the definition of good maternal observation required that mother have observations done and documented in all three recommended areas (temperature, blood pressure and pulse). This meant that despite the good performance on specific tasks (blood pressure -87%- and pulse -77%) the poor performance in temperature taking (35%) resulted in low overall performance based. Importantly, this variation in performance of specific and overall tasks points to the need for comprehensive assessment of all postnatal mothers.



In general such findings could point to the inability of patients to judge technical quality of care and have previously been reported in other settings. For example, in a recent Ghanaian study a negative association was reported between technical quality and client-perceived quality of care. (28) Indeed Alhassan et al reported significant staff-client perception differences in all indices of healthcare quality that they reported and suggested that information asymmetry between clients and staff could have been responsible for the differences in the assessments of quality of care using the two approaches. (28)

Patient reported satisfaction with postnatal care quality despite evident gaps in quality based on technical assessment of care reinforces the suggested information asymmetry between providers and clients. Patients appear not to be fully informed on the anticipated services contained in the postnatal care package (PNC) for mothers and babies. In Kenya, this requirement for provision of adequate information to patients is a requirement contained in the Kenya patient rights charter. (32) The evident lack of information on anticipated services in the postnatal period among subjects in the current study is an indication of possible failure to implement the charter within the area of postnatal care. There is need to operationalize the patient rights charter and explore ways of improving its implementation in routine care settings.

### **Study strengths and limitations**

The study attained the desired enrollment rate with a 100% response rate to the administered questionnaire and high completion rates of individual questionnaire items.

The ability to combine two approaches to quality assessment and more importantly incorporate patient perspectives in assessment of quality of care is a major strength of the current study. In addition, this study is a significant addition to the limited existing literature on quality of care in the postnatal period and more so focusing on teenage mothers. A possible limitation of the study could be recall bias due to the requirement that mothers report events that occurred around their pregnancy during the post delivery period. This threat was minimized by asking specific and focused questions and a pretest of the tool that showed high recall rates for events of interest.

## **Conclusion**

The quality of postnatal care amongst teenage mothers was rated highly from a client perspective but clinical examination suggested that there were gaps and hence the need to improve process of care during the postnatal period.

Most teenage mothers at KNH rated the quality of postnatal care as good. An assessment of quality of care from a technical perspective involving the evaluation of processes of care showed that overall there are specific areas of postnatal care that are good (maternal blood pressure, pulse monitoring, abdominal examination and general examination) and for certain areas performance is poor (temperature taking and breast examination). Completion rates for the processes of care used in measuring quality of care depends on the visit with most processes being completed during the initial postnatal visit and declining during the second and third visits. The difference in findings of quality of care reported in the study could be explained by information asymmetry

between teenage mothers who are largely unaware of guideline recommendations of standards of care and the technical evaluation of care conducted by investigators applying these guideline standards.

Comprehensive clinical examination from technical evaluation (temperature reading taken, pulse reading taken and blood pressure reading taken) was at 41%. Health education was asymmetrically evaluated and yet the topics are important for mother and neonatal survival. Patient perception on health care provider attitude was good.

In conclusion, there was a discrepancy between recommended guidelines on standards of postnatal care and quality of care as relates to clinical examination and health education attributable primarily to teenage mother information gaps.

## **Recommendations**

Based on the main findings of the analysis following objectives the study recommends that:

1. There is need to strengthen reproductive health services and programs for female teenagers especially those in socio-economically disadvantaged groups as teenage pregnancies are concentrated in this population and settings.
2. Quality improvement interventions in postnatal reproductive healthcare are required. Such interventions should be designed paying particular attention to routine areas of care e.g. vital signs monitoring, breast examination and physical examination of the newborn among other areas of care that have been noted to be neglected. The intervention should also explore ways of sustaining good

clinical performance in areas associated with high gestational risks e.g. blood pressure monitoring.

3. There is a need for health institutions to create a teenage postnatal “mother-baby package”

## APPENDICES

### BUDGET AND JUSTIFICATION.

NO.	ITEM	COST(KSH)
1.	proposal writing typing and type setting printing and photocopying	20,000
2.	Data collection and entry	20,860
3.	Data analysis	45,000
4.	Final dissertation	21,800
	<b>TOTAL COST</b>	<b>107,660/=</b>

#### Budget justification.

**Item 1**-proposal writing- ksh 20,000

Typing and type setting-50 pages @ksh.30=1,500+1,000=ksh2,500

Printing and photocopying-50 pages@ 10 per page=500 x 5= ksh2,500

Internet costs (literature review)- 15gb @ksh 1000/gb=ksh15,000

**Item 2**- data collection and entry-ksh20,860

Study questionnaires-240 copies x 3 pages=620 copies @ ksh3 =1,860

MS access data base design costs=ksh4, 000

Data entry costs-2 data entry clerks x 15 days @ksh500 per day=ksh15,000

Item 3-data analysis-ksh45, 000

SPSS software license-validity period 1 year=ksh15, 000

Data analysis charges-ksh30, 000 43..

Item 4-final dissertation-ksh21, 800

Typing and type setting –approx. 150 pages @ksh30=4,500+500=ksh5, 000

Printing and photocopying-approx.150 pages@ksh10 per page=1500 per copy x  
10 copies=ksh15,000

Binding -6 copies@ksh300=ksh1,800

### 3.12 Time lines

Activity number	Activity	Responsible	2015	2016
1	Proposal writing	Researcher Supervisors		
2	submission of proposal	Researcher	August	
3	Pretesting	Researcher		March
4	Data collection	Researcher supervisors		March
5	Data analysis	Researcher Statistician		April
6	Thesis writing	Researcher supervisors		April
7	Submission of thesis	Researcher		October

## **Appendix Ai: Informed consent form (adult) (English version)**

My name is Dr.Rebecca Ng'ang'a. I am currently doing a master's degree course in obstetrics and gynecology at the University of Nairobi. I am doing research on quality of postpartum care amongst teenage mothers at Kenyatta national hospital

The information you give will be used for completion of my master's degree in obstetrics and gynecology at the same university.

The aim of this letter is to request for your participation in this research in which I will ask questions which will be inform of questionnaires.The exercise will take about 10-15 minutes.

### **Please note:**

- Your acceptance to participate in this study is voluntary.
- Your acceptance to participate in this study does not prevent you from withdrawing from the study.
- Declining to participate or withdrawing from this study will not warrant any punishment or penalty i.e. you will not be denied the services you are receiving
- You will not receive any token or monetary benefit by participating in this study
- Your personal details will be highly confidential.
- Part or whole of this study can be availed to you on request.



- There is no right or wrong answer
- There will be no physically invasive procedure
- You are free to ask any question that will allow you to understand the nature of the study. If you need to seek clarification you can contact me on **0724785403** or my supervisors.

Prof. S.B.O. Ojwang **0722512283** and Dr.Francis Kagema **0722712186** at the Department of obstetrics and Gynecology University of Nairobi or SECRETARY, KNH/UoN-ERC

P.O box 19676-00202 K.N.H NAIROBI

## **Appendix Aii) informed consent form (adult) (Kiswahili)**

Jina langu ni Dkt.rebecca ng'ang'a. ninaendelea na masomo yangu kaika somo la magonjwa ya akina mama na wanawake katika chuo kikuu cha Nairobi.Ninafanya utafiti kuhusu ubora wa kadi baada ya kujifugua kwenye mama wenye umri mdogo katika hospitali kuu ya Kenyatta.

Ujumbe wowote utakaonipa utatumika kukamilisha somo langu la masters katika masuala ya uzazi na magonjwa ya wanawake.

Barua hii ni kuomba ushiriki wako katika utafiti huu amabao nitauliza maswali yanayo husu bora wa kadi.Maswali yatachukua muda wa dakika 10-15.

Tafadhali kumbuka:

- Haulazimishwi kushiriki katika utafiti huu.
- Ingawa umekubali kushiriki katika utafiti huu,unaweza kujiondoa kushiriki wakati wowote
- Kukataa kushiriki katika utafiti huu haitakuwa na madhahara yoyote Kama kukatazwa kupokea huduma unazopotea.
- Ujumbe wowote utakaotoa katika utafiti huu ni wa siri.
- Unaweza kupata ujube wowote kuhusu utafiti huu,unapohitaji
- Hakuna jibu lililo sahihi au lisilo sahihi.
- Hakutakuwa na utafiti wa mwili.

Unaweza kuuliza maswali yoyote yanayohusu utafiti huu na maelezo zaidi kwa kunipigia simu kwenye nambari **0724785403** au kwa wasimamizi wangu Prof.S.B.O Ojwang **0722512283** na Dkt.Francis Kagema **0722712186** kwenye idara ya masomo ya magonjwa ya akina mama na wanawake chuo kikuu cha Nairobi,ama karani,K.N.H/U.o.N ERC.

S.L.P 19676-00202

K.N.H NAIROBI

## **APPENDIX AIII) INFORMED CONSENT FORMS (minors under 18 yrs. English version)**

My name is Dr.Rebecca Ng'ang'a. I am currently doing a master's degree course in obstetrics and gynecology at the University of Nairobi. I am doing research on quality of postpartum care amongst teenage mothers at Kenyatta national hospital, your child has been invited to participate in this research study because she fits in the selection criteria of the study group.

If you decide to allow your child to participate, she will be given a questionnaire to fill in which will take about 10 -15 minutes

Please note:

- Your child's participation in this study is voluntary.
- Your acceptance for your child to participate in this study does not prevent her from withdrawing from the study.
- Declining to allow your child to participate or withdrawing from this study will not warrant any punishment or penalty i.e. she will not be denied the services she is receiving
- Your child will not receive any token or monetary benefit by participating in this study
- Your child's personal details will be highly confidential.
- Part or whole of this study can be availed to you or your child on request.

- There is no right or wrong answer
- There will be no physically invasive procedure done to your child

You are free to ask any question that will allow you to understand the nature of the study. If you need to seek clarification you can contact me on 0724785403 or my supervisors.

Prof. S.B.O. Ojwang **0722512283** and Dr.Francis Kagema **0722712186** at the Department of obstetrics and Gynecology University of Nairobi or SECRETARY, KNH/UoN-ERC

P.O box 19676-00202 K.N.H NAIROBI

## **Appendix AIV) informed consent form (minors under 18yrs Kiswahili version)**

Jina langu ni Dkt.rebecca ng'ang'a. ninaendelea na masomo yangu kaika somo la magonjwa ya akina mama na wanawake katika chuo kikuu cha Nairobi.Ninafanya utafiti kuhusu ubora wa kadi baada ya kujifugua kwenye mama wenye umri mdogo katika hospitali kuu ya Kenyatta.mtoto wako amechanguliwa kutumiwa katika utafiti huu kwa sababu umri wake unaambatana na umri wa wale wanatumika kwenye utafiti huu.

Japo utakumbali mtoto wako kutumika kwenye huu utafiti, nitauliza maswali yanayo husu ubora wa kadi.maswali yatachukua muda wa dakika 10-15.

Tafadhali kumbuka:

- Haulazimishwi kukumbali mtoto wako kushiriki katika utafiti huu.
- Ikiwa utakumbali,mtoto wako anaweza kujiondoa kushiriki wakati wowote
- Ikiwa utaukataa mwaliko huu, mtoto wako hatapata yoyote Kama kukatazwa kupokea huduma anazopotea.
- Ujumbe wowote mtoto wako atakaotoa katika utafiti huu ni wa siri.
- Unaweza kupata ujube wowote kuhusu utafiti huu,unapohitaji
- Hakuna jibu lililo sahihi au lisilo sahihi.
- Hakutakuwa na utafiti wa mwili.

Unaweza kuuliza maswali yoyote yanayohusu utafiti huu na maelezo zaidi kwa kunipigia simu kwenye nambari **0724785403** au kwa wasimamizi wangu Prof.S.B.O Ojwang **0722512283** na Dkt.Francis Kagema **0722712186** kwenye idara ya masomo ya magonjwa ya akina mama na wanawake chuo kikuu cha Nairobi, ama karani,K.N.H/U.o.N ERC.

S.L.P 19676-00202

K.N.H NAIROBI

**Appendix Bi: ASSENT DECLARATION FORM FOR ADULTS. (English version)**

I, the undersigned, I do here by volunteer to participate in this study. The nature and purpose have been fully explained to me by

**Dr.Rebecca Ng'ang'a. Phone no. 0724785403 Email address:  
nyokabirn@yahoo.com**

I understand that all information gathered will be used for the purpose of the study only.

**Name of participant.....**

**Signed.....Date.....**



**Appendix Bii) ASSENT DECLEARATION FORM FOR ADULTS (Swahili version)**

Mimi, mwenye sahihi, najitolea huru katika hili somo. Nimeelezewa Kwa undani kiini cha somo hili Na **Daktari Rebecca Ng'ang'a nambari ya simu: 0724785403 barua pepe: nyokabirn@yahoo.com**

Naelewa kwamba ujumbe nitakao utoa utatumika tu Kwa somo hili pekee.

**Jina.....**

**Sahihi.....Tarehe.....**

**Appendix Biii: ASSENT DECLARATION FORM FOR MINORS. (English version)**

I, the undersigned, I do here by volunteer to participate in this study to assess the quality of postpartum care amongst teenage mothers at Kenyatta national hospital. The nature and purpose have been fully explained to me by

**Dr.Rebecca Ng'ang'a. Phone no. 0724785403 Email address:**

**nyokabirn@yahoo.com**

I understand that all information gathered will be used for the purpose of this study only.

No one will know my answers, including strangers, my parents or any other minors

**Name of participant.....**

**Signed.....Date.....**

**Age.....**

## **Appendix Biv) ASSENT DECLEARATION FORM FOR MINORS (Swahili version)**

Mimi, mwenye sahihi, najitolea huru katika utafiti huu wa ubora wa kadi baada ya kujifungua kwa akina mama wenye umri mdogo hospitali kuu Kenyatta. Nimeelezwa

Kwa undani kiini cha somo hili Na **Daktari Rebecca Ng'ang'a nambari ya simu:**

**0724785403 barua pepe: nyokabirn@yahoo.com**

Naelewa kwamba ujumbe nitakao utoa utatumika tu Kwa somo hili pekee.

Naelewa kwamba hakuna mtu atakeyeweza kuona ujumbe wangu, marafiki wazazi na pia wengine wenye umri kama wangu.

**Jina .....**

**Sahihi.....Tarehe.....**

**Umri.....**

QUESTIONNAIRE TO ASSESS THE QUALITY OF POSTNATAL CARE AMONG  
TEENAGE MOTHERS ATTENDING POSTNATAL CLINIC AT KENYATTA NATIONAL  
HOSPITAL.

BIO- DATA.

1. AGE a) 10-15 yrs.

b) 16-19 yrs.

2. Marital status

a) Single

b) Married

c) Widow

d) Separated

e) Divorced

3. Parity?  +

4. Age at menarche?.....

5. Age at coitarche?.....

6. Religion?

a) Muslim

b) Christian

c) Tradition

d) Others (specify).....

7. Highest Level of education?

A) primary

B) Secondary

c) College

d) University

e) None

8. Occupation

a) Employed.

b) Self-employed.

c) Student.

D) unemployed.

9. Monthly Income (in kshs)

a) Less than 10,000

b) More than 10,000

10. Do you smoke?

a) Yes

b) No

11. Do you take alcohol?

a) Yes

b) No

12. Do you use any other substances?

a) Yes ..... (Specify).....

b) No

13. How many sexual partners do you have?

a) One

b) More than one (specify).....

c) Don't know.

14. Was the pregnancy wanted or unwanted?

a) Wanted

b) Unwanted

c) Not sure

POSTNATAL CARE ASSESSMENT.

15. Which is your current postnatal clinic visit?

a) First (24 hours)

b) Second (1st /2<sup>nd</sup> week)

c) Third (6th week)

16. Which of the following was taken?

a) Temperature yes

b) Pulse yes/no

c) blood pressure yes/no

None.....

17. Which of the following was done?

Mother

a) General examination (pallor, edema) yes .... No .... don't know .....

b) Breast examination yes .....no .....don't know .....

c) Abdominal examination yes ....no .....don't know .....

d) Pelvic examination yes ..... No ..... don't know .....

e) Wound(c/s scar/episiotomy) examination yes...no....don't know.....

On the baby?

a)General examination (jaundice, pallor, breastfeeding (observed), activity) yes

no...don't know .....

b) Temperature yes..... no..... don't know.....

c) Cord examination. Yes.....no..... don't know ...

d) None.....

18. Were you educated on the following? (Tick as appropriate)

Mother

- a) Maternal danger signs in peuperium (severe headache, convulsions, foul-smelling per vaginal discharge, fever, engorged breast)
- b) Infant danger signs(fever, convulsions, refusal to breastfeed, high pitched cry)
- c) Breast care
- d) Breastfeeding (correct attachment and position)
- e) Sexuality
- f) Nutrition (maternal nutrition)
- g) Alternative infant feeding

21. Was the information the health provider gave helpful?

- a) Yes
- b) No
- c) Not sure

22. How was the attitude of the healthcare provider towards you?

- a) good
- b) Poor
- c) Not sure



23. If you were to change anything, what will it be and why?

Specify.....

24. Do you think the care rendered to you was of good quality?

a) Yes

b) No

c) Not sure

25. If no (refer to question 24) why?

Specify.....

#### FAMILY PLANNING UPTAKE.

26. Any prior family planning use?

a) Yes

b) No

c) Not sure

27. Are you willing to use any family planning method?

a) Yes

b) No

c) Not sure

28. If yes (refer to question 27) which one.

- a) I.u.c.d
- b) Pill
- c) Implant
- d) Others(specify).....

29. If no (refer to question 27) why?

- a) Spouse refused
- b) Not traditionally acceptable
- c) Methods not clearly explained to me
- d) Others-Specify.....

MASWALI KATIKA UTAFITI WA UBORA WA KADI WANAWAKE WA UMRI MDOGO  
WANAPOKEA KWENYE KLINIKI YA WAMAMA KATIKA HOSPITALI KUU YA  
KENYATTA.

UJUMBE WA KIBINAFSI.

1. UMRI a) 10-15 yrs.

b) 16-19 yrs.

2. Hali ya ndoa?

a) Msichana

b) Umeoa

c) Mjane

d) Kutegwa

e) Talaka

3. Uzazi?  +

4. Umri uliopata damu ya mwenzi?.....

5. Umri uliopoteza ubikra?.....

6. Dini

a) Muislam

b) Mkristo

c) Mtamanduni

d) Dini ingine (fafanua).....

7. Ngazi ya juu ya elimu?

A) Shule ya msingi

B) Shule ya secondary

c) College

d) Chuo kikuu

e) Hamna.

8. Kazi

a) Umejiriwa.

b) Umejiajiri.

c) Mwanafunzi.

D) Hamna kazi.

9. Mapato ya mwenzi (kwa kshs)

a) Chini ya 10,000

b) Zaidi ya 10,000

10. Unavuta singara?

a) Ndio

b) La

11. Unatumia mvinyo?

a) Ndio.....

b) La.....

12. Unatumia vileo vingine vyovyote?

a) Ndio..... (Taja).....

b) La.....

13. Unashiriki tendo la ndoa na wanaume wangapi?

a) Mmoja.....

b) Zaidi ya mmoja (taja wangapi).....

c) Sijui ni wangapi.....

14. Ulikua unahitaji mimba hii?

a) Nilihitaji

b) Sikuhitaji

c) Sijui

UBORA WA KADI.

15. Mara yako ya ngapi kwa kliniki?

- a) Mwanzo (masaa 24)
- b) Pili (wiki 1st /2<sup>nd</sup>)
- c) Tatu (wiki ya 6th)

16. Kati ya haya, yepi yalipimwa?

- a) Kiwango cha joto      ndio/la
- b) Mpingo wa roho      ndio/la
- c) Shinikizo la damu      ndio/la

Hamna.....

17. Ni ngani kati ya hizi ilifanyika?

Mama

- a) Uchunguzi wa jumla (rangi ya mkono/macho, kufura) ndio.... la.... sijui.....
- b) Uchunguzi wa matiti ndio.....la.....sijui.....
- c) Uchunguzi wa tumbo ndio.....la.....sijui.....
- d) Uchunguzi wa pelvic ndio .....a.....sijui.....
- e) Uchunguzi wa kidoda ndio.....la..... sijui.....

Mtoto?

a) Uchunguzi wa jumla (rangi ya mwili, jinsi ya kunyonya (imechunguzwa), kucheza)  
ndio...la....sijui .....

b) Kiwango cha joto ndio.....la.....sijui.....

c) Uchunguzi wa kitovu.ndio.....la...sijui...

d) Hamna lolote lililochunguzwa.....

18. Ulisomeshwa kuhusu yepi? (Piga alama ipasavyo)

Mama

a) dalili za hatari kwa mama (kuumwa na kichwa sana,kutokwa na damu yenye  
harufu mbaya,joto,kufura kwa matiti)

b) dalili za hatari kwa mtoto(joto,kukataa kunyonya,mlio wa hali ya juu)

c) Jinsi ya kukuza matiti

d) Kunyonyesha (njia njema ya kumpa mtoto matiti)

e) tendo la ndoa.

f) Ubora wa chakula kwa mama.

g) Njia zingine za ulishaji mtoto

21. Kwa maoni yako mafunzo uliyopata yalikua muhimu?

a) Ndio

b) La

c) Sijui

22. Muhudumu afya alikua na maono yepi kukuhusu?

a) Mazuri

b) Mabaya

c) Sijui

23. Ungeliweza kubandili chochote kwa huu huduma, ungebadili nini?

Fafanua.....

24. Kwa maoni yako huduma uliyopewa ilikua ya juu ya matarajio yako?

a) Ndio

b) La

c) Sijui

25. Kama la (kwenye swali la 24) kwanini??

Fafanua.....

**NJIA YA KUPANGA UZAZI.**

26. Ulikua unatumia njia yoyote ya kupanga uzazi?

a) Ndio

b) La

c) Sijui

27. Unaazimia kutumia njia yoyote ya kupanga uzazi?



a) Ndio

b) La

c) Sijui

28. Kama ndio (kwenye swali la 27) njia ngani.

a) Njia zingine za kuwekwa kwenye nyumba ya mtoto

b) Tembe la kila siku

c) Njia za kuwekwa Kwa misuli

d) Zingine (taja).....

29. Kama la (kwenye swali la 27) Kwa nini?

a) Kukatazwa Na mchumba

b) Haikubaliki ki mila

c) Njia haijaelezewa kwangu kwa udani

d) zingine-taja.....

