



(RESEARCH ARTICLE)



Factors influencing place of delivery among women residing in Ifakara Town Council, Kilombero District, Tanzania

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Abstract

Background: This study was done to assess factors influencing place of delivery among women residing in Ifakara Town Council, Kilombero district, Tanzania.

Method: A community based descriptive cross-sectional study was conducted in February 2021. A total of 135 child bearing women from 3 randomly selected wards of Ifakara Town Council were involved in the study. Structured pre-tested questionnaire with key information was used to collect desired data.

Results: More than half 55.6% of the women had health facility delivery and 44.4% of them had home delivery. The most common reason for home delivery was sudden onset of labor 50.4%. Other reasons for home delivery were age of 26 and above, parity of four, and education of mother.

Conclusion: Maternal health services, such as antenatal care, skilled assistance during delivery and post-natal care, adequate equipment in health facilities, play a major role of in the reduction of maternal morbidity and mortality. Therefore, efforts should be made both at community and government levels to increase health facility delivery.

Keywords: Antenatal care; Women; Delivery; Ifakara Town Council

1. Introduction

Pregnancy is a physiological process, but there is a risk of maternal mortality and morbidity by pregnancy related complications during labor, delivery and postnatal period. In 2013, the World Health Organization defined maternal mortality as the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective the duration and site of pregnancy (uterine or extra uterine) from any cause related to or made worse by the pregnancy or its management [1]. There are more than 20 million women worldwide become pregnant annually, 15% are likely to develop complications that will require attention of skilled obstetric care to prevent morbidity and mortality [2]. Failure to provide these services results in hundreds of thousands of needless deaths each year. Every year, nearly half a million women and girls needlessly die as a result of complications of pregnancy or childbirth, and 99% occur in developing countries [3]. Haemorrhage, toxemia, obstructed labour and sepsis are universally documented as immediate causes of maternal deaths [2]. However, haemorrhage and hypertensive disorders are the leading causes of maternal mortality in developing countries [4]. Most of the maternal deaths are preventable if deliveries were overseen by skilled personnel [5]. Delivering at health facilities enables women receive proper medical attention and care during childbirth. This is encouraged as the most important strategy in preventing maternal and neonatal deaths [6]. The rates of health facility delivery and deliveries that are attended by skilled providers are low in many developing countries and are lowest in sub-Saharan Africa [7]. A study done in Nigeria shows that maternal education level, husband's occupation and age at

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first pregnancy were the main determinants of place of delivery [2]. A study from rural northern Ghana found that pregnant women who has been seen by a doctor during antenatal care, women who were seen by a clinic nurse or midwife, community nurse, and a traditional birth attendant were more likely to deliver at home [8]. Another study done in Dhading district in Nepal found that maternal education, ethnicity, and parity were significantly associated with place of delivery [9]. Also, distance socioeconomic status, parity, and antenatal care utilization were identified as significant factors of place of delivery in Nepal [10]. A study done in Sekela district in Ethiopia reported reasons for home delivery to be close attention from family members and relatives, unexpected labor, not being sick at the time of delivery, and family influence [11]. A study done in Tanzania found that lack of money, lack of transport, sudden onset of labor, short labor, staff attitudes, lack of privacy, socio-cultural beliefs, and the pattern of decision-making power within the household were the key factors of the place of delivery [12]. A report from the Tanzania Ministry of Health established that more than 90% of pregnant women attended at least one antenatal clinic visit, only 62% of pregnant women delivered at health facility [13]. The TDHS showed a decline in the maternal mortality ratio from 578 to 556 deaths per 100,000 live births, but it is still unacceptably high in Tanzania [14]. Therefore, the aim of this study was to determine factors influencing place of delivery for women residing in Ifakara Town Council, Kilombero district, Tanzania.

2. Material and methods

2.1. Study area

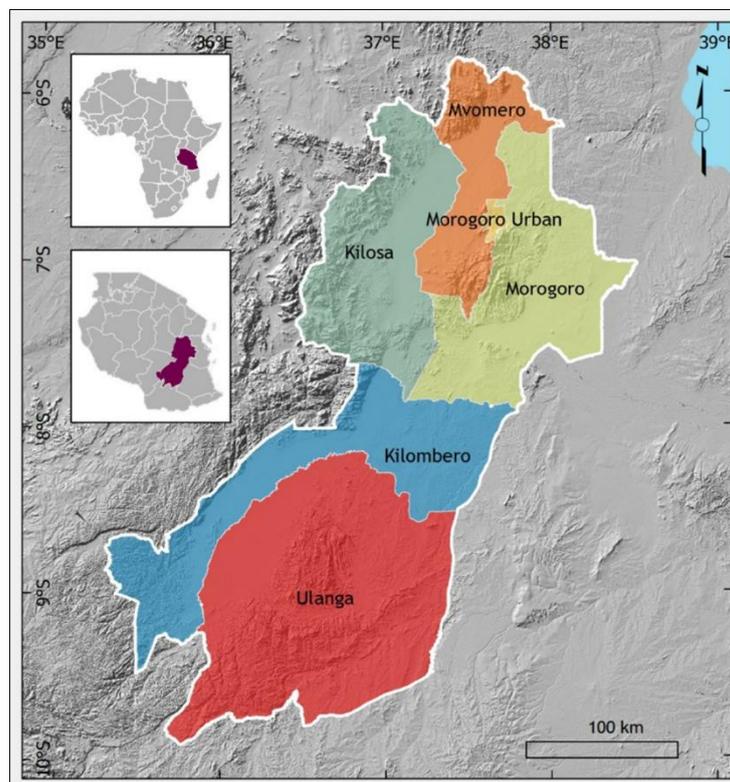


Figure 1 Morogoro Region with its five districts.

This study was conducted at Ifakara Town Council, Kilombero District, Tanzania. Kilombero district is located in the southeastern part of Tanzania. It is situated at latitude 8.0677°S and longitude 37.1259°E. It is bordered by rural Morogoro to the east and Kilosa district to the northeast as shown in Fig.1. Ifakara Town Council has one division which is subdivided into nine wards, 11 villages, 33 streets and 64 Sub villages. The Town Council is divided into urban and rural area; out of nine wards, five are urban and four are in rural areas. Ifakara Town Council has an area of 3,893 km² with its topography mainly being flat. It is situated in a vast floodplain, between Kilombero River in the South-East and the Udzungwa Mountains in the North-West. According to population and housing Census of 2012, the population of Ifakara Town is 106,424 people (52,148 Males and 54,276 females). The indigenous people of Kilombero District are mainly of Bantu origin. There are three major ethnic groups these are Ndamba, Mbunga and Ngindo. Other minor ethnic groups include Pogoro, Hehe, and Bena. However, in recent years, there are immigrants like Masai, Sukuma and Barbaigs

who are engaged in livestock keeping. Ifakara people main sources of income depends on four types of economic activities these are agriculture, livestock and fisheries, Industrial and Commercial Sector and Informal Sector.

2.2. Study design

A community based descriptive cross-sectional study was used, child bearing women were interviewed using Swahili translated questionnaire. Structured pre-tested questionnaire with key information was used to collect desired data. The study was carried out on February 2021.

2.3. Study population

Child bearing women in the three selected wards were involved in the study.

2.4. Sample size

The sample size in this study was 135 participants. The sample size calculation obtained by Kish and Leslie formula:

$$N = \frac{Z^2 P(100 - P)}{\epsilon^2}$$

2.5. Sampling Technique

Multi stage random technique was employed in this study, three wards out of the five urban wards of Ifakara Town Council were selected (Mlabani ward, Viwanja Sitini ward and Ifakara Mjini ward). A total of 45 participants were selected from each ward. Three streets were selected randomly from each ward, then first 15 houses in each selected street women with child bearing were involved in the study.

2.6. Data Collection

The data collected by structured guided questionnaires. The questionnaire prepared in English and translated into Swahili to maintain the consistency and content of the questionnaire, confidentiality of information, participant's rights and voluntarily informed consent were secured. The participants were asked the questions and their answers filled in the questionnaire by the researcher.

2.7. Data analysis

Questionnaires filled with irrelevant information were removed. The data from questionnaires with relevant information were analyzed with Statistical Package for Social Sciences (SPSS version 20).

2.8. Inclusion criteria

All women of child bearing age with children who were willing to participate in the study.

2.9. Exclusion criteria

Women who were in child bearing age with children but refused to participate in the study.

2.10. Ethical consideration

Permission to conduct the study was obtained from the research committee of St. Francis University College of Health and Allied Sciences while permission to use participants in the selected wards was sought from the District Executive Officer and Ward Executive Officers. Confidentiality: all research documents and information were treated as confidential.

3. Results

A total of 135 women were identified in the selected wards who had delivered during the year preceding the study, all were interviewed, 85(63%) were 25 and above years of age, 83(61.5%) were married, 74(54.8%) had primary education, 64(47.4%) of mothers were self-employed, 33(24.4%) of women had parity of two (Table 1).

Table 1 Socio-demographic characteristics of women residing in Ifakara Town Council

Characteristics	Number of respondents	Percent (%)
Age (in years)		
<25	50	37.0
25 and above	85	63.0
Marital status		
Married	83	61.5
Separated	17	12.6
Divorced	14	10.4
Widow	17	12.6
Single	4	2.9
Education level of mother		
Non formal	3	2.2
Primary	74	54.8
Secondary	56	41.5
College/University	2	1.5
Occupation of Mother		
House wife	29	21.5
Peasant	31	23.0
Selfemployed	64	47.4
Civil servant	11	8.1
Parity		
One	29	21.5
Two	33	24.4
Three	30	22.2
Four	29	21.5
Above four	14	10.4

Among the 135 women interviewed, 60(44.4%) delivered at home and 75(55.6%) delivered at health facility. For those women who delivered at home the main factor was sudden onset of labor the proportion was 68 (50.4%) (Table 2).

Among 135 women interviewed, 135(100%) women attended antenatal clinic during last pregnancy. Women with gestational age 14-28 weeks were 65(48.1%) made their first visit to antenatal clinic. A total of 93 (68.9%) women had 4 and above visits to antenatal clinic during last pregnancy, 65(48.1%) women used tri cycle to go to health facility, 87(64.4%) women used Tsh 2,000 – 5,000 for transport to health facility, 128(94.8%) women were satisfied with health services provided at ANC, and 35 (25.9%) women were living far from the health facility (Table 3).

All 135(100%) participants have heard of TBA, 110(81.5%) participants were educated about birth preparedness at ANC, 130 (96.3%) participants discussed with their spouse about birth preparedness (Table 4).

Table 2 Distribution of places of delivery among mothers in Ifakara Town Council

Characteristics	Number of respondents	Percent (%)
Delivery at home		
Yes	60	44.4
No	75	55.6
Reason for home delivery		
Inaccessibility of health facility	29	21.5
Sudden onset of labour	68	50.4
Unpreparedness of family	38	28.1

Table 3 Past obstetric history of mothers of Ifakara Town Council

Characteristic	Frequency	Percentage(%)
Antenatal attendance for last pregnancy		
Yes	135	100
No	0	0
Gestational age made first visit (weeks)		
0-13	53	39.3
14-28	65	48.1
29-40	17	12.6
Number of visit made		
Less than 3	42	31.1
4 and above	93	68.9
Means of transport used to go to health facility		
Motor cycle	40	29.6
Tri cycle	65	48.1
Car	26	19.3
Foot	4	3.0
Cost of transport to health facility		
Tsh 1,000	34	25.2
Tsh 2,000-5,000	87	64.4
Tsh 6,000-10,000	14	10.4
Satisfaction with health services provided at ANC		
Satisfied	128	94.8
Not satisfied	7	5.2
Distance to health facility		
Close	14	10.4
Far	35	25.9
Very far	10	7.4

Table 4 Maternal birth preparedness among mothers at Ifakara Town Council

Characteristics	Frequency	Percentage (%)
Have you heard of TBA?		
Yes	135	100
No	0	0
Health educated on birth preparedness during ANC		
Yes	110	81.5
No	25	18.5
Discussed about birth preparedness with spouse		
Yes	130	96.3
No	5	3.7

4. Discussion

This study aimed at determining factors associated with place of delivery among women residing in Ifakara Town Council. In developing countries, more pregnant women are attending ANCs overtime, skilled delivery services remain underutilized [15]. Many studies have shown that, the predominant factors associated with not utilizing delivery services include lack of education of the mother, financial limitation, and rural residence, tradition and culture, poor quality of delivery at the health facility and delay in starting antenatal care follow-up [16, 17, 18].

In this study, 135 respondents were surveyed most of the participants 63.0% were 25 and above years of age, 61.5% were married, 54.8% had primary education, 47.4% were self-employed and 24.4% were parity two. Previous studies have shown that women with low education are more likely to deliver at home comparing to women with higher education they prefer to deliver in health facility [19, 20]. The present study highlights that woman delivered two times were more likely to deliver at home. This result agrees with the study done in Bahi, Dodoma which showed that women with high parity were less likely to deliver in health facility [21].

In the present study, 44.4% of the participants had delivery at home, 50.4% of the participants in the study who delivered at home mentioned the main reason was sudden onset of labor. The results in the present study shows that delivery at home among the mothers participated in the study, this could be they feared to travel to the health facility after sudden onset of labor thinking that they may deliver on the way. Therefore, they opted to deliver at home rather than on the way. The current results is similar to a study done in Bangladesh [21] that the mother's distance from the nearest health care facility predicts the choice of place of delivery.

In the present study, all participating women 100% attended antenatal clinic during the last pregnancy. The result in this study indicates that health education in the area on the importance of attending antenatal clinic has been perceived well. The majority of the participants, 48.1% at gestational age of 14 – 28 weeks started their first visit to antenatal clinic. In the present study, pregnant mothers were aware of the Government Policy of Tanzania which requires all pregnant women to start attending ANC at gestational age of 12 weeks [22]. Also mothers were satisfied with health services provided at ANC. In the present study, 68.9% of the mothers had 4 and above visits at ANC during pregnancy. This could be the distance of health facilities are within the physical reach. In this study, major transport used by pregnant women to health facility, 48.1% used tricycle and the cost was Tsh 2,000 – 5,000 which was 64.4% participants. The result in the present study shows that tricycle is the most affordable public transport with the lowest cost. This result agrees with the study done on transport and cost [23]. In the present study, all 100% of the participants have heard of TBAs. There are studies done which reported that TBAs determine the place of delivery among Masai tribe [24]. Another study done in Tanzania revealed that if a woman was to deliver to traditional birth attendant labor was kept secret because if complications develop the woman was required to mention all men slept with her [17]. A study done in Ngorongoro rural Tanzania showed that 7% of deliveries were conducted by TBAs [24]. A study in the same area revealed that delaying factors for pregnant women in reaching hospital were vehicle and road limitations [24]. In the present study, 81.5% of the participants had health education on birth preparedness during ANC attendance. Previous studies have indicated that birth preparedness is an integral component of focused antenatal care which involves planning for normal birth and anticipating the actions needed in case of an emergency [25]. Birth preparedness

includes identification by the pregnant woman of the following elements before on set of labour or complications; money savings to meet childbirth related costs such as transport fee, identifying a birth companion and home caretaker and booking means of transport to the health facility [26]. Another study reported that since it is not possible to precisely predict which pregnant women will experience life threatening obstetric complications, encouraging all pregnant women to prepare to access skilled birth services without delay has been identified as one of the most important intervention in safe motherhood [27]. In the present study, 96.3% of the participating women discussed with their spouse regarding birth preparedness. It is a cultural practice in most of the communities in Africa that a man is a chief executive of the family and for that matter, he controls family income and expenditure, involving him in child birth planning brings on board the money which is much needed to procure all elements of birth preparedness [28].

5. Conclusion

The degree of institutional delivery among women residing in Ifakara Municipal Council is high. However, physical access to health facilities due to lack of access to timely and appropriate transport and economic considerations are important barriers for women to deliver at health facilities in Ifakara Town Council. Improving the quality of ANC is a critical dimension to increasing access to institutional delivery.

Recommendation

Socioeconomic empowerment is likely to enhance access to better health care. Therefore, programs aiming at universal access to delivery care should target vulnerable population groups. Joint discussions and decisions between couples about reproductive and child health matters should be promoted as this also enhances institutional delivery.

Compliance with ethical standards

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Disclosure of conflict of interest

The author declares that there is no competing interest.

Statement of informed consent

Written informed consent was obtained from all participants who consented to the study, records were coded and participants/researcher names were not used. All the information collected remained confidential and was used for purpose of the study only. Participation was voluntary and no incentives were given.

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