WOMENS BIRTH EXPERIENCES: REASONS FOR CHOICE OF A PLACE FOR DELIVERY AMONG MOTHERS IN ZANZIBAR NORTH REGION

By

Talhiya Abdulhakim Yahya

A Dissertation Submitted In Partial Fulfillment of the Requirements for the Degree of Master of Public Health of the Muhimbili University of Health and Allied Sciences

November 2009

Certification

The undersigned certifies that he has read and hereby recommends for acceptance by the Muhimbili University of Health and Allied Sciences a dissertation entitled "***Women's birth experiences: reasons for choice of a place for delivery among mothers in Zanzibar north***" in partial fulfillment of the requirements for the degree of Master of Public Health of Muhimbili University of Health and Allied Sciences

Signature: _____

fw Prof.E.Muhondwa (Supervisor)

Date: 21/11/2009

Declaration and Copyright

I, **Talhiya Abdulhakim Yahya**, declare that this dissertation is my own original work and that it has not been submitted to any university for a similar degree or any other degree award.

Candidate's signature: Yahya

Date 21/11/2009

This dissertation is copyright material protected under the Berne Convention, the Copyright Act 1999 and other international and national enactments, in that behalf on intellectual property. It may not be reproduced by any means, in full or in part, except for short extracts in fair dealing, for research or private study, critical scholarly review or discourse with an acknowledgement, without the written permission of the Directorate of Postgraduate Studies, on behalf of both the author and the Muhimbili University of Health And Allied Sciences.

Acknowledgement

I would like to express my sincere appreciation to my supervisor Prof Muhondwa for his enthusiasm and support throughout this study.

Special thanks go to my husband for his unlimited support in every way possible. I have no words to express the depth of my appreciation.

I would also like to acknowledge the support of my sister Asma Awadh and her family in looking out for my children throughout this busy year as well as giving me moral support.

I am grateful to Dr Kakoko the convener for his timely assistance.

Thanks go to my fellow MPH class members especially Agnes Buchwa for their encouragement and support. And to Christopher Mshana for his uncomplaining assistance on technical issues.

Dedication

This work is dedicated to my dear late mother Mmanga Said and my husband Jafary H Liana.

Abstract

More than half a million women die each year of pregnancy or pregnancy related conditions. Most of these are in the third world countries. In Tanzania the Maternal Mortality Rate (MMR) is presently 578 per 100,000 live births in Tanzania mainland and 377 per 100000 live births in Zanzibar. The single most critical intervention for safe motherhood is to ensure that women receive care during delivery by skilled health personnel. However only 47% of women in Tanzania deliver at a health facility. In Tanzania and especially Zanzibar we see a dearth of research on maternal health and especially choices made by the users or potential users of maternal health services. This study therefore aimed to find out the factors influencing choice of delivery place among mothers in Zanzibar north region. It also addressed the levels of patient satisfaction with services either in the health facility or at home compared to the birth experiences of those who changed birth place in the last five years. The methodology used was a cross sectional survey using a questionnaire with closed and open ended questions which was administered to 300 respondents with the assistance of four research assistants. Analysis was done by entering the data in spss program and generating appropriate outputs for reporting and discussion. 56.7 % of the respondents delivered the last born child at home. The factors affecting this choice were found to be spouse's education, parity, ward of residence and cost of delivery. Also significant were employment status, mothers' education, ANC attendance and marital status. The most common reason found for health facility delivery was that the health facility is a safer place to deliver while the most commonly stated reason for home deliveries were the cost of health facility delivery being too high and the distance to the health facility being too far. Satisfaction with birth experience was high both for those who delivered in the health facility and at home. For those who delivered at home there were high satisfaction levels with the services provided by the TBA if present. It is recommended that the government should provide sufficient delivery supplies to the public health facilities so that delivery services can in reality be free. There should also be continuing research on women's perspectives regarding their needs.

Table of Contents

Certification iii

Declaration and Copyright iv

Acknowledgement v

Dedication vi

Abstract vii

Table of Contents viii

List of Table xi

Abbreviations xiii

Definition of terms xiv

1.0 INTRODUCTION 1

1.1 Background 1

1.2 Problem statement 3

1.3 Rationale of the Study 4

1.4 General objective 5

1.5 Specific objectives 5

2.0 LITERATURE REVIEW 6

3.0 METHODOLOGY 16

3.1 Study design 16

3.2 Study area 16

3.3 Study population 19

3.4 Sampling procedure 19

3.5 Study variables 20

3.6 Sample size estimation 21

3.7 Data collection procedure 22

3.8 Pre-testing of the study tool 22

3.9 Limitations 23

3.10 Ethical considerations 23

3.11 Data analysis 24

4.0 RESULTS 25

4.1 Description of study participants. 25

4.2 Predictors of place of delivery 28

4.3 Patient satisfaction 39

4.4 Comparison of past two birth experiences 46

5.0 DISCUSSION 48

5.1 Place of delivery 48

5.2 Reasons for choice of place of delivery 48

5.3 Patient satisfaction 51

5.4 Suggestions for improvements of birth experience 53

5.5 Comparison of the past two birth experiences. 54

6.0 CONCLUSION 55

6.1 RECOMMENDATIONS 56

REFERENCES 57

APPENDICES .....

Appendix 1 Questionnaire on predictors of choice of place of delivery .....

Appendix 2 Questionnaire on predictors of choice of place of delivery .....

Appendix 3: Informed Consent Form, English Version .....

Appendix 4 : Informed Consent Form, Swahili Version .....

List of Table

Table 1. Socio Demographic Characteristics of Respondents in Zanzibar North Region. 2009 26

Table 2: Reasons for home delivery 28

Table 3: Reasons for health facility delivery 29

Table 4: Place of delivery by spouse's education 30

Table 5: Place of delivery by employment status 31

Table 6: Mother's education with delivery place 32

Table 7: Place of delivery with shehia of residence 34

Table 8: Attendance at Delivery by Mothers Education 35

Table 9: Attendance at Delivery by Fathers Education 36

Table 10: Cost of delivery and place of delivery 37

Table 11: Source of money for delivery costs 38

Table 12: Sufficient information with level of education 40

Table 13: Reported availability of basic amenities at the health facility 41

Table 14: Reported presence of some facility factors contributing to patient satisfaction 42

Table 15: Perception on waiting time at the reception 43

Table 16: Level of satisfaction with birth experience by place of delivery.....43

Table 17: Suggestions given for improvement of birth experience.....45

Table 18: If you delivered at a different place from the last birth why did you change your choice of delivery place? 46

Abbreviations

MMR	Maternal Mortality Ratio
WHO	World Health Organization
UNFPA	United Nations Family Planning Association
URT	United Republic Of Tanzania
ICPD	International Conference of Population and Development
TBA	Traditional Birth Attendant
SMI	Safe Motherhood Initiative
MoHSW	Ministry Of Health and Social Welfare
MCH	Maternal and Child Health
TDHS	Tanzania Demographic Health Survey
ANC	Antenatal Clinic

Definition of terms

Amenities of care:	In this study was taken to mean cleanliness of facility and toilets and availability of water in the toilets.
MMR:	Maternal Mortality Ratio is the number of women who die from any cause related to or aggravated by pregnancy and childbirth or within 42 days of termination of pregnancy irrespective of the direction and site of the pregnancy for 100,000 live births.
Parity:	The number of children that a woman has given birth to.
Shehia;	Equivalent of a ward in Zanzibar
Skilled health personnel:	An accredited health professional - such as a midwife, doctor or nurse who has been educated and trained to proficiency in the skills needed to manage normal (uncomplicated) pregnancies, childbirth and the immediate postnatal period, and in the identification, management and referral of complications in women and newborns. (World Health Organization, 2004)
Traditional birth attendant:	Traditional, independent (of the health system), non-formally trained and community-based providers of care during

pregnancy, childbirth and the postnatal period. (World Health Organization, 2004)

1.0 INTRODUCTION

1.1 Background

Pregnancy and childbirth are natural processes but there are inherent risks involved (1). More than half a million women worldwide die each year of pregnancy or pregnancy related conditions. The age at which women begin or stop child-bearing, the interval between each birth, the total number of lifetime pregnancies and the socio cultural and economic circumstances in which women live all influence maternal morbidity and mortality. Although approximately 90 per cent of countries have policies that permit abortion under varying legal conditions to save the life of the mother, a significant proportion of the abortions carried out are self-induced or otherwise unsafe, leading to a large fraction of maternal deaths or to permanent injury to the women involved (2). Sixty to eighty percent of maternal deaths are due to obstetric hemorrhage, obstructed labor, obstetric sepsis, hypertensive disorders of pregnancy, and complications of unsafe abortion (3). Another 20 million suffer from long term disabilities. Long-term consequences of pregnancy-related complications include uterine prolapse, pelvic inflammatory disease, fistula, incontinence, infertility, and pain during sexual intercourse. The consequences also affect the family of the woman since she is often the primary caretaker of the family. In some developing countries, if the mother dies, the risk of death for her children under age 5 is doubled or tripled (1).

In 1987 the World Bank, in collaboration with World Health Organization (WHO) and United Nations Family Planning Association (UNFPA), sponsored a conference on safe motherhood in Nairobi, Kenya to help raise global awareness about the impact of maternal mortality and

morbidity. The conference launched the Safe Motherhood Initiative (SMI), which issued an international call to action to reduce maternal mortality and morbidity by one half by the year 2000 (4). The International Conference on Population Development (ICPD) held in Cairo also emphasized the need to reduce maternal mortality and morbidity, these goals were reiterated by the Millennium Development Goals (MDG's) which set out to reduce by three quarters the maternal mortality ratio and achieve universal access to reproductive health by 2015 (5).

The single most critical intervention for safe motherhood is to ensure that women receive care during delivery by skilled health personnel – a doctor, nurse or midwife – with the necessary skills to handle normal deliveries safely, to recognize the onset of complications beyond their capacity and to refer the mother for emergency care as needed. The gap between the potential and actual benefits of health care is large in the area of reproductive health. Cultural and educational factors may obscure the recognition of illness and the potential benefits from health care, while economic constraints may suppress utilization, even if benefits are recognized (4).

In Tanzania the MMR has remained fairly constant for the past ten years and is presently 578 per 100,000 live births in Tanzania mainland and 377 per 100000 live births in Zanzibar .This is despite the government focus on reproductive and child health services, exemption policy for pregnant women and public health campaigns to encourage antenatal clinic attendance. With the antenatal clinic attendance being 94% for at least one visit, delivery at a health facility is still only 47%. Out of the 53% of deliveries which take place at home, 31% are assisted by relatives, 19% by traditional birth attendants and 3% have no assistance .There are

marked variations among regions. In Zanzibar North for instance less than one-fourth of children are delivered in health facilities (6).

One of the reasons for low rate of health facility deliveries is the poor quality of care, exemplified by shortage of qualified staff, low staff morale, lack of quality control and patient management.

The quality of maternal care services in Tanzania is still unsatisfactory and improvements are very slow. Prospective mothers have to endure rude health workers, dirty or uncomfortable environments in health facilities, lack of equipment and inadequately trained or unskilled health care. Privacy is considered unnecessary to mothers during labour and delivery and so they sometimes have to bear the indignities of vaginal examinations without privacy. As women become more knowledgeable they demand higher quality care and may choose to deliver at home without skilled care perceiving that to be of higher quality than the care she gets in the health facilities. Making a decision to go to a health facility means that the client has to perceive that care as necessary or desirable at that time or for that condition.

1.2 Problem statement

Maternal mortality in Tanzania is one of the leading health problems evidenced by a maternal mortality ratio that has remained high in the past five years and is currently 578 per 100,000 live births (6). The leading cause of death is haemorrhage which can be reduced by attendance by skilled health personnel in a supportive environment. However, only 47% of women deliver at a health facility.

The reasons for low utilization include poor quality of care at the health facilities, and poor accessibility which includes cost as well as distance .Skilled attendance at home deliveries is lacking and therefore health facility attendance is necessary for proper care and management of obstetric complications. Expectations by expectant mothers of obstetric care provided at health care facilities are not met leading to delivering away from health care facilities.

There are few studies in which the views of mothers are presented concerning their choice of delivery place and their perception regarding quality of care.

There is a gap in local studies which describe the mothers' labour and delivery experience from their point of view. We need to know what influences acceptance and use of health care services and hence delivery in health facilities by expectant mothers.

1.3 Rationale of the Study

The best way to reduce maternal mortality is to increase attendance by skilled health personnel. The high and constant maternal mortality ratio and low rate of deliveries at health facilities suggests a problem with utilization. Even with the advent of the exemption system for pregnant mothers there has been little improvement in the rate of health centre deliveries.

In Zanzibar especially, we see a dearth of research on maternal health and especially choices made by the users or potential users of maternal health services. On an island with a population of less than one million and health facilities within 5 km of every citizen we would expect health facility deliveries to be very high. This is not the case however, and this study aimed to find out the reasons for this.

The results from this study can then add knowledge of maternal choices in Zanzibar which can eventually guide policy makers on the best ways to tackle the problem of high number of home deliveries despite high antenatal clinic attendance by addressing the factors uncovered by this study and to plan appropriate interventions.

1.4 General objective

To assess birth experiences of mothers in Zanzibar north region.

1.5 Specific objectives

1. To measure the proportion of women who delivered at home in the past five years in Zanzibar north region.

2. To identify the reasons for choice of place of delivery in the last pregnancy among women in Zanzibar north region.

3. To determine the level of client satisfaction among those delivering in health facilities and those delivering at home in Zanzibar north region in the last five years.

4. To compare birth experiences of last two consecutive deliveries among women in Zanzibar north region in the last five years.

2.0 LITERATURE REVIEW

Only two thirds of hospitals and less than ten per cent of all facilities have signal functions in emergency obstetric care as defined for the averting maternal death and disability project in Tanzania. These have been deemed necessary to decrease the maternal mortality by ensuring skilled attendance (7). Where health care is available, the quality is often severely deficient, leaving its effectiveness well short of potential efficacy .If the available health care is of poor quality, it is not surprising to find there is little demand for it.

Donabedian (1993) defines acceptability as "conformity to the wishes, desires and expectations of patients and responsible members of their families." He further divides this definition into five parts: accessibility, patient practitioner relationship, amenities of care, patient preferences regarding effects risks and costs of care and what patients consider to be fair and equitable (8).

Accessibility

Tanzania is a developing country with a large part of its population living below the poverty line. The income of the household, the charges made for health care, and costs incurred to reach health services are therefore key determinants in the choice of place of delivery. Poverty is associated with poorer education and poorer access to health services in terms of both distance and cost thus increasing the disadvantage associated with poor socio economic status (9). Socioeconomic disparities in health care utilization are large in most developing countries. Constraints are determined by the income of the household, the charges made for health care, and costs incurred to reach health services. Maternal costs, especially when complications

occur, can be very expensive. In a study in Ghana (10) one of the respondents stated that… '*I delivered at (health facility B) because it is cheaper. If I had money I would have delivered somewhere else because of my previous experience at (health facility B) I lost my baby' (p 38)*, while in Mpwapwa in a study conducted by CARE International (11) one woman said

> "*the costs involved in one day of giving birth are different from those involved in nine months of attending clinic. The cost of that one day is like 12 months or more ! You could go to give birth and you are told to pay 15000 and you don't have that money in your pocket*"(p8).

A recent review by WHO found that the direct costs of maternal health care range between one and five percent of total annual household expenditures, rising to between five and thirty four percent if the woman suffers a maternal complication . Cost is also related to distance; the further the health facility is the more a woman has to spend on transport. In the rural areas where the condition of the roads is poor, time and effort used to reach the health facility is also daunting (12). In a study done in Mpwapwa by CARE International (11) one woman said " *the road is bad , so transport is a problem and my husband doesn't have money. I would have liked to give birth in hospital"(p7).*

Problems in accessing health care are felt most acutely by rural women, older women, women with larger families; divorced, separated, or widowed women; and women not working for cash. The major perceived barriers to women's access to health services are lack of money (40 percent), the distance to a health facility (38 percent), and having to take transport (37 percent) (6).In Kenya some women were found to prefer delivery at home with the TBA due to lower

costs and ease of paying (13). One interviewee reported that ……."*You have to pay them but they are not as strict at the hospitals. You can also build a good relationship by buying her some sugar, flour or something small for use in the house once in a while"* (p 52).

A study done in Malawi shows that cost was a factor limiting access to care in a mission run hospital which was seen to have better quality of health care . Government run hospitals also expect women to buy delivery supplies like cotton wool, oxytocin, a plastic sheet etc. Informal out of pocket payments are very common in public health care facilities; these increase the socioeconomic differences in health care utilization (1).The women interviewed stated that it was found that Traditional Birth Attendants (TBA's) also charged a small fee. A study done in Kenya showed that TBA's were considered less skilled but easily accessible especially at night (13).

In Zanzibar, reproductive health services were provided at cost and user charges were widely reported to be collected at most public health facilities. Over 86% of respondents interviewed said they paid for reproductive healthcare services. Reproductive health services charged include those related to purchase of surgical gloves and other hygienic supplies needed during delivery at health facilities. Other payments related to child registration cards, laboratory services, admission at Mother And Child Health (MCH) wards etc (14).

The choice therefore becomes which is the most cost effective health service available rather than the optimum choice for delivery.

Socio cultural factors

In societies where health care is widespread, women's status may not affect their access to reproductive health care services. In other societies however, increased empowerment of women is likely to be associated with increased ability to seek out and use health services to better meet their reproductive health needs (6). It has been found that in Tanzania women with at least secondary education are 2.6 times more likely to deliver at a health facility than those with no education and eleven times more likely to deliver by caesarean section than those with no education (9).

Culture plays an important role in pregnancy and motherhood in most African cultures. Education however has been shown to down play the role of culture with mothers from a higher education background paying less heed to cultural constraints or dictations. Low demand for modern health interventions often derives from deep-rooted attitudes that reflect culture and social norms (3).

Gender attitudes and roles are particularly important determinants of health seeking behavior (15). Cultural norms in some societies restrict the movements of women. In Zanzibar the culture favors male dominance in decision making and women spend more time indoors only going out with permission from their husbands (16). In a study in Malawi of the women who delivered at home, 13% said that they did so because they had either been forbidden to go to the health centre, or advised to stay at home by an older female relation (11). In Bolam's study in Nepal reasons for institutional delivery were not explored the authors focusing only on

reasons for choosing home delivery, nor how the decision process was made within the household (18).

Recognition of illness and the potential benefits of treatment are prerequisites for health care demand .Before a woman seeks care she must recognize the signs of illness. A lack of educational opportunities and poor understanding of health related matters mean that a lot of women are not familiar with the signs and symptoms of different diseases especially those associated with the reproductive organs (16).

In Nepal multiparity as well as poor maternal education was more likely to result in a home delivery (18).

Perceived quality of care

A detailed survey in a rural region of India found very low use of public health facilities despite these being in principle, free. The reason is the very poor quality of care, although the private sector alternatives are also of dubious quality (15).In a study in Ghana (10) one woman reported "*the attendants were angry with me when I was in labour. They were impatient with me" (p 37).* In Tanzania women also report barriers to obtaining health care that are associated with quality of care: 14 percent of women report that unfriendly providers are a big problem and 8 percent cite the concern that there may not be a female provider (6). Clean toilets and surroundings, distance to the toilet and presence of water are amenities that contribute to perception of quality of the health services (8).The absence of facilities for providing food are also a deterrent to delivering at health facilities. In a study done in Mtwara (p 19) one of the

respondents had this to say....."*going to hospital creates the problem of carrying food and I don't have anyone to leave my family with.*"(p 868)

A study in rural Tanzania showed that health system factors such as staff attitudes also had an impact on the choice of delivery. Poor staff attitude was perceived to exist in many health facilities including abusive language, denying women service, lacking compassion and refusing to assist properly (11).

> *We encounter many problems during delivery .For example, I gave birth but I had a tear, and my father said they should stitch me up, they answered 'yes, but we do not have a needle or thread. You must give us money so we can go and buy them at the pharmacy... Similarly I did not have the rubber mat for delivery and they asked me for money. I gave them money and shortly after, the rubber mat arrived .I wondered, did they really buy that from the pharmacy? (p7)*

In Kenya (13) one woman was reported as saying "*You are told to move to make space for another*" (*p 60*).

Lengthy admission procedures, inefficient referral system and long waiting time are also very tedious and confusing for the clients (13). A surprisingly large percentage (21%) indicated that they delivered their children at home because their own experience or that of others had shown that certain midwives were very unkind to mothers during labour (20) .One of the women in a study in rural Tanzania (11) said "To *be honest, for now, hospitals are not good. For example when requesting assistance from nurses, they ask you what kind of help do you want? At the time you had sex you felt pleasured. Now why are you complaining?"(p12)*

Also there is no individualized treatment at the hospital due to many patients and not enough health workers to cater to all of them. As one woman interviewed in Kenya (13) said,

> *There are so many people in the hospital that the doctor is not able to concentrate on you at all. He is called from all sides. It will now force the relatives who have brought you to keep vigil so that the moment they see the [baby's] head, they call him to attend to you. In fact you end up delivering alone and wonder what the use of having him there with you was. And you still have to pay him some money for services he did not render (p 69).*

The number and quality of health care staff is also limited as evidenced by one woman in Tanzania (11) who said "*our health centre should also have experts like the hospital, where we are attended by people wearing white or blue uniforms, but at our health centre they wear orange.*"(p 5)

Patients' perceptions of risk or benefits of care

In Nairobi's informal settlements a qualitative study was done and one respondent indicated that she preferred delivering in hospitals because they have the necessary equipment and there are medical staff who know how to do surgery, medicines etc; another woman indicated the presence of blood for possible transfusion and drips when she got weak as advantages of delivering in hospital (13). In Malawi when the expectant mothers were asked to give the reasons for wanting to deliver at the health centre, 90% of the respondents indicated that they could be referred to hospital much more quickly from the health centre (17). One mother in a study in Ghana (10) stated that '*I delivered at (health facility A) because this is my first child.*

If you delivered anywhere else and you develop a complication they would refer you there eventually and so I decided to go there as a first choice' (p38).

Some women see hospital deliveries as a threat to their health or culture as a woman in Malawi (17) said "*You see some of the mothers who die and lose their babies are as a result of the action of the nurses. If it had not been for the other nurse, my baby could have dropped to the floor and anything could have happened*" *(p72).* While another woman in the same study had this to say *'"those who have an operation, they get fluids and blood which is a threat to our culture' (p74).*

Emotional support

Traditionally most women during delivery and labour at home had a female companion to support them and give them moral and physical support. This was essential due to the nature of the whole process of childbirth which is painful, risky, and uncomfortable. For the new expectant mother it is more so as it is a new and strange experience (16). Emotional support has been shown to decrease duration of labour, increase satisfaction; increase chances of spontaneous delivery. Women who receive continuous, one-on-one support during pregnancy are less likely to have regional or any analgesia / anaesthesia, an operative vaginal birth and a caesarean section. The positive effects of support are stronger in women who have no other source of support and in settings where epidural anaesthesia and electronic fetal monitoring are not used routinely (21).

Patient satisfaction

Patient satisfaction occurs when patient expectations are fulfilled. In other words, it is the overall level of contentment with a service/product experience (22). Satisfied patients are more likely to use the service in question again therefore this guarantees continuity of care and attendance at the health facility. They are also more likely to comply with treatment guidelines either prescription instructions, diet restrictions etc (23). Patient experience is associated with contact with human and physical resources, cognition i.e. the level to which the client understands what is happening to her and why, the respect and dignity of care and the emotional support she receives during labour and beyond (24).

Another strong indicator of a patient's satisfaction with her experience delivering a baby at a health facility is being willing to recommend that facility to others. When asked about their recommendations one woman in Ghana (10) said that *"I will recommend that facility because the providers were caring"* (p 41), while another said *'I will recommend the facility to others because if you have any problem with your delivery, that is where you will be referred to"* (p 40) .

Women who have delivered a child in a health facility are the most likely to continue to deliver future children in health facilities (6). In a study in Ghana (10) one mother interviewed stated that "*I will go there again because even though one of the nurses was unfriendly and impatient, the other was very accommodating and I pray I will meet someone like her anytime I have to go there" (p38).*

Antenatal care

Presently, it is acknowledged that the ability to discriminate between women at high and low risk in all formal risk-scoring systems is poor, however the significant effect of prenatal care points to the role that care during pregnancy has in informing women of the benefits of institutional deliveries and in connecting women to appropriate services (24).

Antenatal clinic attendance is relatively good in Tanzania with 94% attendance for at least one visit. However for the recommended four visits attendance is still low (6).Over 80 percent of pregnant women in Zanzibar attend clinic for antenatal care, but trained personnel deliver only about 40 percent while TBAs attend the rest. Attending antenatal clinic more than three times was associated with greater odds of delivery in a public facility in a study done in India (24). While in Nigeria findings of a study showed adequate ANC attendance during pregnancy did not significantly influence hospital delivery (25).

No studies were found which assessed the womans reason for choice of place of delivery and her satisfaciton with the services either in the health facility or home. This study therefore aimed to fill that gap.

Most studies have used the etic perspective in studying the preferences of women;the emic perspective is rarely presented. This does not do justice to the population concerned i.e the women whose voices are not being heard

3.0 METHODOLOGY

3.1 Study design

A descriptive cross sectional household survey was used.

3.2 Study area

Zanzibar archipelago comprises the islands of Unguja (also called Zanzibar) and Pemba with a number of islets adjacent thereto. It is part of the United Republic of Tanzania but administratively there is an autonomous government for matters that are not part of the union agreement.

The island of Zanzibar, also called Unguja, is separated from the mainland of East Africa (Tanzania) by a channel which is at its narrowest part 36 km (22 1/2 miles) across. It lies between latitudes 5° 40' and 6° 30' South; and longitude 39° East. It is about 85 km (53 miles) in length and 39 km (24 miles) in breadth at its broadest point. Its area is about 1 660 square km (640 square miles). It is the largest island on the east coast of Africa. Zanzibar has five administrative regions and 10 districts:

Kaskazini Unguja (Zanzibar North)	*Kaskazini A* (North A)
	Kaskazini B (North B)
Kusini unguja (Zanzibar South)	*Kati Unguja* (Zanzibar Central)
	Kusini Unguja (Zanzibar South)
Mjini Magharibi (Urban West)	*Mjini* (Zanzibar Urban)
	Magharibi (Zanzibar West)
Kaskazini Pemba (North Pemba)	Micheweni
	Wete
Kusini Pemba (South Pemba)	Chake Chake
	Mkoani

Zanzibar population is 984,625 (2002 census) .Fifty percent are below 50 years. The annual growth rate is 3.1%. The population density is 400/sq.km. The life expectancy is 48 years. The infant mortality is 83/1000 and under 5 mortality is166/1000. The maternal mortality ratio is 377/100000.A hundred percent live within 10 km of Health care facilities and ninety percent within 5 km. There are 127 Primary Health Care Units, 4 Primary Health Care Centres, and 3 regional Hospitals in Pemba with capacity of 80 to 100 beds and a 400 bed referral hospital in Zanzibar Town. There are 100 private clinics, 3 private hospitals, 66 pharmacies and 206 OTC shops .The population per physician ratio is estimated at about 11,000.

Although the Health care portfolio for Zanzibar is not a Union Government matter, there is considerable collaboration with the mainland on health matters. The Ministry of Health and Social Welfare remains the responsible agency for health services in Zanzibar

Zanzibar north

Zanzibar North was chosen for the study due to having one of the highest rates of home deliveries in Tanzania. In Zanzibar north the total population is 136,953 with 67093 males and 69860 females. Zanzibar is divided into five administrative regions, three in Unguja and two in Pemba. Each region is subdivided into two districts, which make a total of ten districts for the islands and two sub-districts. The districts are subdivided into 50 constituencies, 32 in Unguja and 18 in Pemba. The lowest government administrative structure at the community is the *shehia* level. The whole of Zanzibar has 296 *shehias*, 198 in Unguja and 98 in Pemba.

The distribution of population between North A and North B is as follows;

District	Males	Females	Total	No. of households	No. per household
North 'A' District	40,721	43,627	84,348	17,252	4.9
North 'B' District	26,372	26,233	52,605	10,602	5.0

In North A district there are the following constituencies (*majimbo)* Chaani, Matemwe, Mkwajuni, Nungwi, and Tumbatu and in North B there are the following constituencies Bumbwini, Donge, and Kitope. These are divided into *shehia.*

Physical Infrastructure

There is only one good tarmac road that connects the district with Zanzibar town, Nungwi, Matemwe and Mkokotoni. There are also small ferryboats linking Mkokotoni and Tumbatu Island. Bicycles, ox-carts and small buses are used not only to transport goods but also people.

Economic Activities

The most important crops include cloves, coconuts, paddy, cassava, sweet potatoes, bananas, sorghum, maize, pigeon peas and sea weed; with cloves dominating the people's economy and lives.

There are few small-scale industries in the district, like carpentry, masonry and lime extraction.

Livestock are kept at household level with some houses keeping one or two cows, a few chickens, ducks, goats and guinea fowl

There are 114 registered fishing cooperatives although some are inactive. The income from fishing varies from month to month and place to place. The fish is sold as far as Zanzibar town

Tumbatu is an island located on the north-western part of Unguja Island known for its historical significance and home to the Watumbatu ethnic group. Transport to the main island is by small boats used by fishermen or motored boats used by visitors to the island. There are no cars in Tumbatu. There is also no electrical supply apart from generators owned by schools some government offices and mosques.

Mahonda is a village located in the northeast of the island, seven kilometers to the west of Kinyasini and 20 kilometers northeast of the capital, Zanzibar City.

3.3 Study population

The study population constituted all women who delivered a child in the past five years. This group was chosen as they have been using health services for labour and delivery or have delivered at home.

3.4 Sampling procedure

There are two districts in Zanzibar North with eight constituencies and 62 *shehia*. Five constituencies were randomly chosen from these two districts whereby a list of all the constituencies was used as a sampling frame and then one *shehia* was randomly selected from each of these constituencies. These were Pita Na Zako, Fujoni, Mahonda, Tumbatu Gomani and Donge Mchangani At the *shehia* level a random starting point was chosen and all eligible women chosen until the required sample size of 60 women per *shehia* was achieved. 60 respondents were therefore interviewed from each ward.

3.5 Study variables

Dependent variables

1. Choice of place of delivery

2. Patient satisfaction

3. Attendance at delivery

Independent variables

Demographic characteristics	**Economic status**	**Accessibility**
Age	Employment status	Distance from home
Level of education	Level of income	Cost of delivery
Marital status		
Parity		
Spouses educational level		
Ward of residence		

Amenities of care	**Indicators of patient satisfaction**
Presence of companion during labor and delivery	Plan for delivery in subsequent pregnancy
Privacy	Recommendation of health facility to a relative or friend.
Cleanliness of toilet	
Cleanliness of surroundings	



Facility factors contributing to patient satisfaction

Perceived competence of staff at health facility

Timely assistance during delivery

Presence of a companion during labour and delivery

3.6 Sample size estimation

The sample size estimation was calculated using the following formula by Kirkwood and Steve (2003).

$$n = \frac{z^2 p(100-p)}{\varepsilon^2}$$

Where n = the required minimum sample size

p = estimated prevalence of women who deliver at home in Zanzibar north is 77% (TDHS, 2004-5)

ε = margin of error on p (set at 5%)

z = standard normal deviate corresponding to 95% confidence level (=1.96)

Substituting these figures in the formula gave

n=272

When you add 10% for non respondents you get 299 women



3.7 Data collection procedure

Recruitment and training

Three research assistants were recruited from clinical officers who had recently graduated from Mbweni College in Zanzibar. They were given one day orientation on the study objectives, methodology and questionnaire. Emphasis was on collection of accurate data, client confidentiality and establishing rapport with respondents.

Data collection tools

The data was collected using a structured questionnaire with closed and open ended questions. The questionnaire was constructed in English and translated into Kiswahili which is the national language. It collected information on the socio demographic characteristics of the respondents, the information on previous birth experience including satisfaction and reasons for choice of delivery place.

3.8 Pre-testing of the study tool

The study tool was pre tested in Zanzibar urban area on thirty women. This was used to check the flow and logic of the questions and whether the questions were easily understood. Slight modifications were made. A few questions were added and some questions rephrased to make them clearer. Also options in some of the closed ended questions were added.

3.9 Limitations

Calculation of the income per month of the study participants was difficult due to the nature of the occupations of most of the women being small scale subsistence farmers with varying incomes depending on the season and the crops as well as vagaries of the weather. Most of the crops harvested were for home use rather than for sale which made it difficult to estimate their value. Moreover many of the women depended on their husbands for a living so their income status was not representative of their economic status. This affected the results pertaining to socioeconomic status of the women. We tried to minimize this by enquiring about the spouses as well as the woman's income and calculating by using the market value of the crops.

Views from the women were mainly positive contrary to expectations and to previous reports. Whether this was due to fear of reprisals if criticism was voiced was difficult to ascertain. The women were assured of confidentiality and the identity of the researcher and purposes of the research were made clear.

3.10 Ethical considerations

Ethical clearance was obtained from the research and publication committee of the Muhimbili University of Health and Allied Sciences (MUHAS). The permission to conduct the study was obtained from the relevant authorities at the district; constituency and *shehia* level. Written informed consent was obtained from each of the participants prior to administering the questionnaire. They were first assured of confidentiality of the information collected by telling them that the information collected would be coded and their names would not be used or recorded anywhere.

Some information for example concerning the labour and delivery process was sensitive and confidential. To address this, the interview was arranged to take place somewhere where the interviewee was not overheard by other people.

3.11 Data analysis

All questionnaires were coded before data entry. Data was entered in SPSS program. SPSS program was used to generate outputs for data entered which were used for reporting and discussion. Frequencies were produced for categorical variables and differences between proportions were examined using X^2 test. Continuous variables were summarized by calculating means and standard deviations. Typical quotes were taken from the open ended questions to emphasize the findings.

4.0 RESULTS

4.1 Description of study participants.

The results of this study include socio demographic characteristics, proportions of those who delivered at home and in health facilities, reasons for their choice of place for delivery and impact of socioeconomic factors on place of delivery. It also covers levels of satisfaction with the birth experience and factors affecting satisfaction. Comparison results of the past two delivery experiences are also shown.

Socio demographic characteristics include age, marital status, religion, educational level, employment status and monthly income for those who are engaged in an economic activity.

A total of 300 women were interviewed with a mean age of 30 years and an age range of 14 to 54 years. Most of the respondents were self employed (52.3%), but 42.7% had no employment. More than three quarters (83.5%) had a calculated monthly income of below 100,000 shillings .Majority were married (87.7%) and a large proportion were Muslim (98.0%). Table 1 shows the distribution of the socio demographic characteristics of the respondents.

Table 1. Socio Demographic Characteristics of Respondents in Zanzibar North Region. 2009

Socio demographic characteristics		
Age	**Number**	**Percent**
14-23	66	22.0
24-33	139	46.3
34-43	83	27.7
44-53	11	3.7
54 and above	1	0.3
Total	**300**	**100.0**
Marital status		
Married	263	87.7
Co-habiting	1	0.3
Widowed	5	1.7
Divorced	30	10.0
Single	1	0.3
Total	**300**	**100.0**
Religion		
Muslim	294	98.0
Christian	6	2.0
Total	**300**	**100.0**

Socio demographic characteristics Cont....

Educational level	Number	Percent
Not educated	83	27.7
Incomplete primary school	44	14.7
Completed primary school	59	19.7
Secondary school and above	114	38.0
Total	**300**	**100.0**
Employment status		
Self employed	157	52.3
Employed	15	5.0
Not employed	128	42.7
Total	**300**	**100.0**
Monthly income in tsh		
Less than 50000	70	38.7
50000-100000	81	44.8
100001-150000	17	9.4
150001- 200000	10	5.5
>200000	3	1.7
Total	**181**	**100**

4.2 Predictors of place of delivery

56.7 % of the respondents delivered the last born child at home .Only 5 (1.7%) delivered in a private health facility while 125 delivered in a public health facility. Table 2 shows that the most commonly stated reason for home delivery was precipitate labour reported by 29% of the mothers who delivered at home, while cost of delivery at health facility being high was the reason with 11.2 % of the respondents. Other common reasons were the health facility being too far (10.1%) and all the previous babies being delivered at home (10.7%).

Table 2: Reasons for home delivery

Reasons for home delivery	**Number**	**Percent**
The health facility is too far	17	10.1
Cost of delivery at the facility is high	19	11.2
I don't like the hospital environment	4	2.4
The service was unsatisfactory at the health facility in my previous pregnancy	4	2.4
I trust the local birth attendant	9	5.3
I was advised by my friend /relative	2	1.2
All my babies are delivered at home	18	10.7
I had precipitate labour	49	29.0
All my deliveries have been without complications	12	7.1
There was no one to leave my family with	5	2.4
Others	30	17.8
Total	169	100.0

The most common reason as shown in table 3 for choosing the health facility for delivery was stated as "the health facility is a safer place to deliver" as stated by 80.8% of the mothers who delivered at the health facility. The proximity of the health facility was also mentioned by 6.2%.

Table 3: Reasons for health facility delivery

Reasons for health facility delivery	**Number**	**Percent**
The health facility was near	8	6.2
My friend recommended it	1	.8
That is where I attended antenatal clinic	7	5.4
The health facility is a safer place to deliver	105	80.8
All my babies are delivered at the health facility	5	3.8
I was advised at the antenatal clinic	3	2.3
Others	1	.8
Total	**130**	**100.0**

The characteristics of those who delivered at home as opposed to those who delivered in a health facility are shown in the following tables.

Place of delivery by socio demographic characteristics.

There was a strong relationship between spouse's education and place of delivery. Increasing level of education of the spouse was associated with the likelihood of health facility delivery of the partner as seen in table 4.

Table 4: Place of delivery by spouse's education

	Home delivery		**Health facility delivery**	
Spouses education	**Number**	%	**Number**	%
No formal education	50	70.4	21	29.6
Incomplete primary education	38	62.3	23	37.7
Complete primary education	50	57.5	37	42.5
Secondary education	27	35.5	49	65.5
Total	165	55.0	130	45.0

X^2=19.7, p value 0.000

Employment status was seen to be associated with place of delivery and the relationship was seen to be strongly significant. The self employed were subsistence farmers of seasonal crops like sweet potatoes, rice and cassava and some were engaged in petty business which was selling of fish and sea products like clams, mussels and seaweed. The respondents who were unemployed and the self employed were more likely to deliver at home while those in formal employment had a higher proportion delivering in the health facility(86.7%).This is seen in table 5.

Table 5: Place of delivery by employment status

Employment status	**Home delivery**		**Health facility delivery**		**Total**	
	Number	**%**	**Number**	**%**	**Number**	**%**
Unemployed	70	54.7	58	45.3	128	100
Self employed	98	62.4	59	37.6	157	100
Employed	2	13.3	13	86.7	15	100
Total	170	56.7	130	43.3	300	100

X^2=13.22, p value 0.001

There is a significant relationship between mother's education and place of delivery as shown in table 6. Completing primary education seems to be associated with an increased tendency for home delivery. Otherwise increased level of education is associated with increased proportions of mothers delivering in the health facility.

Table 6: Mother's education with delivery place

Education	**Delivery place**				**Total**
	home delivery		health facility delivery		
	Number	%	Number	%	
No formal education	63	75.9	20	24.1	83
Incomplete primary education	24	54.5	20	45.5	44
Complete primary education	34	57.6	25	22.4	59
Secondary school and above	49	43..0	65	57.0	114
Total	170	56.7	130	43.3	300

$X^2 = 21.13$, p value 0.000

Place of delivery with antenatal clinic attendance

Only 9 respondents did not attend antenatal clinic and they all delivered at home. Conversely increased attendance of antenatal clinic was associated with higher proportions of health facility deliveries with those attending more than 4 times having a prevalence of health facility delivery of 62.2%. This was seen to be statistically significant $p<0.05$.

Place of delivery with parity

Most women who had delivered for the first time did so in the health facility (70.2%) while higher parity was associated with delivery at home as evidenced by a high proportion of those who delivered for the fifth or more time doing so at home (66.4%). This difference was found to be significant, $p<0.05$.

Relationship between *shehia* of residence and place of delivery.

As seen in table 7, there were an equal number of respondents from each of five *shehias*. Of these in Tumbatu the highest proportion of study participants (86.7%) delivered at home. This was found to be significant $p < 0.05$.

Tumbatu is an island off the coast of Zanzibar .The health facility there has only recently been opened and is not equipped for deliveries .Pita na zako, Mahonda and Fujoni are served by health centers. Donge Mchangani residents have to attend the health facility in the neighbouring ward/shehia which is about 30 km away.

Table 7: Place of delivery with shehia of residence

Shehia of residence	Home delivery		Health facility delivery		Total	
	Number	%	Number	%	Number	%
Pita na zako	35	58.3%	25	41.7%	60	100
Fujoni	19	31.7%	41	68.3%	60	100
Tumbatu	52	86.7%	8	13.3%	60	100
Donge mchangani	39	65.0%	21	35.0%	60	100
Mahonda	25	41.7%	35	58.3%	60	100
Total	170	56.7%	130	43.3%	300	100

X^2=47.91, p value 0.000

In table 8 mothers education was seen to have a significant association with attendance at delivery. 78.3 % of those respondents with no education delivered with the assistance of a non skilled attendant, this decreased to 48.2% for those who had secondary education and above.

Table 8: Attendance at Delivery by Mothers Education

		Attendant At Delivery		Total
		Skilled Attendant Number (%)	Non Skilled Attendant Number (%)	
Education	No Education	18(21.7)	65(78.3)	83
	Incomplete Primary Education	20(45.5)	24(54.5)	44
	Complete Primary Education	25(41.4)	34(58.6)	59
	Secondary School And Above	58(51.8)	54(48.2)	112
Total		121	178	299

χ^2 =21.9, p value 0.001

Spouse's education was associated with attendance at delivery as seen in table 9 where 71.8 % of the respondents with no education delivered with non skilled assistance while only 42.1 % of those with secondary education and above did so. This difference was found to be significant.

Table 9: Attendance at Delivery by Fathers Education

Fathers education	**Attendance at Delivery**		**Total**
	Skilled attendant Number (%)	Non skilled attendant Number (%)	
No education	20(28.2%)	51(71.8)	71
Incomplete primary education	25(41.0)	36(59.0)	61
Complete primary education	33(37.2)	53(61.6)	86
Secondary education and above	44(57.9)	32(42.1)	76
Total	122(41.5)	172(58.5)	294

X^2 =15.1, p value 0.019

Table 10 shows that a higher proportion of respondents who delivered at a health facility incurred comparatively greater costs than those who delivered at home. For example of those who incurred costs less than 5000 shillings, 66% delivered at home. Of those who incurred costs greater than 15000 shillings, 94.2% delivered at a health facility. This was found to be very significant.

Table 10: Cost of delivery and place of delivery

Cost of delivery	**Place of delivery**			
	Home		Health facility	
	Number	%	Number	%
Less than 5000	66	79.5	17	20.5
5000-10000	89	68.5	41	31.5
10001-15000	12	36.4	21	63.6
>15000	3	5.8	49	94.2
Total	170	57.0	128	43.0

χ^2 =85.6, p value 0.000

Most of the payments for the costs of delivery were obtained from the spouse (80.7%). Other sources of funds were from relatives (5.0%) and borrowing (3.9%) as seen in table 11.

Table 11: Source of money for delivery costs

Payment made from	**Number**	**Percent**
Salary	5	1.8
Farm produce sales	8	2.9
Spouse	226	80.7
Relative	14	5.0
Borrowed	11	3.9
Others	16	5.7
Total	**280**	**100.0**

Mean delivery costs for health facility delivery

Average delivery costs for health facility deliveries included transport to and from the health facility, payments made at the health facility and money used to pay for delivery supplies. Average costs for transport amount to 5274 shillings, health facility payments were 8198 shillings and delivery supplies cost 4903 shillings on average.

Delivery costs for home deliveries

For home delivery the average cost included delivery supplies 2536 shillings ranging from 0 to 20000 shillings and payment of midwife or assistant was 3569 shillings also ranging from 0 to 20000 shillings. The average costs were on the whole lower than those encountered by the respondents who delivered in a health facility.

4.3 Patient satisfaction

Factors affecting patient satisfaction were taken as information given to the respondent during labour and delivery, availability of basic amenities at the health facility, perceived competence of staff, timely assistance at delivery and waiting time on arrival at the health facility. Questions were also asked directly concerning the level of satisfaction of the respondent with the birth experience as well as satisfaction with the services offered by the birth attendant in both home and hospital deliveries.

Information given concerning labour and delivery in health facility

52.4 % of respondents reported that they had received sufficient information on labour and delivery. One respondent said that, "*they would examine me and tell me that you still have 5 or 6 cm to go.*" (A 40 year old married woman). Another complained that, "*they would examine me then not tell me anything.*"(26 year old woman with secondary education)

55.6 % of those with no formal education thought insufficient information had been given .This proportion has a tendency to decrease with educational level with only 43.55% of those with secondary education and above saying they had received insufficient information as represented in table 12. This association was not statistically significant.

Table 12: Sufficient information with level of education

Education	**Sufficient information given**		**Total**
	Yes	**No**	**Number (%)**
	Number (%)	**Number (%)**	
No formal education	8(44.4)	10(55.6)	18(100.0)
Incomplete primary education	9(45.0)	11(55.0)	20(100.0)
Complete primary education	14(53.8%)	12(46.2%)	26(100.0%)
Secondary education and above	35(56.5%)	27(43.5%)	62(100.0)%
Total	66(52.4)	60(47.6)	126(100)

X^2 =1.33, p value 0.7

A high proportion of respondents who had delivered in a health facility reported that the health facility was clean (95.2%), the toilets were clean (91.3%), and there was water available in the toilets (95.3%). (Table 13)

Table 13: Reported availability of basic amenities at the health facility

Amenities	**Yes**		**No**		**Total**	
	Number	%	**Number**	%	**Number**	%
Cleanliness of facility	121	95.2	9	4.8	130	100
Cleanliness of toilet	117	91.3	12	8.7	129	100
Availability of water in the toilet	124	95.3	6	4.7	130	100

Some of the facility factors seen to affect patient satisfaction are seen in table 14. Most facilities did not allow the presence of a companion during labour and delivery (75.6 %), however competence of staff was perceived to be high (99.2%) as was privacy during labour and delivery (91.8%).

Table 14: Reported presence of some facility factors contributing to patient satisfaction

Availability of Facility factors	**Number who said yes**	**%**	**Number who said no**	**%**
Perceived competence of staff at health facility	127	99.2	3	0.8
Privacy during labour and delivery	112	91.8	18	9.2
Timely assistance during delivery	110	88.0	20	12.0
Presence of a companion during labour and delivery	31	24.4	99	75.6

Concerning presence of a companion during labour and delivery one woman said, "*There are many patients and few workers therefore the relatives would help to relieve the workload.*"(26 year old woman with secondary education). A 22 year old woman said that, "*when you're ready to deliver you are told to go to the area for delivery carrying your bag; your relative could help you carry your bag.*"

A large proportion of respondents perceived waiting time to be short on arrival at the health facility (94.5%) as seen in table 15.

Table 15: Perception on waiting time at the reception

Clients perception	**Number**	**Percent**
Short	121	94.5
Reasonable	7	5.5
Long	0	0
Total	**128**	**100.0**

On being asked what their level of satisfaction with the birth experience was, 98.2% of those who delivered at home and 92.8% of those who delivered in the health facility were satisfied with their birth experience as seen in table 16. This association was seen to be significant.

Table 16: Level of satisfaction with birth experience by place of delivery

Place of delivery	**Level of satisfaction with birth experience**			
	Not satisfied	Satisfied	Very satisfied	Total
Home	3(1.8)	97(58.8)	65(39.4)	165(100.0)
Health facility	9(7.1)	91(72.2)	26(20.6)	126(100.0)
Total	12	188	91	291

X^2 =14.23 p value 0.007

In the open ended questions, on being asked about their satisfaction with the services offered by the attendant during delivery one woman who delivered at home said that "*she was sympathetic; she was not rude and did not ignore me nor charge me a lot of money.*"

One lady who delivered in the health facility stated that, "*they did not listen to me or give me any help until I delivered by myself.*"

Other indicators of satisfaction with the services

Further indication of satisfaction with the health facility was considered to be planned delivery in the same facility in the subsequent pregnancy and recommendation of the health facility to a friend or relative. 88.4 % of those who delivered in a health facility indicated that they would like to deliver the same health facility in the next pregnancy and 97.5% would recommend that facility to a relative or friend.

When asked what they would like to be different about their birth experiences 31.1% stated that they would like the services to increase.16.2% wanted the number of health workers to increase (table 17)

Table 17: Suggestions given for improvement of birth experience

Suggestions	**Frequency**	**percent**
Services should increase	23	31.1
Number of health workers should increase.	11	14.9
Women should be allowed a companion during labour and delivery.	9	12.2
There's nothing to add	12	16.2
Services and supplies should be given free	5	6.8
Delivery services should be brought nearer	6	8.1
Women should try to be cleaner when admitted in hospital	5	6.8
Others	3	4.1
Total	74	100.0

As one woman stated, "*services should be free some of us are too poor to pay.*"(A 39 year old subsistence farmer) While another said, "*the number of beds should be increased we are sleeping two to a bed.*" (22 year old woman from Mahonda)

4.4 Comparison of past two birth experiences

The reasons for change of delivery place in the mothers who had more than one delivery in the past five years and who had changed the delivery place are highlighted in table 18. The most common was that the delivery place was far from home (24.4%).

Table 18: If you delivered at a different place from the last birth why did you change your choice of delivery place?

Reason	Number	Percent
I was not satisfied with the services	4	9.8
The costs were too high	4	9.8
It was far from home	10	24.4
I was advised by a friend /relative	5	12.2
I had precipitate labour	5	12.2
I had no one to leave with the children at home	4	9.8
I had no problem in my previous pregnancy	3	7.1
It was my second pregnancy I did not need to deliver at the health facility.	2	4.9
Others	4	9.8
Total	41	100.0

35 respondents had changed delivery place in the last two consecutive pregnancies in the last five years. 80% of these said that they had a better birth experience at the health facility when compared to home.

25 respondents had delivered in the same health facility in the last two pregnancies. Of these 72% stated that the services had improved.

One woman said that "*At the health facility when you get a problem they can help you promptly.*" (Young married uneducated woman from Tumbatu)

While another woman said that delivery at the health facility was better because, "*... after delivery I was given an injection and some drugs.*" (45 year old woman from Donge Mchangani.)

5.0 DISCUSSION

This study set out to find the reasons for choice of birth place and the level of client satisfaction with delivery place and birth experience. It was also comparing the birth experiences of the past two deliveries in those who had delivered more than once in the past five years.

5.1 Place of delivery

In this study the prevalence of home delivery in Zanzibar was found to be slightly higher than the national prevalence which is 53% of all births or the Zanzibar prevalence which was 51%. However it was much higher than the estimate for Zanzibar North which was about a quarter of all births (6). This discrepancy can be due to the absence of recent data on the prevalence of home and health facility delivery in Zanzibar.

5.2 Reasons for choice of place of delivery

Increased educational level of the mother (respondent) and her spouse were each associated with increase in health facility delivery .Whether this was due to higher health literacy of the more educated man or woman or perhaps the higher economic status associated with increased education is not clear. Most of the mothers (82.3%) named the head of the household as the husband and this supports the reasoning that educational level of the spouse is significant in determining place of delivery of the mother. This is consistent with findings from studies in Kenya and Nigeria (13, 25) which also found an association between spouses' educational

status and health facility delivery. Many other studies in third world countries also indicate that the mothers' education has a positive effect on health facility delivery (27, 26, 28).

In assessing parity of the respondent in relation to place of delivery it was found that those with less than four children were more likely to deliver at the health facility than higher multiparous women. This may be because first time mothers are worried about possible complications. One woman who had delivered her first child at the health facility admitted that in the subsequent pregnancy she was planning to deliver at home as, "*with the first child one is worried but the second one is no problem*". Older and multiparous mothers having delivered all their babies at home with no complications may be reluctant to change. A community survey done in India also showed that multiparous less educated women were less likely to deliver in a health facility and one of the reasons given for home delivery was a previous easy delivery (18).

Bolam in his study in India found that poverty indicators were not significant risk factors for home delivery (18). Idris et al however did a study in Nigeria which showed that the employment status of the husbands was an important determinant of the place of delivery (25). In this study the employment status was seen to be significant. Self employment consisted of petty trading in fish, clams, mussels and subsistence farming and therefore leads to an irregular income due to seasonal crops and changes in tides which affect the fish trade. These men are also usually of a lower educational status. Employed men however are more likely to have a higher level of education and a higher income and therefore be more likely to prefer a health facility delivery.

In Zanzibar the researcher found a significant difference in the costs of delivery in the health facility and at home. High cost of health facility delivery was one of the major factors that led to mothers delivering at home. The delivery costs included transport, health facility payments and delivery supplies and ranged from no payment to 70000 shillings for health facility payments. Health facility payments were mainly unofficial payments for delivery supplies which included gloves, plastic sheet, syringes and drugs (75.5%) while some health facilities also charged a registration fee (42%). Indeed in the open ended questions mothers complained about the high cost of transport and delivery supplies some of which they bought at the health facility. As one mother said, "*they should bring the health facility closer as transport is a problem and is also very expensive.*" While another respondent complained, "*the supplies should be given free as some of us have little capacity to pay or we may not be prepared.*" And indeed Kruk in his study in rural Tanzania found that 73.3% of women who had facility deliveries had to make out of pocket payments which amounted to 6272 Tanzanian shillings on average. Rajendra who did a cross sectional survey in India found that the lower the economic status of the mother the more likely she was to deliver at home and an explorative study done in Malawi found that cost was a significant barrier to health facility delivery. (17, 22). Nevertheless no significant association between income level and place of delivery was found in this study. Perhaps the difficulty in estimating the income level of the subsistence farmers who did not sell their produce contributed to this anomaly.

WHO is advocating for skilled care during pregnancy and childbirth as being important to reduce MMR (1).This study found that skilled attendance at delivery was related to mothers' education, fathers' education and ward of residence. All the mothers who delivered at home

were attended by unskilled personnel who included TBAs, relatives and neighbours. The level of skilled attendance at delivery in this study was found to be slightly lower than the level for Zanzibar (46%) found in the TDHS (2004/5).Three of the wards sampled had health centres less than five km from the residences while one of the wards was an island and the mothers had to travel by boat at high cost and/or for several hours to get to a health facility while another had to use the neighbouring wards health facility. This might explain the difference in choice of place of delivery between different wards as well as the differences in skilled attendance at delivery between the wards. Evidently distance is seen to be a barrier to health facility deliveries as transport is a factor mentioned by a fifth of the respondents as the reason of choosing to deliver at home. In Malawi distance to the health facility was also seen as a significant factor related to a high proportion of home deliveries (17).

In this study the rate of antenatal attendance was very high (97%) and this was consistent with national estimates (94%) as reflected in the TDHS 2004/5 (6). The antenatal clinic attendance was also seen to be significantly associated with the place of delivery though rate of health facility delivery does not reflect the high rates of antenatal clinic attendance.

5.3 Patient satisfaction

Various factors were seen to be significant in determining patient satisfaction. These include presence of basic amenities, having a companion during labour and delivery and referring the facility to a friend or relative among others.

The respondents were almost equally satisfied with home and health facility delivery. This might indicate that patient satisfaction did not affect the choice of place of delivery.

Basic amenities in this study were mainly seen to be satisfactory, whereas most studies do not seem to take into account the presence or absence of basic amenities as a factor affecting patient satisfaction.

Presence of a companion during labour and delivery was one factor which was found to be deficient as the health facilities did not allow the women to have relatives or husbands accompanying her in labour. One woman said that "*there are a lot of patients and few health workers, the relative (companion) would be able to help.*" Providing support to women in labour is essential from a humane point of view, and may achieve improvements in some pregnancy outcomes and in mothers' emotional well-being. As one mother said *"the relative would calm you down and encourage you.*" However Langer in his study on effects of continuous support for women during labour also says that where resources are limited and there are competing needs, interventions have to be compared in terms of their effectiveness and cost before being recommended as a routine practice (21).

Even though many studies indicate a dissatisfaction with the attitudes of health care staff in the health facilities which deters women from seeking services there ,this study found high level of satisfaction and praise of health workers' behaviour when dealing with the expectant mothers .A qualitative study done in Ghana had mixed accounts with women in the focus group discussions expressing indignation and distress at their treatment at the hands of the midwives in the health facilities while some voiced praise (10). Because of the qualitative nature of that study it is difficult to know the proportions of those who expressed satisfaction with the staff as opposed to those who were dissatisfied moreover the statistical significance

cannot be known. .However Sitzia and Wood say that "dissatisfaction is only expressed when an extreme negative event occurs"(27). This raises concern as to the high levels of satisfaction reported by the respondents in this study also considering the fact that a high proportion of the respondents delivered at home. As some of the respondents reported in the open ended questions that "*we are thankful for a safe delivery that is all that matters.*" This might indicate that their expectations are low having never been exposed to any better services.

Further indication of satisfaction was considered to be planned delivery in the same facility or recommendation of the health facility to a friend or relative .Ambruoso in Ghana found that women made recommendations based on positive attitudes of one or more providers (10). In my study this indicator showed high level of satisfaction as most women stated that they preferred to deliver in the same facility in the next pregnancy. Although on explaining their satisfaction with the services of the health workers, the respondents seem to have negative expectations and were pleasantly surprised to find otherwise , "*they were not rude nor did they insult me in any way*" was a typical response .

5.4 Suggestions for improvements of birth experience

More than a quarter of the respondents said that they would like the quality of the services to increase and the number of health workers as well. Further suggestions included, "*they should increase the number of workers because if the doctor is working at night we have no doctor during the day in our health facility*" a woman from Donge Mchangani said. In the open ended questions this included training of the health workers on courtesy, and allowing relatives as companions during labour and delivery. Some also said that they should have an

ambulance for transporting them to hospital because transport costs were very high. These observations are confirmed by Mrisho who found that in rural Tanzania women in a focus group discussion complained about the high transport costs needed to get to hospital (19).

5.5 Comparison of the past two birth experiences.

Some of the respondents who had more than one birth in the last two years (85.4%) changed the delivery place due to various reasons key being the distance from the health facility being too far. This corresponds with studies done which have identified distance and having to take transport as the chief barriers to health facility delivery (13,25). But most of the respondents reported having experienced better service at the health facility than home saying that "*in the health facility there were more services than at home*" implying that mothers wish to deliver in a health facility but are unable to do so due to distance or cost. As a young woman in Tumbatu said "*there are midwives who have knowledge. At home in case of any problem you have to look for transport to take you to hospital; the only problem is that the service in the health facility is expensive.*" A study done by Amoti_ kaguna in Uganda found that previous place of delivery was significant in determining present place of delivery. Since most deliveries are uncomplicated in nature it is likely that mothers who deliver at home with no problem will deliver there again (28).

6.0 CONCLUSION

This study found that the proportion of women who delivered in the health facility (43.3%) was much higher than the prevalence reported for Zanzibar north in 2004, but was still unsatisfactory though it tallied with the national prevalence .Clearly more efforts need to be put to increase this number.

Costs borne by the women were high and included delivery supplies, health facility payments and transport costs for those delivering at the health facility. The cost of delivering at the health facility was higher than the home delivery costs and this was one of the factors associated with choice of delivery place.

Distance to the health facility was also key. Wards which were near to the health facility had a significantly higher level of health facility delivery than those farther from a health facility. The educational status of the spouse and attendance of antenatal clinic were positively associated with attendance of health facility for delivery as was lower parity of the woman.

Satisfaction with birth experience was found to be high both for those who delivered in the health facility and at home. Respondents expressed satisfaction with services offered by the health care staff and TBAs as well as amenities at the hospital. They suggested that health care staff should be increased and health facilities brought closer to their homes.

Comparisons of birth experiences between those who had more than one delivery in the past five years showed that the women would prefer to deliver at the health facility if they could

overcome the constraints of poverty and distance. 80% said they had had a better birth experience at the health facility.

Accessibility therefore stands out as the main issue associated with the decision to deliver in a health facility in this study.

6.1 RECOMMENDATIONS

There is an urgent need for the government to provide sufficient delivery supplies to the public health facilities so that delivery services can in reality be free.

Local government leaders at the shehia level can form an alliance with the community members to find a low cost means of transport for pregnant mothers at term to the health facility to ensure even those with sudden onset of and short labour can make it to the health facility.

There should be disciplinary measures incorporated in the running of the health facilities to hold health workers responsible for misconduct.

REFERENCES

1. WHO. Mother baby package; Implementing safe motherhood in countries. Geneva : 1994. p. 18, practical guide.

2.UNPIN. Women, empowerment and health. International conference on population and development.Cairo; 1994. p. 5.

3. Ministry of Health and Social Welfare.The National Road Map Strategic Plan to Accelerate Reduction of Maternal, Newborn and Child Deaths in Tanzania 2008-2015. Dar es salaam : Reproductive and Child Health Section, 2008. p. 6.

4. Starrs A. Safe motherhood initiative: 20 years and counting.. The lancet, 2006, Vol. 368, pp. 1130-1131.

5. United Nations Population Information Network. International conference on population and development. Cairo , 1994.

6. National bureau of statistics.The demographic and health survey. Dar es salaam ; 2004-5. pp. 149-150.

7. COWI, EPOS health consultants. Joint external evaluation of the health sector in Tanzania. Dar es salaam ;2007.

8. Donabedian, Avedis. An introduction to quality assurance in health care. New York : Oxford University Press, 2003.

9. Smithson, Paul. Fair's Fair-Health inequalities and equity in Tanzania. Dar es salaam : Womens dignity project, 2006.

10.D'Ambruoso L, Abbey M, Hussein J. Please understand when I cry out in pain: women's accounts of maternity services during labour and delivery in Ghana. BMC Public health 2005; Vol 5 , pp. 36-40.

11.Care International,Womens Dignity. We have no choice:facility based childbirth:the perceptions and experiences of Tanzanian women, health workers and traditional birth attendants.Dar es salaam:CARE; womens dignity; 2008

12. Health Research For Action. District health services delivery in Tanzania,where are we in terms of quantity and quality of health care provision? Dar es Salaam:Ministry Of Health and Social Welfare; 2006.

13. World Bank, African Population and Health Research Centre (APHRC). Averting preventable maternal mortality:delays and barriers to the utilization of emergency obstretic care in Nairobi's informal settlements. Nairobi : 2006.

14 .Mwisongo A., Njau J. Exploring the impact of introducing user charges for reproductive health services in Archipelago Zanzibar: challenges and opportunities. Accra : African Health Economics and Policy Association, Inaugural Conference of the African Health Economics and Policy Association. 2009

15. O'Donnel. Access to health care in developing countries:breaking down demand side barriers. Cad. saude publica, 2007 ; 23, 2820-2834.

16. Roberts, Jennifer Kitts:Janet Hatcher.The health gap:beyond pregnancy and reproduction. Ottawa : IDRC, 1996. p. 173.

17.Chimango J, Seljeskog L, Sundby J. Factors influencing womens choice of place of delivery in rural Malawi;an explorative study., African Journal of Reproductive Health 2006; Vol. 10, pp. 66-75.

18. Bolam A,Costello A, Ellis M, Malla K, Manadhar D S. Factors affecting home delivery in the Kathmandu valley,Nepal. Health Policy and Planning, 1998;vol 13, pp. 152-158.

19.Mrisho M,Mushi A K, Mshinda H, Mwifadhi. Factors affecting home delivery in rural Tanzania. Tropical Medicine And International Health 2007; Vol. 12, pp. 862-872.

20. Lule, Godfrey S. and Ssembatya, Margaret. A Selection of Essays: Intention to Deliver and Delivery Outcome. [book auth.] Janet Hatcher Roberts and Carol Vlassoff. The female client and the health-care provider : The International Development and Research Centre, 1995, pp. 80-81.

21. Langer A. Continuous support for women during chilldbirth:RHL commentary.: The WHO Reproductive health library, Geneva :World Health Organization; 2007.

22. Andalee S.S, Khandakar S, Nazlee S. Patient satisfaction with health services in Bangladesh. Health policy and planning 2007; Vol. 22, pp. 263-273.

23. Bleich S N, Özaltinb E , Christopher JL.How does satisfaction with the health-care system relate to patient experience? Bulletin WHO 2009, Vol. 87, pp. 271-278.

24. Hulton A. A framework for assessing maternal health services and preliminary findings from its application in urban India.Southampton Stastical Sciences Research Institute Applications And Policy Working Paper; 1998.

25. Idris S.H.,Gwarzo U.M D.,Shehu A.U.Determinants of Place of Delivery among Women in a Semi-Urban Settlement in Zaria, Northern Nigeria, Annals of African Medicine 2006; Vol. 5, pp. 68-72.

26.Bangser M ,Mamdan. Poor peoples experiences of health services in Tanzania: A literature review.Dar es salaam: Women's Dignity Project, 2004.p11.

27. Sitzia J, Wood N. Patient satisfaction: A review of issues and concepts. Social Science & Medicine. 1997; Vol 45:pp 1829–43

28.Amoti-kaguna B, Nuwaha F. Predictors of home deliveries in Rakai District, Uganda. African journal of reproductive health 1999; Vol 2, pp79-86.