

# **PRIMARY HEALTH CARE INSTITUTE - IRINGA (PHCII)**

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## **THE MAGNITUDE AND FACTORS INFLUENCING LOW DELIVERIES IN HEALTH FACILITIES IN KIGOMA DISTRICT**

*A Dissertation submitted in partial fulfillment of the requirement for the  
Advanced Diploma in Health Education*

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**DECLARATION**

I Gideon S. Kibambai, hereby declare that this dissertation is my own work and that it has not been presented for similar qualification at any other institution. This is the result of my own investigation.

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Signature... ..

Date... ..

## **DEDICATION**

I dedicate this work to my beloved wife Enydyjoy D. Baningangwa and my children Weru, Samuel, Ester and Tumaini and other close friends of mine who gave me moral support and encouragement during the whole period of my study. Also this dedication is extended to my sponsor, the Medical Mission Support Germany, my fellow students and my mother.

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## **ABBREVIATIONS**

ANC	-	Ante-Natal Care
CORPs	-	Community Owned Resources Persons
CHMT	-	Council Health Management Team
DMO	-	District Medical Officer
DRC	-	Democratic Republic of Congo
DC	-	District Commissioner
FGD	-	Focus Group Discussion
GVT	-	Government
MCHC	-	Maternal and Child Health Clinic
MOH	-	Ministry of Health
PHCI	-	Primary Health Care Institute
RCHS	-	Reproductive and Child Health Services
VA	-	Voluntary Agency.
RMO	-	Regional Medical Officer

## GLOSSARY OF TERMS

**Safe Mother hood:**

A woman's ability to have safe and health pregnancy and delivery.

**Safe Mother hood Initiatives:**

Is a global effort (programme) that aims to reduce deaths and illness among women and infants, especially in developing countries.

**Maternal risk:**

Is defined as the probability of dying or experiencing a serious complication as a result of pregnancy or childbirth.

**High risk category:**

Is defined as pregnant woman who has been identified to have any of the danger signs during antenatal services.

**Low risk category:**

Are pregnant women who do not have any danger signs identified during antenatal care.

**Focused Ante-natal Care:**

Is providing goal oriented care that is timely, friendly, simple, beneficial and safe to pregnant women.

**Essential Obstetric Care:**

A set of minimal health care elements, which should be made available to all pregnant women which include both preventive and curative health measures.

It includes caesarian sections, manual removal of the placenta as well as non emergency measures.

## ABSTRACT

Health unit delivery is a problem in Kigoma district as it is for other districts in the region.

The study was conducted in Kigoma district between November 2001 to April 2002 Kigoma district. It was a descriptive cross sectional with the aim of determining the magnitude and factors influencing to low health unit deliveries. The multi-stage sampling procedures were employed to select eight (8) villages to be involved in the study.

The overall 52% of deliveries took place outside health units while 48% took place in health facilities. More than a half 54.5% of mothers were not knowledgeable on maternal risks during pregnancy labour/delivery. While health unit utilization by women living far more than 6km was low compared by those living close within 5km to the health facility ( $P < 0.001$ ).

Another contributing factor for low health unit delivery was poor knowledge in the community including low level of education for women attending ANC clinics. However the role-played by relatives should be taken into account as 58.94% of mothers who had home delivery were assisted by their relatives. Furthermore the more the mother attends ANC visit the more she is likely to deliver in health facility being 31% of mothers who had more than four (4) visits while pregnant.

Age influences place of delivery that is the more the women become older the higher the chances of delivering at home. Home delivery was proclaimed to be due to sudden onset of labour , self preference, poor quality of obstetric care, long distance to health units and high cost of hospital deliveries.

This study recommends that health education to the community on advantages of conducting their deliveries in health units, where skilled personnel will attend them should be intensified and made more effective.

## **CHAPTER ONE**

### **1.0. INTRODUCTION**

#### **1.1. BACK GROUND INFORMATION**

All women should have access to basic maternity care during pregnancy and delivery. This includes antenatal care, clean and safe delivery as well as postpartum care for mothers and infants (WHO 1997).

Every time a woman is pregnant which happens as estimated 200 million times every year around the world, a woman risks a sudden and unpredictable complication that could result in her death or injury, and the death or injury of her infant. At least 40% of all pregnant women will experience some type of complication during their pregnancies. For about 15% this complication will be potentially life threatening. Such complications can occur in pregnancy, during labour, delivery and postpartum period that require high quality obstetric care, (Koblinsky et al 1993).

Attempts to predict these complications before they occur have not been successful since most complications are unexpected and the majority of women with poor pregnancy outcomes do not fall into any high risk categories (Graham 1997 and Ahmad 1998).

Therefore pregnancy should be viewed as a special period during which all women should take particular care and seek treatment for certain signs and symptoms (WHO 1994).

Basic maternity care comprises of quality antenatal care, clean and safe delivery whether the delivery takes place at home or in an institutional setting. One of the most important functions of antenatal care is to offer the woman advice information about the appropriate place of delivery given her own particular circumstances and health status. ANC is also an opportunity to inform women about the danger signs and symptoms for which assistance should be sought from a health care provider without delay (WHO 1994).

Globally Safe Mother Hood Initiative was launched in Nairobi 1987 to improve maternal health and cut the number of maternal deaths in half by year 2000. The initiative is a global effort that aims at reducing deaths and illness among women and infants also, especially in developing countries, (WHO and Sr. Kebe 1994).

The initiative pledges the nations to implement Safe Motherhood Services, which is achieved by providing high quality maternal health services to all women. Among the services provided include care by skilled health personnel before, during and after delivery and emergency care for life threatening obstetric complication (WHO 1994). Throughout the world 75% of maternal mortality occurs during unassisted labour (Wachuku King S. 1994).

A striking feature for most developing countries is that the proportion of women receiving Ante-natal care is distinctly higher than the proportion of women receiving delivery care in health units ( WHO 1997)

World Health Organization (1997) estimates of coverage in maternity care reported that 65% of all pregnancies in Asia had at least once attended Antenatal care and 37% of deliveries took place in Health units.

Likewise in Africa it has been estimated that 63% of pregnant women receive at least one Antenatal care visit and 36% of deliveries took place in Health units. Whereas 60% of deliveries in Western Africa and 56% in Northern Africa took place in Health units. (WHO 1997).

Again a report by World Health Organization (1997) estimated that in East Africa approximately 66% of pregnant women who had at least one Antenatal care visit, only 32% of deliveries took place in Health units. It also stated that in Kenya only 44% of deliveries took place in Health units.

In Tanzania despite of high antenatal attendances of pregnant women in various health facilities, maternal mortality rate is still high (529 per 100,000 live births) while infant mortality rate is still 99 per 1,000 births. Also, only 40% of pregnant women deliver in health facilities. In view of this, the MOH decided to strengthen the quality of

Reproductive and Child Health services by developing the National Package of Essential RCH interventions called Focused Antenatal Care (MOH 2002).

The goal for Focused Antenatal Care is to provide timely and appropriate Care to women during pregnancy to reduce the Maternal Morbidity and Mortality as well as achieving a good outcome for the baby (MOH 2002).

## **1.2. STATEMENT OF THE PROBLEM**

The problem of low deliveries in health facilities exist in all the districts in Kigoma region, which is less than 40%, thus Kigoma rural district is not an exception. According to District Annual health report (2000). Kigoma district has 35.7% of women delivered in health units, while the Antenatal coverage was 94%.

Determinants leading to low deliveries in health units in Kigoma rural district is not known. However empirical research has shown that the following factors contribute to the problem and these include cultural traditions, mothers being unfamiliar with hospital environment, uncomfortable about being examined by male physician, worried about cost, being unhappy with separation from their families (WHO 1998 and Dehne K. L. et al 1995).

However Rooney (1992) also reported that health unit delivery is only for those with risk factors e.g. Prim-parity, height less than 150 cms and a history of serious complications in a previous delivery.

The deliveries outside Health units subjects a woman into complications such as tears, retained placenta, ruptured uterus, postpartum haemorrhage and puerperal sepsis. It often happens to some women who agree to enter Health unit only when birth complications have advanced and tends to increase the incidence of maternal mortality (Ahmed 1998 and Mathew et al 1995).

In Kigoma district in order to alleviate the problem of low deliveries in Health units, health education is provided in all MCH clinics with emphasis on Antenatal care visits

and delivery in Health units for pregnant mothers. Most of this Health education sessions are based to mothers who come to seek for health care in these clinic, however it has not been effective to solve the problem. This necessitated the need for conducting this study so as to find out the reasons for low deliveries in Health units.

The information resulting from the research will be used to plan appropriate interventions towards improving safe motherhood services in the district. It will also be used to advise the non-governmental organization and CHMT members in Kigoma district towards proper formulation of strategies and effective Health education messages to help solve the problem of low deliveries in Health units in the district.

### **1.3. THE PURPOSE OF THE STUDY**

The purpose of this study was to determine the magnitude and factors contributing to low deliveries in Health units in Kigoma Rural District.

### **1.4. RATIONALE OF THE STUDY**

The need for this study comes from the fact that despite a high antenatal attendances of pregnant women (94%) and health education interventions through MCH clinics employed to motivate mothers on the importance of delivering in health units, health facility deliveries, in Kigoma district are still low being 35.7%. (District Annual health report, 2000). Also there is no study that has been done in the district to find out the magnitude and determinants of the problem and recommend for appropriate measures to address the problem.. The consequences of un-assisted delivery by skilled personnel is devastating and threatening the life of both mother and the child, therefore this document intend to highlight on some effective measures which could be used to address the problem of low heath unit deliveries.

## **1.5. OBJECTIVES**

### **1.5.1. Broad objectives**

To determine the magnitude of deliveries at health units and their determinants in Kigoma rural district.

### **1.5.2. Specific Objectives:**

1. To determine the magnitude of deliveries at health units.
2. To identify mothers levels of knowledge on maternal risk factors.
3. To determine whether mothers' parity has influence on place of delivery.
4. To determine whether distance to health unit influences on place of delivery
5. To determine community perception on quality obstetric care provided in Health units.
6. To determine whether social economic /cultural factors influences on place of delivery.

## **1.6. RESEARCH QUESTION**

1. What is the magnitude of health unit delivery?
2. What is the level of knowledge of mothers on maternal risks factors?
3. Does parity influence place of delivery
4. Does distance influence place of delivery
5. What is community perception on quality of obstetric care provided in Health units?
6. What are socio-economic/cultural factors influencing health unit deliveries?



## CHAPTER TWO

### 2.0. LITRATURE REVIEW

Several studies have been done to determine the magnitude of health facility deliveries. Underneath are a few of the documented studies. Barbhuiya et al (2001) in their study on prevalence of home deliveries and ante-natal care done in Gazipur Thana Bangladesh results showed that 83% of the respondents received ante-natal check-up throughout their last pregnancy and out of 505 respondents 91.3% of the respondents was found to have delivered at home while only 8.7% at health institutions.

On the other hand – Kaguna et al (2000) in their study on factors influencing choice of delivery sites in Rakai district Uganda noted that 44% of the sample delivered at home, 17% at traditional birth attendant's place, 32% at public health units and 7% at private clinics. In Tanzania the Demographic Health Survey (1996) described health facility delivery being 47% and home delivery being 50%.

Another study done by Patrizia (1994) in Zimbabwe reported that whereas ANC attendance rates were high however the deliveries in the majority of cases did not take place at the hospital or planned place which was only 44.3% health unit deliveries. Similarly Godfrey. and Ssembatya in their study done in Mangachi district in Malawi in 1996 reported that although many mothers attend ante-natal clinics at various units in Malawi, less than one quarter of them actually deliver in the health centre, which was 23% of all deliveries in the study.

Mothers knowledge is an important factor in enabling them in attending ANC. Findings from a study by Ladfors et al 2001 in a population based study Swedish Women's opinions about ante-natal delivery and post partum care reported that 81% of porous women answered that, checking blood and urine samples, fetal rate and measurement of fundal height were the most important procedures in ante-natal care. Mother have also been reported to be having substantial knowledge on risk factors. In a study in Ekpoma

Nigeria reported that the community was knowledgeable about hemorrhage in pregnancy and delivery, however because of the inability to recognize early warning signs they continued with traditional treatment even when clear evidence of danger existed (Chiwuzie et al 1995).

Mothers have a tendency to believe that, the more they deliver the less the complications and hence the less need to deliver in health facility. The TDHS (1996) discovered that in overall 45% of births were delivered in a health unit, while about half of the births were delivered at home. The proportion of births delivered in a health unit decreases with the mothers parity.

A similar study in Mongachi Malawi by Godfrey and Margaret (1996) reported that many deliveries which took place at home, were either primigravide or grand multiparous. Although the reasons given for not being attended or being attended by non-trained personnel during delivery appeared genuine, the risks taken by the grand multiparas remained disturbingly high. These women who take the trouble to attend antenatal clinics, among them, they were assumed to have been motivated to use the health facilities.

The influence of distance cannot be underscored. WHO (1986), Studies done in Cuba, Egypt, Indonesia, Jamaica and Turkey on maternal mortality demonstrated that maternal complication rates are increased in areas where women are likely to arrive in the hospital, in a serious condition. This includes distance to the health facility and in adequate action by medical personnel. On the other hand Godfrey et al (1996) reported that among reasons given by mothers for not delivering in health units was distance to the health unit. Eighteen percent (18%) of the respondents in this study most of them primigravida and grand multiparas had their confinement at home.

Several other studies have been done on perception regarding the quality of obstetric care. According to Walker D et al (WHO 2002) in a study done in Kalimantan Indonesia where preference to home delivery among pregnant women was high was found due to poor quality of care which was an important contributor to excessive maternal mortality in many countries. Another study done in Conakry Guinea considering the short distance between the sub urban units and referral units being less than 10km usually covered by taxi, rates of maternal mortality related to uterine rupture were surprisingly high. Among other causes was inability to monitor deliveries adequately caused delays in transferring women with real obstetric complications (Thonneau et al 1994)

Rizzuto and Stars (1997) pointed out that in Africa, staffs often lack clinical and interpersonal skills. Facilities are in poor repair drugs and medical supplies and equipment are not existent or expensive. Problem of inadequately trained staff and supplies also came up in focus group discussions, in Ekpoma[ Nigeria] it was noted that there was a negative perception of the quality of care available in which shortages of materials, adequately trained personnel and committed personnel in the modern health institutions serving the community Chiwuzie et al (WHF 1995).

Brieger et al 1994 described other factors which keep women away from higher level health facilities are costs of hospital delivery, unfamiliar practices, inappropriate staff attitudes, restrictions with regard to the attendance of family members before seeking institutional care. Other factors included negative perceptions of the quality care provided, related to bureaucracy, lack of drugs and other supplies, none functioning equipments, absence of doctors especially at night and apparently unfriendly attitudes of staff towards patients, also referral from one level of care to another was not well organised.

Socioeconomic/cultural factors have significant influences on a place where delivery is to take place. WHO describes that poverty is clearly a high risk factor. It is also known that poor women are less likely to have formal education than wealthy women, and are less likely to be in good health and to seek or receive medical care (Maine WHO 1986). Some studies done in Bachok district Malaysia and elsewhere noted that, child birth at home is perceived as a natural family event in which relatives support and comfort the mother while child birth in hospital on the other hand is an event from which families are to some extent excluded. Furthermore hospital delivery is not popular among rural mothers who are strongly influenced by tradition (Ahmad et al -WHO 1995).

Whereas Bolam et al in a study on factors affecting home delivery in the Kathmandu valley Nepal health unit delivery was 81% and home delivery was 19%. In univariate analysis comparing home and institutional deliveries, maternal education, parity and poverty were associated with place of delivery. It has been noted that poor education and multiparity rather than poverty per se increase the risk of a home delivery in Kathmandu(Bolam et al 1998).

Mathew et al (1995) in survey to establish knowledge of TBAs in Nigeria on handling deliveries they noted that, many of the birth attendants were illiterate and only a few had been trained by a health professional. Majority did not recognize potentially serious complications occurring in the mother as a cause of concern.

## **CHAPTER THREE**

### **3.0. RESEARCH METHODOLOGY**

#### **3.1. STUDY AREA**

The study was conducted in Kigoma District; the district is among the three administrative districts in Kigoma region. This region is formed in the West end of the border with two countries Burundi North west and Democratic Republic of Congo on the western part the district shares a long border with D.R. Congo in the famous Lake Tanganyika. The district has 6 division 22 wards and 75 villages registered officially. The population size is 466,684. Women of bearing age (15 - 49 years). (District Annual Health Report 2000).

Majority of the inhabitants in the district are peasants, they grow cassava, beans, groundnuts and bananas as food crops. Coffee and palm oil are cash crops. Fishing is also practiced along Lake Tanganyika both as cash and food. Income per capital is T.shs 15,000 per head per annum.

The district experiences good rainfall which starts from October to May, communication by road is the main source of transportation and railway link with the famous central line from Dar es Salaam. The situation of roads is poor hence worse during the rain seasons. In the Lake Tanganyika there is the famous Liemba ship, which saves the Southern part to nearby countries. However the majority uses small outboard driven boats shunting out to Kigoma often not reliable in emergency cases. Hiring fishing boats in case of emergencies especially involving delivery is not possible to many families as the cost of fuel is very expensive in a distant of more than 40 km to the Maweni Regional hospital.

### 3.1.1 DISTRICT HEALTH SYSTEM

The district Health system is lead by the Council Health Management Team headed by the District Medical Officer. There are four (4) Health centers namely Buhingu situated along Lake Tanganyika south of Kigoma town. Bitale which is in Mahembe and Nguruka. Matyazo health center is a mission health center, it is equipped with enough medical, professionals and manages most delivery complications including Caesarian sections. There are 52 dispensaries in the district. All these are under the supervision of the DMO.

**Table 1: Distribution of health facilities in Kigoma District**

TYPE	OWNER		TOTAL
	GOVT	V.A	
Hospital	0	0	0
Health Centre	3	1	4
Dispensary	48	10	58
Total	51	11	62

### 3.2 STUDY TYPE

This was a descriptive cross sectional study.

### 3.3. VARIABLES USED

#### 3.3.1. Dependent Variable

Place of Delivery.

#### 3.3.2. Independent Variables

- Level of knowledge on maternal risk factors during pregnancy/labour and delivery.
- Parity.
- Distance.
- Community perception on Quality of Obstetric care.
- Social economics/cultural beliefs and traditions.

### **3.4. STUDY POPULATION**

The population sample was drawn from:

- Women in bearing age groups who had experienced pregnancy and delivery.
- Health providers in respective villages
- Village leaders and influential people.
- Women's groups in Kigoma district.

#### **3.4.1. SAMPLING TECHNIQUE**

A multistage sampling method was employed where by:

Simple random sampling was used to select two divisions out of six divisions. Four (4) wards from the selected divisions were selected by simple random sampling. Two (2) villages from each ward were selected through simple random sampling to make a total of eight (8) villages for study.

Systematic random sampling was applied to select fifty (50) households from each village, at a regular interval of six (6) until a sample size of 400 respondents was obtained for women of bearing age who had experienced pregnancy and delivery.

For focus group discussions, this was conveniently selected after consultations with village leaders in the respective village.

Eight (8) focus group discussions, one (1) from each village, which comprised of eight (8) participants, were involved. Thus making a total of sixty-four (64) respondents. Groups involved were village leaders and influential people, Community Own Resource Persons including TBAs, Health workers and women groups found in the village

Themes discussed included:

- Knowledge on maternal risks factors
- Reasons for not deliveries in health units
- Reasons for home delivery
- Opinion to improve maternal services.

### **3.4.2. SAMPLE SIZE**

The sample size of the study was obtained by using the following formula

$$n = \frac{P(100 - P)}{e^2}$$

Where by: n = I deal sample size

P = Prevalence

e = Standard error (2.5)

Source = Varkervisser (1991)

$$\text{Thus } n = \frac{50(100 - 50)}{2.5^2} = \frac{50 \times 50}{6.25} = 400 + 64 = 464.$$

Therefore sample size was 400 respondents.

Plus Sixty Four[64] from focus group discussions making a total of 464 respondents .

### **3.5.1 DATA COLLECTION TECHNIQUE.**

This was done using structured questionnaires interview both with open and closed questions. Focus group discussions tool used were focus group discussion guide.

### **3.5.1. DATA PROCESSING AND ANALYSIS**

The collected data is sorted manually and questionnaires were numbered. Before processing, however data was checked again for completeness and internal consistence. During processing data were summarized on the data master sheet.



The processed data was analyzed manually and later checked by Epi Info Version 6. Information obtained is presented in tables, bar charts, pie charts, and expressed in frequencies and percentages. Focus Group results are presented in a narrative summary form.

### **Knowledge on Maternal risk factors**

1. BP more than 140/90 mmHg
2. Height below 150cm
3. Bleeding during pregnancy/ delivery / postpartum
4. Mal-presentations
5. Pre-mature labour
6. Grand multiparity more than 5 deliveries
7. Previous complicated delivery (assisted delivery either C/S or Vacuum Extraction) i.e. obstructed labour/dystocia
8. Anaemia Hb below 10gm/dl
9. Prime parity - 1<sup>st</sup> pregnancy
10. Pregnancy at younger ages below 16 years.
11. Perennial tears/lacerations

<b>Knowledge category</b>	<b>scale</b>
High knowledge	- if respondents mention 6 and above maternal risks correctly.
Average knowledge	- if respondents mention 3 - 5 maternal risks correctly
Low knowledge	- if respondent mention 0 - 2 maternal risks correctly.

### **3.6. QUALITY CONTROL**

The principle investigator translated the questionnaires in Kiswahili to maintain reliability, which was followed by training research assistant and pre-testing to ensure consistence of the data collected.

### **3.7. ETHICAL CONSIDERATION**

Before starting data collection phase, the permission to continue with the study was asked from the district commissioner after the introduction letter from the institute was presented. The purpose of the study was clearly explained to the respondents. Those willing for the interview were included in the study. Confidentiality was assured to the respondents and questionnaires were numbered instead of using respondents name.

## CHAPTER FOUR

### 4.0. RESEARCH FINDINGS

This chapter presents the research findings obtained from the study area conducted in Kigoma District. This was a descriptive cross-sectional study. The purpose of the study was to determine the magnitude of deliveries in health units.

A sample size of 464 respondents was studied. This was composed of 400 respondents mothers who have experienced pregnancy and delivery for self-administered questionnaires. Also it had 64 respondents who were conveniently selected for FGD.

**Table 2: Distribution of respondents by age**

**(n = 400)**

Age group	n
16 - 25	146 (36.5%)
26 - 35	169 (42.25%)
36 - 45	81 (20.25%)
46 and above	4 (1%)
Total	400 (100%)

The table above indicates that majority 169 (42.25%) of the respondents were women of age group between 26 - 35 and small minority 4 (1%) were of the age 46 and above.

**Table 3: Distribution of respondents by level of education, (n = 400)**

**(n= 400)**

Education level	n
No formal education	164 (41%)
Primary education	233 (58.3%)
Secondary education	2 (0.5%)
College education	1 (0.3%)
Total	400 (100%)

The table above indicates that majority 233 (58.3%) of women were literate at least Primary education and 164 (41%) women had no formal education.

**Table 4: Distribution of respondents by parity**

**(n=400)**

Deliveries	Number of respondents
1 - 4	244 (61%)
5 - 8	126 (31.5%)
9 - 13	30 (7.5%)
Total	400 (100%)

The table shows that majority 244 (61%) of women interviewed had deliveries between 1 and 4, while about 126 (31.5%) of women were grand multiparous and 30 (7.5%) had the highest deliveries.

**Table 5: Distribution of respondents by marriage.**

**(n=400)**

Marital status	n
Married	360 (90%)
Not married	40 (10%)
Total	400 (100%)

The table above indicates that 360 (90%) of women interview were married.

**Figure 1: Distribution of respondents by place of delivery**

**(n = 400)**

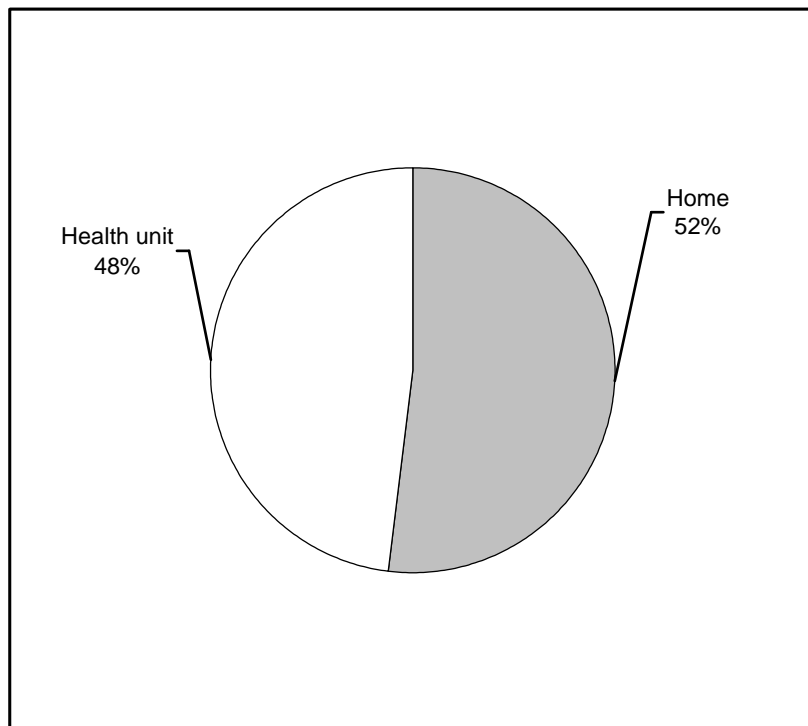


Figure 1 above shows the prevalence of home delivery in Kigoma district is higher 208 (52%) as compared to health unit 192 (48%) deliveries. This implies that majority of pregnant women deliver at home thus being subjected to high health risks.

**Table 6: Distribution of respondents by parity and place of delivery**  
(n = 400)

Place of Delivery	Parity	No of respondents
Home	1 - 4 deliveries	111 (27.75%)
	5 & above	89 (22.25%)
Health unit	1 - 4 deliveries	139 (34.75%)
	5 & above	61 (15.35%)
Total		400 (100%)

Table 6 above shows that women with deliveries from 1 -4 majority of them had their confinement in health unit 139 (34.75%), while women with 5 deliveries and above Majority of them 89 (22.25%) had their confinement at home. This indicates that Multipurous women who are already at risk do subject themselves to further dangers during delivery because of delivering outside health units.

**Table 7: Distribution of respondents by level of knowledge on maternal risks during pregnancy and delivery**  
(n = 400)

Level of knowledge	Number of Respondents
Low knowledge	218 (54.5%)
Average knowledgeable	158 (38%)
High Knowledgeable	30 (7.5%)
Total	400 (100%)

Table 7 shows that 218 (54.5%) of women interviewed had low knowledge on maternal risks during pregnancy, labour and delivery. This implies that these women could develop maternal risks in which they could not seek medical help as early as possible. Because they are not aware of the consequences of the symptoms they are experiencing.

**Table 8: Distribution of Respondents by Level of Education and Attendance to Antenatal Care (n = 400)**

Number of visits	No formal education	Primary school education	Secondary school education	College education	Total
	n	n	n	n	n
0	10 (2.5%)	10 (2.5%)	0 (0%)	0 (0%)	20 (5%)
1	2 (0.5%)	6 (1.5%)	0 (0%)	0 (0%)	8 (2%)
2	18 (4.5%)	16 (4%)	0 (0%)	1 (0.25%)	35 (8.75%)
3	49 (12.25%)	68 (17%)	1 (0.25%)	0 (0%)	118 (29.5%)
4	46 (11.5%)	73 (18.25%)	0 (0%)	0 (0%)	119 (29.75%)
5	23 (5.75%)	30 (7.5%)	0 (0%)	0 (0%)	53 (13.25%)
6	9 (2.25%)	17 (4.25%)	0 (0%)	0 (0%)	26 (6.5%)
7	2 (0.5%)	5 (1.25%)	0 (0%)	0 (0%)	7 (1.75%)
8	2 (0.5%)	5 (1.25%)	0 (0%)	0 (0%)	7 (1.75%)
9	3 (0.75%)	4 (1%)	0 (0%)	0 (0%)	7 (1.75%)
Total	164 (41%)	233 (58.25%)	2 (0.5%)	1 (0.25%)	400 (100%)

Table 8 Displays that respondent with primary education (at least literate) had more attendances by 233 (58.25%) compared with those who had no formal education 164(41%). This indicates that the more the educated women attend health units more often than illiterate ones.

**Table 9: Utilization of health unit for deliveries by women living far from and near the health unit (n = 400)**

Distance from the health facility	Used health facility for delivery	Did not use health facility for delivery	Total
	n	n	
0 - 5 km	121 (48.4%)	129 (51.6%)	250 (62.5%)
6 and above km	71 (37.3%)	79 (52.7%)	150 (37.50%)
Total	192 (48%)	208 (52%)	400 (100%)

Table 9 above indicates that 48.4% of women living within a distance of 5 km from health facility used health facility for delivery compared to only 37.3% of women living

6 and above km away from the nearest health facility. This difference is statically significant ( $\chi^2 = 140$ ,  $df = 1$ ,  $p < 0.001$ )

**Table 10: Distribution of respondents who had delivered at Home by Attendant assisting during delivery (n = 208)**

Attendant	Number of respondents
Trained TBA's	20 (9.66%)
Untrained TBA's	33 (15.95%)
Relatives	122 (58.98%)
Self help	32 (15.6%)
Total	208 (100%)

The table shows that majority 58.94% of women delivered with Assistance from their relatives. This indicates that relatives play a major role in influencing women's choice for place of delivery. Also the study noted that 32 (15.6%) of women had no assistant during delivery. This implies that such women are either unaware of complications they are facing or they not convinced to deliver in health units from different reasons.

**Table 11: Antenatal care visits and place of delivery**

**(n = 400)**

Ante-natal care visits	Place of Delivery	Respondents
None	Home	12 (3%)
	Health units	9 (2.25%)
1	Home	5 (1.25)
	Health unit	3 (0.75%)
2	Home	26 (6.50)
	Health unit	9 (2.25)
3	Home	65 (16.25)
	Health unit	51 (12.75)
4 and above	Home	96 (24)
	Health unit	124 (31)
	Total	400 (100%)



The table above shows that women who had antenatal care visits of 4 and above 124(31%) delivered in health units. However women with 0 - 3 antenatal care visits delivered at home. Had a high home delivery compared to Health unit (12, 5, 26,65) respectively.

**Figure 2: Relationship between Level of education and knowledge on maternal Risks during pregnancy labour/delivery (n = 400)**

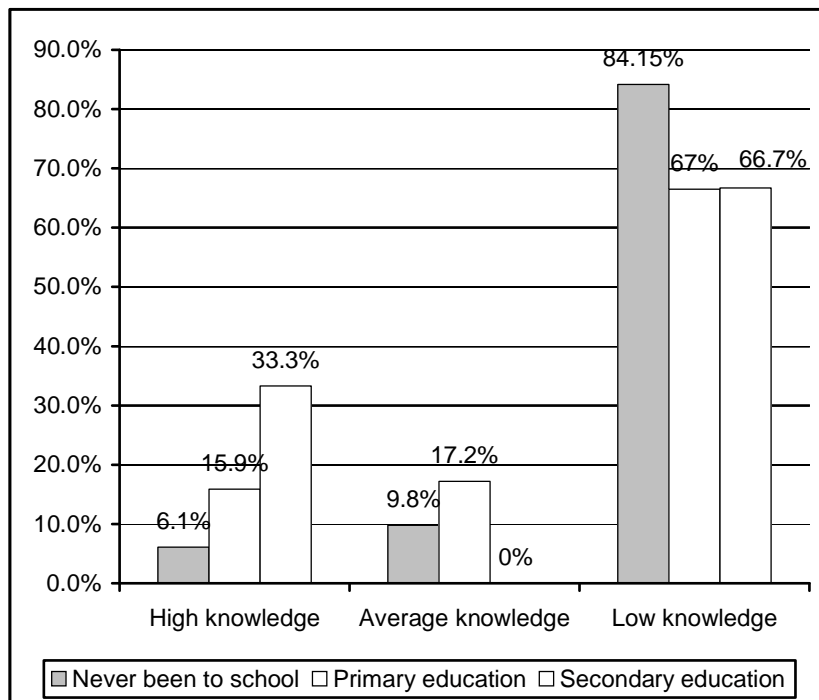


Figure 2 above shows that respondents with no formal education 138 (84.15%) had low knowledge on maternal risks during pregnancy, delivery and labour compared to 156 (67%) with primary education and 2(66.7%) with secondary education [ $\chi^2=16.69$  df 6 p > 0.001]. The result is not significant.

**Table 12: Relationship between age and place of delivery (n = 400)**

Age in years	Place of delivery		Total
	Health unit	Home	n
16 - 24	58 (51.33%)	55 (48.67%)	113 (100%)
25-35	91 (45.05%)	111 (54.95%)	202 (100%)
36-49	43 (50.59%)	42 (49.41%)	85 (100%)
Total	192 (48%)	208 (52%)	400 (100%)

The table shows that women aged between 25 - 35 years, majority 111(54.95%) had their deliveries at home and women aged between 36 - 49 42(49.45%) had their deliveries at home also, while women aged 16 - 24 years 58(51.33%) had their confinement in hospital. This indicates that age influences place of delivery, as the older the woman becomes the higher the chances of delivering at home.

**Table 13: Reasons given by mothers who had home delivery (n = 208)**

Reasons	Number of respondents
Sudden onset of labour	106 (50.96%)
Clients preference	48 (23.08%)
No health unit around (distance)	12 (5.77%)
High costs	11 (5.29%)
Presence of other attendants e.g TBAs, relatives	8 (3.85%)
Others	23 (11.06%)
Total	208 (100%)

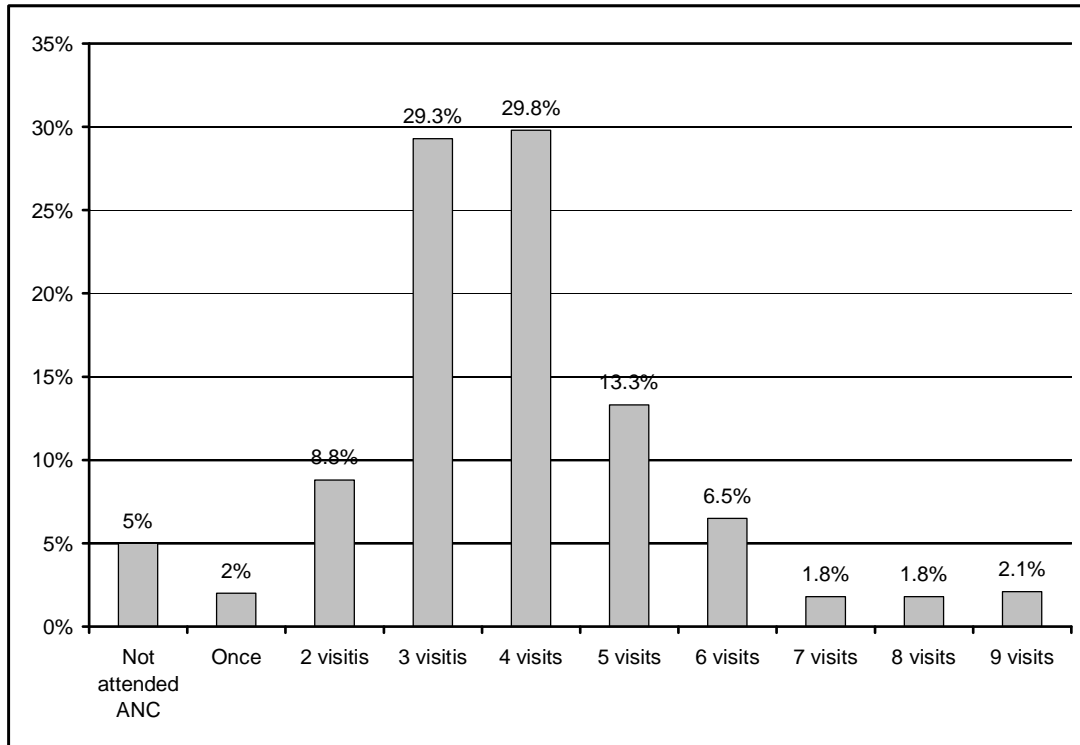
The above table shows that more than a half 106 (50.96%) of mothers who had home delivery had a sudden onset of labour, whereas 48(23.08%) preferred themselves to deliver at home. This indicates that these women who had sudden onset of labour could also be due to low knowledge on signs and symptoms of labour.

**Table 14: Reasons given by mothers who had health unit delivery (n = 192)**

Reasons	Number of respondents
Asked by ANC workers	93 (48.44%)
Clients preference	87 (45.31%)
No clear reasons	18 (6.25%)
Total	198 (100%)

The table above shows that nearly a half 93(48.44%) of mothers who had health unit delivery were advised by health workers. Whereas 87(45.3%) of mother deliver in health units on their preference. This indicates that health workers can influence mother to have a choice of place of delivery.

**Figure 3: Grouped bar chart showing frequency of ANC visits attendances by mothers ( n = 400)**



The above figure shows that the highest attendances made by pregnant women were four (4) visits. This is equivalent to 119[29.8%] of the respondents. It indicates that most mothers do not have regular visits thus liable of missing important information concerning their health status.

## **FOCUS GROUP DISCUSSION RESULTS**

### **Introduction**

Focus group discussion was conducted in eight (8) villages, which were selected for study. Respondents included village leaders and influential people, women groups and health workers. These groups were arranged by village executive officers (VEO). Groups had mixed participants women and male with the exception of women group, which comprised of women of bearing age. Groups were made of 8 participants.

### **Themes for FGD:**

- Knowledge on antenatal services
- Reasons for not delivering in health units
- Reasons for home deliveries

### **Respondents from village leaders and influential people**

About 5(62.5%) from five villages were found knowledgeable on antenatal services given to pregnant mothers, while 37.5% had no knowledge on Ante-natal services.

All 8(100%) groups said pregnant women should deliver in health unit.

### **Reasons given for not delivering in health units are:**

- High cost was found to be the prominent cause mentioned by all groups 8 (100%) this involved also traveling costs purchasing delivery equipments and referral costs.
- Sudden onset of labor was mentioned by 3 (37.5%) as the second cause of home delivery
- Lack of awareness of women on health unit's delivery was another cause of low health unit delivery by 3 groups (37.5%) of the respondents
- Poor knowledge of health workers in predicting precisely the date of delivery and unfavourable languages from health workers was mentioned by 3 (37.5%) of the respondents.

- Lack of awareness of men on maternal services was mentioned by 2 (25%) of the respondents.
- Others are inability of mothers to recognize they are in labour, fears of being operated for those who have been referred to higher centers and unfamiliar with health unit deliveries while lying on bed.

**Advised given to improve the situation are:**

- 5(62.5%) proposed that health education should be strengthened to the community in order to increase the awareness on conducting deliveries in health units.
- 4(50%) proposed that qualified health workers should be make available in all health units providing delivery services.
- Health workers should not humiliate clients this was mentioned by 4(50%) groups instead they should exercise maximum politenesses in handling pregnant mothers.
- Delivery equipments should be made available in health units. This was mentioned by 3(37.5%) of all respondents.
- Make deliveries free if possible was mentioned by 1(12.5%).

**Focus Group Discussion with Women group**

- The prominent cause of home delivery is sudden onset of labor (precipitate labor) this was mentioned by 4(80%) of the five groups interviewed.
- Difficult transport is also an obstacle to health unit delivery. This was mentioned by 3 (60%) of the respondents.
- Inability to predict the date of delivery is also a cause of low health unit delivery. This appeared in 2(40%) of respondents.
- 4(80%) groups responded that the difference between home delivery and health unit delivery is that while home delivery carries a lot of risks and when they happen there is little that can be done help the mother, whereas one 1(20%) said that home delivery is costless, has no traveling disturbances and mothers are handled with hearted sympathy by attendants always encouraged and not disappointed.

### **Focus group discussion with health workers**

Focus group discussion was held in 5 health units one health center and four 4 dispensaries.

Respondents were asked to mention the cause of home delivery.

3(60%) health unit workers described that high cost and distant were the common causes of home delivery. While infective health education to the community and presence of other attendants lie TBAs also contributed to the cause. This was mentioned by 40% of the respondents.

Sudden onset of labor also contributed the same as was mentioned by 2 (40%) of health unit workers. Normal delivery of the past pregnancy and hostile languages by health workers were mentioned each by one 1 (20%) of the health unit workers surveyed.

## CHAPTER FIVE

### 5.0 DISCUSSION.

The discussions in this chapter are based on research findings and literature review with its relationship to objectives of this study.

An overall 208 (52%) of respondents had their confinement at home while health unit delivery was 192 (48%) of the respondents. This implies that more than a half of pregnant mothers deliver at home settings where they can be subjected to high health risks. Similar findings were observed by Tanzania Demographic Health Survey (1996), which described health facility delivery being 47% and home delivery being 50%. Further more WHO estimates in developing countries deliveries in health units is only 40% while 54% of all deliveries are outside health units (WHO 1997)

It was found that women with deliveries of (1 – 4) majority of them had their confinement in health units 139 (34.75%), while women with 5 deliveries and above who constituted 89 (22.25%) had their confinement at home. This indicated that grand multiparous women who are already at risk do subject themselves to further dangers during delivery by delivering outside health units.

Study findings on distance show that there is an influence on place of delivery as women living far from the health units did deliver at home. The Focus group discussion with 8 villages showed negative perception on quality of obstetric care that is there were inadequate skilled health workers, shortage of equipments, supplies and negative attitude of health workers to clients. This could be due to poor distribution of skilled health workers, shortage of equipments, supplies and non employment.



Social Economic/Cultural factors are some of the reasons given for not delivering in health units among others; all 8(100%) focus group discussions said that high costs of hospital delivery was a major hindrance for mothers to have delivery in health units. The high costs was contributed to, by traveling costs to health units, purchasing delivery equipments, drugs and high referral costs.

More than half 218 (54.5%) of the interviewed women, had low knowledge on maternal risks during pregnancy, labour and delivery. A small minority 30 (7.5%) were knowledgeable on maternal risks. This implies that any risk woman could develop any of the mentioned risks and fell to seek/get medical help as early as possible simply because they are unaware of the consequences of the symptoms they are experiencing.

In this way, they subject themselves to serious life threatening dangers during labour and delivery unknowingly. A nice example of a similar situation is given by Chiwuzie et al (1995) who reported in a study done in Ekpoma Nigeria that the community was knowledgeable about hemorrhage in pregnancy and delivery, however because of the inability to recognize early warning signs they continued with traditional treatment even when clear evidence of danger existed.

In summary, the study findings taking into account the studied variables do not differ very much from findings by other researchers. Such findings like inadequate action by medical personnel, distance and deliveries ranging to 40% have been reported by WHO which does not differ very much from 48% found in this study and that of Tanzania Demographic Health Survey (1996) where delivery in health facilities was 47% .

However the noted difference was in home deliveries regarding the prime gravid and grandmultiparous. This study found out that it was the grandmultiparous who used to deliver at home and not both the prime gravid and grandmultiparous as found by Godfrey et al (1996).But negative perception of the quality of obstetric care was found in all other studies as in this study.

## **5.1. CONCLUSION**

From the study finding it has been observed that more than half of women had home delivery while less than half of women had health unit deliveries. A larger group of mothers were not knowledgeable to maternal risks during pregnancy and delivery. Moreover women with high parity were found to have delivered at home more than in health units and that distance was found to influence place of delivery because women who lived more than 6 km minority used health units for delivery. Also the study noted that many women who had delivered at home most of them were assisted during delivery by their relatives.

However women who had antenatal attendances of four (4) above had delivered in health units. Other factors found to influence low health unit delivery were social economic/ cultural factors in which focus group discussions noted that women were eager to deliver in health units but costs, absence of delivery equipments and negatively perceived attitudes about health personnel were among the major causes for low health unit delivery. However reasons given by mothers who had home deliveries was sudden onset of labour.

## **5.2. RECOMMENDATION**

- Health education to the community on advantages of conducting their deliveries in health units where skilled personnel will attend them should be intensified and made more effective.
- Train facility workers on good attitude to clients.
- CHMT should enough skilled professional of delivery equipments.
- According to this study the major inhibiting factors was lack of knowledge on the importance of health unit delivery and material risks associated with home delivery among women of bearing age. To improve the situation health education should be given to mothers and the community so as to equip them with knowledge on the importance of skilled attendant during childbirth.

## **HEALTH EDUCATION MODEL**

### **5.3.THEORETICAL PERSPECTIVE ON HEALTH EDUCATION INPUTS REGARDING TO LOW HEALTH UNIT DELIVERIES IN KIGOMA DISTRICT.**

#### **INTRODUCTION:**

Health education model is a guide or idea that can be used for explaining or teaching health education on health and/or health related problems. It consists of several health models that can be applied to a single health intervention depending on the problem to be dealt with.

Commonly used models are:-

- Health belief model (HBM)
- The theory of Reasoned Action (TRA)
- Beliefs, Attitude, subjective norms and enabling factors (BASNEF)
- Health Action Model (HAM)
- Communication of Innovation theory (CIT)

#### **HEALTH BELIEF MODEL.**

It highlights the role of beliefs in stimulating preventive health education. Unlike other models it provides a useful checklist for choosing the point to emphasize in any communication message especially the importance of perceived serious, susceptibility and preventability. (Hubley 1993).

#### **THE THEORY OF REASONED ACTION.**

The Theory of Reasoned Action (TRA) influences significant others on individuals intention to act. In this model Fishben and Ajzen improve an aspect of TRA analysis of health making by separating belief from attitudes (Fishben and Ajzen 1985). Though it compliments and involves aspect of health decision making by separating belief from attitude, it emphasizes the paramount importance of the influence of significant others on the individuals intention to act.

## **BELIEF, ATTITUDE, SUBJECTIVE NORMS AND ENABLING FACTORS (BASNEF).**

BASNEF examines behavior from the perspective of the underlying factors like beliefs, values social pressure and enabling factors that influence the community. (Hubley 1993).

## **HEALTH ACTION MODEL (HAM).**

HAM provides a comprehensive frame work in which major variables influencing health choices and action and their interrelationship are described and categorized, it is more powerful health model because is capable of incorporating other health related theories such as belief model and TRA.

In this study health action model (HAM) will be used as a perspective health education of factors contributing to how health unit deliveries among pregnant women in Kigoma district. HAM comprises the three systems of perception namely belief system motivation system and normative system.

### **HAM: Normative system.**

Normative system describes cultural and group behaviour. Norms may be acquired through with groups experience as well as parents. From the study findings mothers knowledge on maternal risks during pregnancy, labour and delivery is a problem. Mothers seemed to be influenced by relatives, for the delay to report to hospital if at all and usually in a serious condition which risks the health of the child and mother. Most of the women do not make decisions for their health care, instead they wait the husbands or mothers to decide on their behalf. These significant others (husband and mothers) need to know that, their delay in decision making endangers the life of their clients. Furthermore strong influences from traditional birth attendants again who had not been trained. However, as it has been stated earlier, women ought to understand that it is them who face the problems and that decision should not necessarily depend on significant others.

To reduce the complications that appear during pregnancy, labour/delivery due to these norms, effective health education is needed to educate the women and the community as a whole towards changing the behaviours, which are harmful.

The community should be knowledgeable to the dangers that might happen in pregnancy/delivery even if it is normal physiology in human life.

### **HAM: Belief system**

A belief system is a probability judgment that links some object to some attribute. The importance of belief in health action is to assist an individual to make positive judgment to intended action and perform.

The study shows that many respondents do not know whether being pregnant one is susceptible to many ill health conditions, and whether these problems are serious as they believe that pregnancy and child birth are normal physiologies. In a believe that God will help anyone at any place if he wished, so the importance of hospital delivery is not given enough concern.

The majority of women are reluctant in early seeking medical care even if they have been informed about their health status, clearly this may happen when a woman has strong beliefs on her traditional culture. The situation may worsen, if ever health workers have told her that her pregnancy is normal.

Belief about self in this context refers to the susceptibility of a pregnant woman to complications of pregnancy and childbirth.

Women may believe that they can bear children without developing any complications, either because they were told their pregnancies were normal by health workers, or through previous experiences observed to significant others, (mothers, relatives) or themselves having already delivered safe without assistance. However both health workers and mothers not excluding the community need to understand that, every pregnancy carries a risk of complication at anytime be during pregnancy period,

labour/delivery and the post partum period which can have serious outcomes (WHO 1998), hence, prompt and timely decision to seek health care is the most appropriate resort for their well being.

Therefore in this case health education is an important intervention to ensure that these women understand that although pregnancy is not a disease however once they are pregnant, and if not cared properly your pregnancy can have devastating outcome to both mother and child also the concern family. Women need to know that although family members in the expectation of getting a new family member may cheer pregnancy they are risking their lives from many complications, which are associated with.

**HAM: Motivation system.**

This describes a complex change of elements that ultimately determine the individual attitudes to the adopting it.

HAM also shares features of value expectancy theory (VET) which states that motivation involves not only effective goals, but also beliefs about the likelihood of a given course of action achieving such goals. In addition, HAM also emphasizes the centrality of drive forces in determining health action. HAM also asserts that a given value may give rise to variety of particular attitudes.

Fishben et al (1986) observes that “an attitude represents a person’s general feeling of favourableness towards some stimulus object” while values are those emotionally changed beliefs and elements of faith which make up what an individual considers worth while in life. Women in Kigoma district value to deliver at home in the presence of the significant others (grand mothers, TBAs) because of their traditional culture. In this case even if complications develop it is difficult for these significant others (mothers, relatives) to detect them early enough hence refer them to higher centres with no delay. Moreover, clarification of values of an individual woman or her family will facilitate women’s intention to seek medical early during their illness.

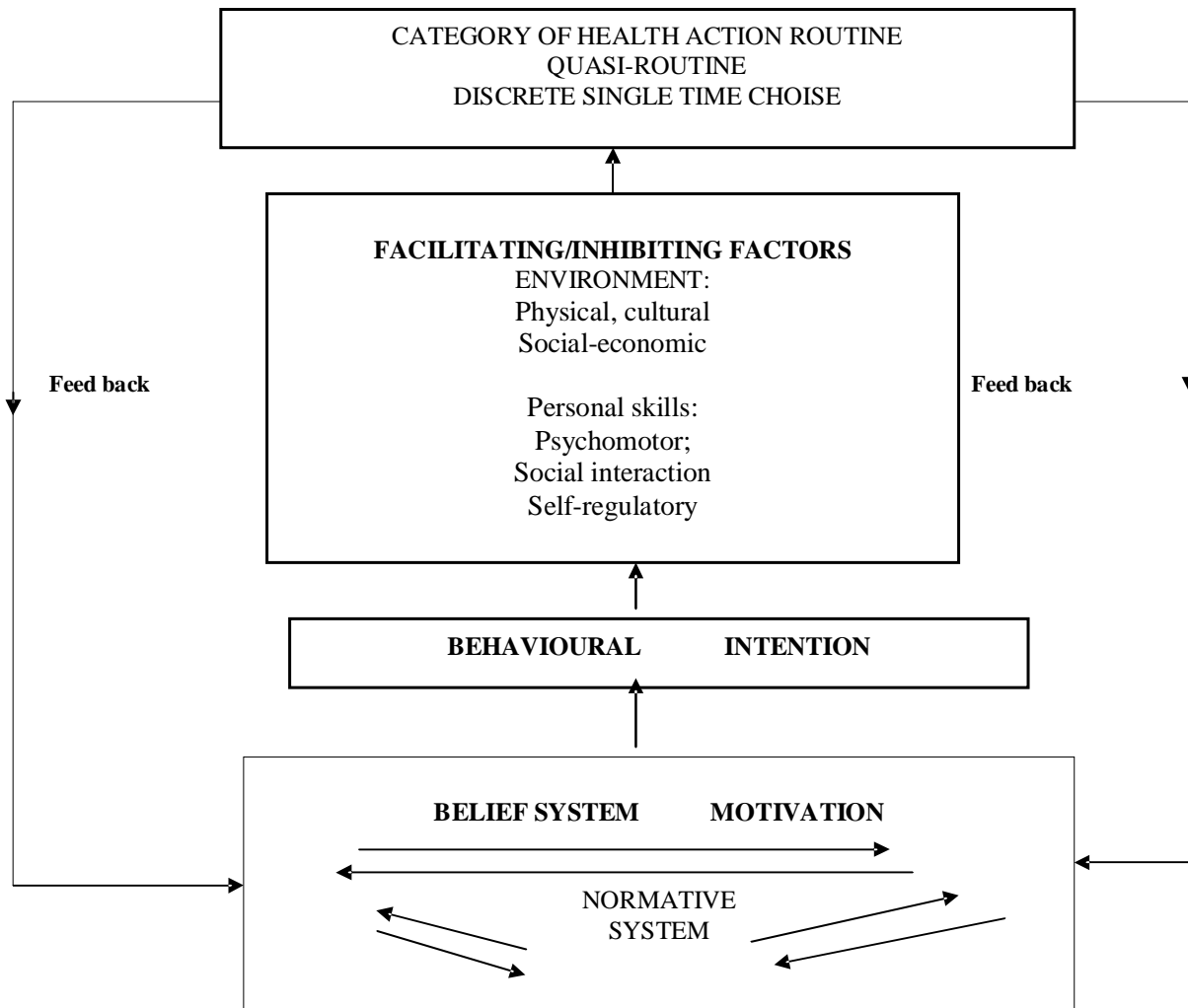
People will only perform a given behaviour if they see that it will provide some benefits. In this case pregnant women will be willing to have their confinement in hospital if they are given an effective health education and understand that delivery in health units prevents many unnecessary complications. The aim of the health education programme is to ensure that women and their families are well informed and influenced to take measures that can prevent maternal complications occurring during pregnancy and delivery by conducting their deliveries in health units. Maternal complications during delivery are preventable and not only God's wish, as many may believe.

**HAM – Facilitating/inhibiting factors.**

Once a decision is made, facilitating factors environmental circumstances, knowledge and skills enable the individual to undertake the health action. These are psychosocial and environmental circumstances which inhibit or facilitate decision-making (Hubley, 1993).

The HAM argues that the facilitating factors should be made available to enable those who have already formed a decision to practice the health action. In this case the availability of skilled staff and presence of reproductive health service should be made accessible to mothers.

**Figure 4: An overview of Health Action Model**



Source: Tones et al (1994)

The above Health Action Model (HAM) is used to explain how an individual can make a decision to reach an intended health action.



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**ANNEX 1**

**QUESTIONNAIRE ON FACTORS INFLUENCING LOW DELIVERIES IN HEALTH FACILITIES**

Name of Interviewer... ..

Age of the mother... ..

Parity... ..

**TICK APPROPRIATELY**

1. Are you married?

Married ( )

Single ( )

Divorced ( )

2. What is your level of education?

No education ( )

Primary school ( )

Secondary school ( )

High education ( )

3. Do you have children?

Yes ( )

No ( )

If Yes, How Many... ..

4. How many antenatal visits did you attend during your last pregnancy?... ..

5. What risk factors are you told concerning pregnancy by health providers?

.....

6. Were you diagnosed to have risk factors in your last pregnancy?

.....

7. How far is your home place to health unit?

(0 –5) kms < 5 km ( )

> 5km ( )

8. How long does it take you to reach a health unit?  
 Less than one hour ( )  
 More than one hour ( )
9. How do you travel to the health unit?  
 On foot ( )  
 Public transport ( )  
 My own transport ( )
10. Where did your last delivery take place?  
 Health unit ( )  
 Home ( )
11. Where will your next pregnancy, if you were to become pregnant take place  
 Home ( )  
 TBA ( )  
 Hospital ( )
12. Why didn't you deliver at health unit? Give reasons... ..
13. Are you satisfied with services given at health units?  
 Yes ( )  
 No ( )  
 If no give reasons... ..
14. What are your comments regarding obstetric services provided by your health unit? .. ..
15. What are the antenatal services offered to pregnant women at antenatal clinic  
 (a)... ..  
 (b)... ..  
 (c)... ..  
 (d) ... ..
16. At what gestation age a pregnant woman is supposed to start antenatal clinic... ..

17. What maternal risk factor necessitate a pregnant woman to deliver at a health unit
- (a) .....
  - (b) .....
  - (c) .....
  - (d).....
  - Others... ..

**QUESTION FOR MOTHERS WHO DELIVERED AT HOME**

1. Why did you deliver at home
  - (i) Preferred at home ( )
  - (ii) Services not available ( )
  - (iii) Does not no where to go ( )
  - Couldn't reach clinic on time ( )
  - Other reason ( )
2. Who assisted you with the delivery? .....
- Who else... ..
3. Were you asked to deliver to hospital or health unit?
  - Yes ( )
  - No ( )
4. Did you experience any threatening difficult during delivery or after delivery?
  - Yes ( )
  - No ( )
5. If yes, what was it... ..
6. What did you do with the problems... ..



**ANNEX 2**

**FOCUS GROUP DISCUSSION FOR VILLAGE LEADERS AND INFLUENTIAL LEADERS.**

Name of facilitator... ..

**Questions:**

1. From your experience where do you think pregnant women should deliver?
2. Why do pregnant women deliver at home?
3. What advice will you give concerning improving the delivery services in your health facility?

**ANNEX 3**

**FOCUS GROUP DISCUSSION FOR WOMEN GROUPS.**

Name of facilitator... ..

**Questions.**

1. Why do pregnant women prefer to deliver at home?
2. Is there any difference between health unit delivery and home delivery?
3. What are the advantages of home delivery compared to hospital delivery?
4. What are the dangers of home delivery?

## **ANNEX 2:**

### **QUESTIONS FOR FOCUS GROUP DISCUSSION WITH HEALTH WORKERS**

1. Do you attend deliveries in your facility?
2. Where do most pregnant mothers deliveries?
3. Why don't they deliver in health units?
4. What are your comments concerning low health units delivery?
5. Who should deliver in health units?
6. What are the consequences of not delivering in health units?
7. What is the coverage of antenatal services?
8. How many women do deliver in your health unit/month?

**ANNEX 4:**

**MAP OF KIGOMA DISTRICT**

**ANNEX 5:**

**PERMISSION LETTER**