UNIVERSITY OF NAIROBI

SCHOOL OF NURSING SCIENCES

RESEARCH   PROPOSAL

A   RESEARCH PROPOSAL SUBMITTED IN PART FULFILLMENT FOR THE AWARD OF THE DEGREE OF BACHELOR OF SCIENCE IN NURSING OF THE UNIVERSITY OF NAIROBI

RESEARCH   TOPIC

ASSESSING THE EFFECTIVENESS OF CERVICAL DILATATION IN MONITORING THE PROGRESS OF LABOR BY HEALTH CARE WORKERS AT PUMWANI MATERNITY HOSPITAL

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REGESTRATION NO. H32/8598/2003

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SEPTEMBER   2008

DECLARATION

I   Mushira Lilian Marita declare that the research proposal is my original work and has been presented for the award of the degree Bachelor of Science in Nursing at the University of Nairobi

Signature....................   Date.....3 | 9 | 08

Mushira Lilian Marita
H32/8598/03

CERTIFICATE OF APPROVAL

This proposal has been submitted for examination for the award of the degree of Bachelor of Science in Nursing with my approval as a university lecturer.

Signature *Grace Omoni*   Date *3rd September 2008*

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ACKNOWLEDGEMENT

I wish to acknowledge my lecturers; Mr. Waithaka and Mrs. L. Bitok for their efforts in helping me develop the research concept paper.

I also acknowledge my supervisor Dr. Grace Omoni for guiding me in the research proposal writing.

Lastly I acknowledge my friends for their encouragement and in typing the proposal

DEDICATION

This work is dedicated to my parents Mr. and Mrs. Mushira for their support in my quest for higher education.

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LIST OF ABBREVIATIONS

M.O.H- Ministry of health

JAMA- Journal American Medical Association

W.H.O- World Health Organization

CM -   Centimeter

K.N.H- Kenyatta National Hospital

DEFINITION OF TERMS

1) Vertex-   it is the top of the head, the part nearest to the cervical os and can be

expected to be born first

2) Nullipara-   A woman who has not given birth to a viable infant

3) Diagnose-   process of determining the nature of a disorder

4) Manometer-   Device for measuring pressure in a liquid or gas

5) Primigravidae   -A woman experiencing her first pregnancy

6) Gestation-   period during which a fertilized egg cell develops into a baby that is

        ready to be delivered

7) Effacement -   process by which the cervix shortens in length as it becomes included
        into the lower segment of the uterus.

8) Cephalopelvic   disproportion-is   anatomic disproportion between fetal head and

        Maternal pelvis

9) Cervical Dystocia- is a non –compliant cervix which effaces but fails to dilate because

        of severe scarring

10) Effectiveness- usefulness or productivity

EXECUTIVE SUMMARY

This is a descriptive cross-sectional study aimed at assessing the effectiveness of cervical dilatation in monitoring labor. Variations related to individual health care provider practice are considered. Uniformity of care which is inexpensive and valuable especially in identifying high risk patients with dysfunctional labor requiring intervention or augmentation is also considered. The study area is Pumwani maternity hospital, a hospital that is located in the Nairobi City Council area in Starehe constituency. Its patients are among the poorest and youngest population of women in Kenya aged 14-45 years.

The study will target healthcare providers based in Pumwani labor ward and the study population will include all the health care providers at Pumwani maternity hospital. A sample size of 150 participants will be selected, questionnaires and a checklist will be used for data collection. Pre-testing of the study will be done at K.N.H labor ward a total of 20 health team will be used

Data analysis and presentation will be by use of advanced computer packages and will be protected by a password. Data will be presented inform of bars, Pie-charts and proportions .

It is anticipated that the research will take eight months and a total of Ksh.152, 149.

The information obtained will be used to write reports to department of Obstetrics and Gynecology and the Ministry of Health that will assist in improving on the quality of maternity care services.

The benefits being to reduce maternal and fetal mortality and morbidity ratios, to reduce obstetric trauma and early identification of impending complications and to increase utilization of hospital maternity care services by mothers living in Kenya.

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CHAPTER 1

Introduction

1.01: BACKGROUND INFORMATION

Labor is the process by which women give birth, it begins with the onset of regular uterine contraction and culminate the delivery of the baby, expulsion of the placenta and the membranes spontaneously without any complications within a period of 18-24 hours(Cunningham Gary and whitridge,2005)

Cervical dilation is the opening of the cervix in later stages of pregnancy in response to coordinated contraction and plays a crucial part in childbirth (Chris and sue, 2004). Labor brings joy and happiness to majority of families but occasionally death and catastrophe to others (Baker, 2004).As labor nears the cervix begins to thin or stretch to prepare for the passage of the baby (Davis and Gallagher, 2007). In normal pregnancy the cervix is 3.5 cm and cervical ripening (that is the cervix softens and becomes more distensible) begins prior to the onset of labor contractions and necessary for cervical dilatation and passage of the fetus (Jodie, 2007). Therefore, the amount of cervical dilatation and descent of the presenting part are cardinal indicators of the progress of labor and are usually determined by means of a manual vaginal examination done by inserting fingers through the mother's vagina (Ofer and Barnea, 2001). Vaginal examination is an essential diagnostic action in assessing the start and progress of labor and should therefore be conducted by a trained birth attendant with clean hands covered by sterile gloves (WHO, 1993). The values obtained range from 0-10 cm and instruments can also be used for accurate measurement of cervical dilatation based on a variety of physical principles like mechanic, electro mechanic, hall effect , ultrasound and others (Yehuda, Danfarine and Yuri, 2005).But still the possibility of drawing incorrect conclusion upon the progress of labor is 11 and 33 percent for the time interval between 4 and 2 hours with an estimated error of plus or minus 1 cm dilatation (Lectic, 1999).

In summary, decision making among the health care providers concerning the care of nullipara women vary substantially and these differences make it difficult to interpret the results of systematic reviews of progression of labor thus the care given is affected

1.02: PROBLEM STATEMENT

There is variation in values obtained by healthcare providers at Pumwani maternity hospital thus labor progress does not match with whatever values recorded on the partogragh therefore making it difficult to anticipate and prepare for a delivery for example, taking the women to the delivery room and getting the delivery pack ready for the delivery. This would be a factor contributing to the significant morbidity and mortality ratios, increased caesarean section and other obstetric complications.

Globally an estimated 600,000 women die every year due to obstructed labor (Lectic, 1999).The developing countries especially the Sub Sahara Africa accounts for 99 percent followed by Asia and maternity is ranked as the primary health problem in young adults aged 14-44 accounting for 18 percent of the disease burden (Kanzira, 2008).Twenty three countries in world with the worst mortality rates in 2006 were all in Sub Sahara Africa and WHO estimated that in Nigeria 800,000 women are living with fistulae cased by obstructed labor (Miller, Hanretty, 1997), a disabling condition that grows by 20,000 cases each year while in Tanzania 9,000 women die every of complications related to pregnancy.

Although Kenya has made great progress in addressing maternal health since the inauguration of safe motherhood initiative in Nairobi in 1987, maternal health indicators have shown a deteriorating trend as evidenced by the maternal mortality ratio which has increased from 365 maternal deaths per 100,000 live birth in 1999 to 590 per 100,000 in 1998(M.O.H). One in sixteen women is likely to die as a consequence of pregnancy and in some poorest parts one in six face the risk (Kanzira, 2008).In Nairobi Kenya a study done on pathology in perinatal mortality showed that the clinocopathological causes of deaths in 497still births and the first 24

hours neonatal deaths are described as major factors in 303 still births to be cord compression and prolapse , birth trauma and prolonged labor(Fillales, 1983).

In all the deliveries, 73 percent of the women are primigravida and only 3.7 percent do not develop complications in their, therefore most women die in their prime period of their lives causing major health, social and economic impact on their families (Kanzira, 2008).Economy is affected in terms of the costs of managing obstetric complications, the caesarean section delivery costs (Jodie, 2007), and the fact that these woman are responsible for food preparation, care of young ones, the sick and the old (obstetrics and gynecology journal, 2007).

Of the 98 percent of births which occur in hospitals, progressive dilation of the cervix is a definitive sign of labor (Chris, 2004).Yet cervical dilation examination is very subjective and depends to a greater extend on experience judgment and even the finger size of the health worker (Palteli and Yoav, 1998). It would be therefore, desirable to provide for a precise and accurate attainment of cervical dilation measures or a repeat basis during the course of labor (Davis and Gallagher, 2007).

In conclusion we need to have an alternative confirmation method that can be used to counter check the values obtained by cervical dilation monitoring.

1.03 JUSTIFICATION.

The study will be carried out at Pumwani maternity hospital one of the largest maternity hospitals in East and Central Africa and it is ranked as the third largest unit in Sub-Sahara Africa therefore a good sample can be obtained to give the picture of what is happening (Wikipedia, 2007). In addition, it is located close to Mathare and Korogocho two of Nairobi's biggest slums. It serves a large population of between 25-30,000 women each year with an average of 80 babies being delivered each day (property Kenya, 2002).

Being in a developing county it struggles to achieve the WHO set target of accepted mortality rate of five deaths in every 1,000 women due to inadequate resources and staff (Wikipedia, 2007).There is temptation by health providers to treat all birth routinely with the same high level of intervention required by those experiencing complications (WHO, 1999). In addition to the inaccuracies caused by cervical dilation such as the finger size, individual judgment, experience of the examiner and the method being so subjective (Davis and Gallagher, 2007).

Traditionally, there is progress when the cervix dilates at one centimeter per hour yet many women will have 2 or more hours without dilation and 2 to 3 strong contractions that open the cervix fully (Vandelaan, 2008).

The concept of normality that is , dilation of 0-4 centimeter representing early labor, 4-8 to indicate active labor and 8-10 centimeter being the transition to fully dilation of 10 cm is arbitrary (Baker, 2006). There is no evidence to suggest that when there is progress in second stage and the condition of both mother and the baby is satisfactory the imposition of an arbitrary limit on its duration is necessary. (Hillan, 1999)

It is also uncertain whether the four hourly vaginal examination in hospital setting of a large sample of women really reveal physiological markers of normal labor (Chris, 2004).

Being in a developing country the systems are less developed therefore, complications of labor account for a significant proportion of material deaths and may affect up to 40 percent of women developing life threatening complications (M.O.H, 2004).

Therefore, the information obtained will be channeled to the obstetrics and gynaecology department and M.O.H to be utilized in improving the quality of maternity care and solve the problem of adoption of unhelpful, untimely, inappropriate and unnecessary interventions that are poorly evaluated to reduce the risks.

1.04: OBJECTIVES

A: MAIN OBJECTIVE

To assess the effectiveness of cervical dilation in monitoring the progress of labor with an aim of improving on the quality of maternity care during labor.

B: SPECIFIC OBJECTIVES.

1. To assess the effectiveness of cervical dilation in identifying the indicators of good progress.
2. To determine its usefulness in detecting impending complications.
3. To identify the effects associated with the use of cervical dilation in monitoring labor.

1.05: RESEARCH QUESTION.

1. How effective is cervical dilation in identifying the indicators of good progress.
2. Is cervical dilation useful in detecting impending complications.
3. What are some of the effects associated with the use of cervical dilation in monitoring labor.

1.08: HYPOTHESIS

There is a relationship between the effective use of cervical dilation in monitoring the progress of labor and the prognosis of labor.

CHAPTER 2: LITERATURE REVIEW.

Introduction.

Labor and birth are integration of powerful physiological and psychological forces that bring a new life into the world (Chris, 2004). In preparation for a delivery the cervix in some women may dilate and efface slowly over a period of weeks but for the first time mothers it may not dilate until active labor begins (Davis and Gallagher, 2007). The values are plotted on a partograph which allows an instant visual assessment of the rate of cervical dilation and comparison with the expected norm according to the parity of the woman (Baker, 2006).

2.01: The effectiveness of cervical dilation in identifying the indicators

Of good progress

Cervical dilation should progress at a rate of 1.2 cm per hour for nullipara women with a descent of 1.5cm per hour. Cervical dilation of 3-5cm or more in presence of uterine contractions reliably represent the threshold for active labor in nullipara (Conningham, Larry, Kenneth, 2004). The dilation does not ordinarily proceed at a constant rate because it is slower until 4.5cm dilation is reached followed by a more rapid dilation then slower again until full dilation of 20cm is achieved (Ofer and Barnea, 2001).

Normally, when effacement and dilatation of the cervix occurs, the operculum from the canal is displaced this usually mucoid and slightly streaked with blood due to separation of the chorion from the deciduas around the cervix (Chris and Sue, 2004).In early labor contractions they are weak an amplitude of 20mmHg lasting 20-30 seconds and occurring frequently about every 20 minutes. By the end of first stage the amplitude is 60mmHg lasting 45 -60 seconds and occurring every 2-3 minutes with a resting tone that exists in between the contractions ranging between 4 and 10mmHg if measured and on rupture of membranes clear fluid is observed (Baker, 2006). On auscultation, the fetal heart rate should be clearly heard an the presentation that is cephalic (in 96.8 percent of cases) identified if sutures and fontanelles are felt (Cunningham, Larry, 2004).Therefore, vaginal examination is done to all mothers unless there has been bleeding in

excess of bloody show, otherwise a gloved index and second fingers are inserted and spread apart to determine the dilated diameter (Chris and Sue, 2004).

To conclude, labor monitoring requires adequate on the indicators of good progress so as to be able to detect when normal labor turns to be abnormal.

2.02: Effectiveness in detecting impending complications

Labor becomes abnormal when there is poor progress evidenced by a delay in cervical dilatation or descent of the presenting part and or fetus showing signs of compromise (Baker, 2006).Failure to progress in either spontaneous or stimulated is the increasingly popular description of ineffectual labor(Cunningham, 2005).

In first stage poor progress could be due to abnormalities of the passenger (the fetus with respect to size, presentation and position), abnormalities of the passage (abnormal maternal bony pelvis such as pelvic contraction and abnormalities of soft tissue of the reproductive tract that form an obstacle to the fetal descent) and abnormalities of powers (uterine contractility and maternal expulsive forces) (Baker, 2006).

Therefore, any changes like slow or inadequate dilation may indicate inefficient or pathological labor and is often an indication for medical or surgical intervention particularly is accompanied by evidence of fetal distress (Arulkumaran, 2006). Slow progress can be recognized early and appropriate actions taken to correct it where possible (Baker, 2006). In the pantograph the alert line is passed if the delay is continous for more than 4 hours, then critical assessment of the delay has to be made and decision taken about the appropriate management (WHO, 1999). Second stage delay can also be due to powers, passenger, passage abnormalities for example, secondary uterine inertia which may be exacerbated by epidural analgesia, weak and ineffectual contractions sometime associated with maternal dehydration and ketosis (if there is no mechanical problem anticipated the patient is dehydrated and started on intravenous oxytocin) and occipital posterior position (oxytocin is administered if the contractions are not strong). Finally narrow pelvis (android) that result in arrest of the fetal head at the level of the ischial spine in transverse position (deep transverse arrest (Baker, 2006).

Therefore, it is necessary to monitor labor in order to anticipate and prepare for deliveries.

2.03: Effects associated with cervical dilation on women.

Early diagnosis of labor, one to one care, reassurance, early amniotomy, oxytocin augmentation are essential elements when caring for mothers in labor (Arulkumaran, 2006). They help in reducing the negative effects associated with cervical dilation method such as early medical and surgical intervention psychological effects as well as increased maternal mortalities.

Dystocia is common in nullipara and is responsible for more than 50 percent of the primary caesarean section deliveries (American family physician, 2007).Lack of progress is the reason for 68 percent of unplanned cephalic presenting fetuses (Gifford and colleagues, 2000). Notzon and associates associates (1994), found that 21 percent of American women without prior caesarean delivery were diagnosed as having prolonged labor and 50-60 percent of all caesarean deliveries in United States are attributed to this diagnosis. Giffords and colleagues (2000) found out that 25 percent of all caesarean section performed annually in united states for lack of progress were women withcervical dilation of 0-3cm and that the diagnosis is made before active labor without an adequate trial of labor (American family physician, 2007).

A study to estimate the prevalence of lack of progress in labor as a reason for caesarean section was done by who, when and where the medical records were received and a post partum telephone survey was done to collect data from 733 women who delivered full term non-breech infants by unplanned vertex caesarean section delivery between March 1993-Feb 1994.

There were a subject of 21447 births sampled at delivery from 30 hospitals in Los Angeles county and Iowa. There were 68 percent of unplanned vertex caesarean section, 16 percent of subjects had caesarean delivery in latent phase of labor when the labor is not prolonged and their practice did not conform to the published diagnostic criteria for lack of progress. Repeat

caesarean delivery was the second most common reason for caesarean delivery in United States accounting for 30 percent of nearly one million caesarean deliveries performed annually. About 50-60 percent caesarean deliveries were done because the pregnancy is subsequent to a primary caesarean section. The proportion of women diagnosed with lack of progress had more than tripled from 3.8 percent in 1970's to 11.6 percent in 1989 (Obstetrics and Gynecology Journal, 2007).

Menager's (1996), reports that in a study of convenience samples of 500 women, 100 women gave a history of an obstetric or gynecological procedure that was traumatizing and of these, 30 fulfilled the criteria for diagnosing post traumatic stress disorder. The description of the experiences are harrowing e.g. Rolbolm and Bittenheim (1996) compared the effects of gynaecological examinations on survivors of childhood sexual abuse with non-abuse controls and the former group reported more trauma like responses including overwhelming emotions and unwanted, unpleasant memories and thoughts. Over 80 percent of this group had not been asked by the examiner about any history of sexual abuse or assault prior to examination.

Bergstrom et al (1992) highlighted cultural rationalization that the practioner often takes on in undertaking the procedure describing behaviors and language used surrounding vaginal examination which sanitize and make it socially acceptable when in just every other context it is intimate, private and sexual (Chris, 2000).

In addition, these effects especially operative delivery rates have increased emphasizing the need for more research to resolve this common problem of poor progress of labor.

CHAPTER 3: METHODOLOGY

3.0I: STUDY DESIGN.

This will be a cross-sectional descriptive study aimed at assessing the effectiveness of cervical dilation in monitoring the progress of labor at Pumwani maternity hospital

3.02 STUDY SITE

The research will be conducted at Pumwani maternity hospital in Starehe division, Nairobi province in Kenya. .Starehe constituency is one of the eight constituencies of Nairobi province that consists of the central and Northern part of Nairobi, is located entirely within Nairobi city council area and has a population of 22,398 (Property Kenya,2002). Pumwani was founded in 1926 as the Lady Griggs Welfare, the city council took over the hospital's management in 1944.Over years the number of mothers delivering in this hospital has grown to about 30,000 and mostly the low income residents of Nairobi and its environs are reached. The bulk of mothers are aged between 14 and 18. It has a 350 bed capacity. The hospital also provides other medical services. It offers antenatal and postnatal clinic services as well as family planning services to patients who require the services and has a school of midwifery within the hospital which trains Kenya registered midwives and enrolled midwives (Wikipedia ,2008).

3.03: STUDY VARIABLES

Are variables that will be used to achieve the stated objectives. They include;

a) Independent variables

i)   Age

ii)   Level of education

iii)   Personal attributes like finger size

b) Depended variables

i) Effectiveness to detect good progress

ii) Detection of impending complications

iii) The effects of cervical dilatation on the mother

3.03: TARGET POPULATION AND STUDY POPULATION.

The study targets all health care providers at Pumwani labor ward. The population;

Inclusion criteria

1) All health care workers in labor ward (Doctors, Midwives and Nurses)

2) All healthcare providers who will be willing to participate

3) Healthcare providers that make use of cervical dilatation to monitor progress of labor

Exclusion criteria

1) Health care providers in other units such as antenatal clinic

2) Health care providers not willing to participate

\3.04: SAMPLE SIZE OF PARTICIPANTS.

Fishers A.A. Laing J.F, 1998.

$N = \dfrac{Z^2 P (1-P)}{D^2}$

n= desired sample size (where n>10,000)

Z= standard normal deviation usually set at 1.96 which corresponds to 95% confidence interval.

P= proportion of incorrect measurement of cervical dilation

Q=One minus the proportion of incorrect measurement of cervical dilatation

d= degree of accuracy desired.

D= design effect =1

Therefore, n=1.96

$N = 1.96^2 \times 0.11 (0.89)/0.05$

$3.8416 \times 0.11[0.89]/0.0025$

Sample size = 150

3.05: SELECTION OF STUDY SUBJECTS.

Simple random sampling will be used in which all the healthcare providers in labor ward will have an equal chance of being included in the study . A list of all members of the population will be constructed .The number of individuals to be included will be selected at random from the list .A random number in this case, 5 will be the starting point and every 5th person will be selected until the number of members required for the sample is attained. Extra participants will be selected for replacement incase of refusal to participate or mortality of some of the selected people. The population under study is equivalent to the total population of healthcare providers at Pumwani maternity hospital which is approximately 300 .

3.06: DATA COLLECTION INSTRUMENTS.

1. A structured questionnaire will be administered to the health care workers which

that will contain both open and closed ended questions

2. A check list for participant observation

3.07: DATA COLLECTION, CLEANING AND ENTRY.

Questionnaires will be hand delivered to the participants (doctors, nurses and midwives) and they will be advised to fill the questionnaire individually to minimize bias. All questions will be screened for completeness and the spoilt ones discarded. Data will be corded and stored in computer. And protected by a password .As a participant observer I will involve myself in the activities.

3.08: PRE-TESTING OF THE STUDY INSTRUMENT

The instrument will be pre-tested at K.N.H labor ward 20 participants will be will be selected to fill the questionnaire by use simple random sampling method to collect data. The purpose of these is to test the validity of the instrument. Several suggestions made on how to improve the questionnaire will be in co-operated to improve it.

3.09: DATA ANALYSIS AND PRESENTATION

The analysis and presentation of data will be done using the statistical program for social sciences computer package. Bars, Pie-charts and Proportions will be used to present the data graphically. Inferential statistics will be presented inform of central tendencies and other forms of comparative statistics significance tests will be done using the student t-test and the chi square.

3.10: SELECTION AND TRAINING OF RESEARCH ASSISTANTS.

Three research assistants will be appointed from the BSC Nursing students level IV, because they are well versed with research and have good communication skills. They will undergo three day training on issues relevant to the study like sampling criteria, data collection e.t.c. The research assistants will help in distribution of the questionnaires to the study participants, that is, the Nurses, Mid wives and Doctors. Informed consent will be obtained, it will be confidential and code numbers instead of names will be used to ensure anonymity. Permission will be sought from relevant authorities that is, the Ministry of Health and the Ethical committee to conduct the research.

3.11: ETHICAL AND CLEARANCE ISSUES

The participants will be under no obligation to answer any questions they are not comfortable with. They have the right to ask questions and clarification whenever necessary and the right to withdraw.

3.12: EVALUATION BENEFITS.

1. To reduce maternal and fetal mortality and morbidity ratios.
2. To reduce obstetric trauma and complications related to birth.
3. To increase the use or utilization of hospital maternity care services in Kenya.

3.13: LIMITATIONS OF THE STUDY.

1) Research participants could be expecting some immediate benefits after participating. This is not available so they may drop out.

2) Cervical dilatation monitoring must be performed by highly skilled and experienced provider

BUDGET ESTIMATION

ITEM	QUALITY	UNIT COST	AMOUNT
STATIONARY			
Fool scalps	2 reams	450	900
Ball pens + erasers.	2 dozens	150	300
Clip boards	8	100	800
Stapler + staples	1	200	200
		Sub-total	2,200
COMPUTER AND OTHER SERVICES.			
Typing proposal	1 x 40	5	200
Printing proposal	1 x 40 pages	10	400
Photocopying proposal	3 x 40 pages	2	240
Binding proposal	1 x 4	60	240
Typing questionnaires	1 x 5 pages	5	25
Printing questionnaires	1 x 5 pages	10	50
Photocopying questionnaires	3 x 5 pages	2	30
Statician	1	10,000	10,000
		Sub-total	11,135
TRAINING RESEARCH ASSIISTANTS	6 x 5 days	500	15,000
SALARIES (pre-testing)			

Principle research	1 x 5 days	1,000	5,000
Research assistants	6 x 5 days	500	15,000
		Sub-total	35,000
SALARIES(actual research)			
Principle researcher	1 x 20 days	1,000	20,000
Research assistants	6 x 20 days	500	60,000
supervisor	1 x 2 days	500	1,000
		Sub-total	90,000
		Grand total	138,335
		10% contingencies	13,814
		Total budget	152,149

GANTT CHART

Activity	Period in months						
	February	March	April	May	June	July	August
Problem identification	██						
Proposal writing	██						
Training research assistants		██					
Pre-testing study tool			██				
Data collection				██	██		
Entry and cleaning of data					██		
Data processing and analysis.						██	
Submission of final draft.							██

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APPENDIX 1: CHECK LIST.

1) Able to detect start of active labor at 4cm dilation.

☐ Yes

☐ No

☐ Comment

2) Studied fluid characteristics after rupture of membranes.

☐ Yes

☐ No

☐ Comment

3) Sutures and fontanelles could be felt on vaginal examination to determine the

Presenting part.

☐ Yes

☐ No

☐ Comment

4) Diagnosed arrest or protraction disorders of active phase of labor.

☐ Yes

☐ No

☐ Comment

5) Identified abnormalities of powers, passage, and passenger in both first and second stage.

☐ Yes

☐ No

☐ Comment

APPENDIX 2: QUESTIONNAIRE

DEMOGRAPHIC DATA.

a) Age (years)………

Tick where appropriate

b) Sex

    ☐ Male

    ☐ Female

c) Marital status.

    ☐ Married.

    ☐ Single.

    ☐ Divorced.

    ☐ Widowed.

    ☐ Separated.

d) Level of education (completed level)

i) Certificate.

    ☐ Diploma.

    ☐ First degree

    ☐ Masters degree

    ☐ Others (specify)……………………………

e) Religion.

- ☐ Protestant.

- ☐ Catholic.

- ☐ Islam.

- ☐ Others (specify)……………........................

f) Economic Status.

How much money do you earn monthly?

Specify……………………

EFFECTIVENESS OF CERVICALDILATION IN IDENTIFYING

INDICATORS OF GOOD PROGRESS

1) Were you able to detect the start of active labour?

- ☐ Yes

- ☐ No

If yes, in 1 above how?

- ☐ The dilation was less than three centimeters

- ☐ The cervical os was still closed but the woman's behaviour were suggestive of active labor

- ☐ The dilation was 4 cm

- ☐ Others specify

2) When you performed vaginal examination

(a)The membranes had ruptured

- ☐ Yes

- ☐ No

If yes, in 2 (a) a above how was the fluid characteristics

- ☐ Clear with no smell

- ☐ Stained

- ☐ Stained and had a bad smell

- ☐ Others specify

3) Did you feel for the presenting part?

- ☐ Yes

- ☐ No

If yes, in (a) above what did you feel?

- ☐ A mass not so distinct

- ☐ Sutures and fontanelles

- ☐ I could feel the lower limb

- ☐ I was not able to feel anything

- ☐ Others specify……………….

4) What was the diagnosis of the presenting part

    ☐ Transverse

    ☐ Cephalic

    ☐ Obligue

    ☐ Breech

5) Were contractions present?

    ☐ Yes

    ☐ No

If yes, in 5 (i) above, what was their character

☐ Coordinated

☐ Uncoordinated

☐ Other specify

6) Did the woman experience any problems of active labor?

☐ Yes

☐ No

If yes, in 6 a above, which one?

☐ Arrest disorder

☐ Protraction disorder

7) From the answer you gave above, how was the dilation and the descent?

☐ A slow rate of cervical dilation less than 1.2 cm per hour and a descent of 1cm per hour

☐ Cervical dilation of 1.2cm per hour and a descent of icm per hour

☐ No cervical change for 2 hours

☐ Others specify

8) Did the woman have any abnormalities that would affect cervical dilation method?

☐ Yes

☐ No

If yes, in 8 a above, which one?

☐ Abnormalities of the powers

☐ Abnormalities of the passage

☐ Abnormalities of the passenger

9) How did you manage the abnormality identified?

- ☐ Intraveneous oxytocin and rehydration

- ☐ Trial of forceps delivery

- ☐ Caesarean section

- ☐ Others specify................

10) Was the pelvis adequate?

- ☐ Yes

- ☐ No

If yes, in 10 a above, what type of pelvis?

- ☐ Android

- ☐ Anthroid

- ☐ Platypelloid

11) What parity is she? Specify

Do you think parity has an influence on the use of cervical dilatation

- ☐ yes

- ☐ No

Explain?...

....

THANK YOU VERY MUCH FOR YOUR CO-OPERATION

APPENDIX 3: RESEARCH   PARTICIPANTS CONSENT FORM

Mushira Lilian is a fourth year Bachelor of Science in Nursing in the University of Nairobi. She is carrying out a research on assessment of the effectiveness of cervical dilatation in the monitoring of progress of labor at Pumwani maternity hospital. This is in part fulfillment for the award of bachelor of science in Nursing of the university of Nairobi .Study participants should be primidravida women aged 15-45 .Strict confidentiality will be observed and the results will be used for research purposes only. You will not be required to give your name during this study for the sake of anonymity. You are free to answer all questions posed to you and should there be any question you are not comfortable answering or don't understand then you are under no obligation to answer.

I have fully understood the objectives of the study and hereby sign to show my willingness to participate.

Signature……………   Date…………………

Signature of the assistant………....................   Date………………

Thank you for participating in the study.

APPENDIX: 4 LETTER SEEKING AUTHORITY TO CONDUCT RESEARCH

MUSHIRA   LILIAN MARITA

SHOOL OF NURSING SCIENCES

UNIVERSITY OF NAIROBI

P.O.BOX 19676

NAIROBI

22nd AUGUST 2008

MINISTRY OF SCIENCE AND TECHNOLOGY

SHOOL OF NURSING SCIENCES

ETHICAL COMMITTEE

THE UNIVERSITY BOF NAIROBI

Dear /Madam,

REF: SEEKING FOR AUTHORITY TO CONDUCT RESEARCH

I am a fourth year student at the University of Nairobi pursuing a bachelor of science in nursing degree. I would like to conduct a research to assess the effectiveness of cervical dilatation in monitoring labor progress at Pumwani maternity hospital .the research will be conducted in part fulfillment of the award of the Bachelor of science in nursing degree. The research findings will be used to give recommendations on how to develop educational guide lines and improve on the quality of maternity care offered in Kenyan hospitals.

I kindly request for your authority to conduct the research.

Thanks in advance

Yours faithfully,

Mushira Lilian Marita.

APPENDIX 5. LETTER SEEKINNG PERMISSION TO CONDUCT RESEARCH

MUSHIRA LILIAN

SCHOOL OF NURSING SCIENCES

UNIVERSITY OF NAIROBI

P.O.BOX 19676

NAIROBI

9TH JUNE 2007

SUPERINTEDENT PUMWANI MATERNITY HOSPITAL

P.O.BOX

NAIROBI.

RE: PERMISSION TO CONDUCT RESEARCH

I am a fourth year student at the University of Nairobi pursuing a Bachelor of Science in Nursing degree. I would like to conduct research to assess the effectiveness of cervical dilatation in monitoring labor progress in Pumwani The research will be conducted in part fulfillment of the award of the Bachelor of Science in Nursing degree . The research findings will be used to give recommendations on how to improve maternity services

I kindly request for your permission to conduct the research.

Thanks in advance.

Yours faithfully,

MUSHIRA LILIAN MARITA.