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Factors Influencing Home Delivery and Related Challenges in Nyaruguru District, Rwanda: Qualitative Analysis

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Abstract

Objective: Sensitization to deliver at health facility aims in reducing maternal death and this is done worldwide and particularly in Rwanda. By 2015, 19% of women in Nyaruguru district delivered at home. This qualitative study aims to identify factors influencing home delivery and related challenges in Nyaruguru district.

Methods: Purposing sampling was used to select 56 women who delivered at home. Additionally, 3 focus group discussions have been conducted; each focus group was composed by 7 members including 2 mothers, 2 community health workers, one nurse, in charge of social affairs at sector level and one community member. Guided interview was conducted to explore perception of mothers who delivered at home to better understand the factors behind. Data were recorded and analyzed with N-vivo. Verbal consent was obtained from all study participants and confidentiality was guaranteed.

Results: Of the mothers who participated in the study, 25(44.6%) were aged above 30 years, 25(44.6%) attended only one ANC, 36(64.3%) had monthly family income between 20,000 to 50,000 RWF. The majority of respondents had community-based health insurance 46(82.1%). Regarding complications acquired during home delivery, 40(71.4%) had excessive vaginal bleeding, 6(10.7%) reported severe headaches/fever. 30(53.6%) reported that their child did not cry at birth. After getting complication 46(82.1%) reported to health facility to seek for advanced health care. The study identified a wide range of factors, including; traditional views, poverty, strong faith in traditional birth attendant, illiteracy and lack of knowledge regarding maternal health services, prevailing religious beliefs, geographical condition of same area of Nyaruguru that hinder the transport availability, and the fear of undergoing a caesarean delivery at health facilities.

Conclusion: Individual, and healthcare system related factors influence home delivery. Healthcare programs can consider ensuring access to quality delivery services and provide transport facilitation for poor mothers from remote areas.

Keywords: IVRS; M-Health reproductive health; Young married women; Preconception care

Introduction

The WHO estimates show that only 50% of women have access to skilled health worker in developing countries [1]. It was revealed that pregnancy and childbirth related complications contribute to a significant number of maternal deaths and disabilities in the world especially in developing countries [2]. In Sub Saharan Africa, the percentage of home deliveries attended by non-medical personnel is also high. Per et al. [3] reported that 60% of mothers in Sub Saharan Africa deliver without assistance of health workers. Most common causes for not utilizing the health facility for delivery were found to be the successful experiences of home deliveries with a help of immediate relatives or neighbors.

It is well known that complications and unsafe deliveries carried out at home are one of the leading causes of maternal mortality. WHO estimates showed that 99% of maternal death occurs in developing countries where more than a half of these deaths are due to maternal complications [1].

Few studies have addressed traditional and cultural factors associated with home delivery. According to Mwifadhi Mrisho [4], lack of money, lack of transport, sudden onset of labor, short labor, staff attitudes, and lack of privacy, tradition and cultures and the pattern of decision-making power within the household were perceived as key determinants of the place of delivery. Many women choose home birth because delivering a baby in familiar surroundings is important to them [5]. Others choose home birth because they dislike a hospital or birthing center environment, do not like a medically centered birthing experience, are concerned about exposing the infant to hospital-borne pathogens, or dislike the presence of strangers at the birth. Others prefer home birth because they feel it is more natural and less stressful [6].

RDHS (which year) shows that there are mothers who still deliver at home and only 91% delivered at health facility in Rwanda [7]. In 2015, Nyaruguru with 19% of home delivery was the first district to deliver at home in the whole Southern Province and in Rwanda as well. In addition, Nyaruguru was counting around 751 women who delivered at home in the same year; the southern province where Nyaruguru District is located was having 9% of home delivery in 2015. Therefore, the purpose of this study was to assess factors influencing home delivery and related challenges in Nyaruguru District, Rwanda.

Materials and Methods

Research design

A cross-sectional research design with pure qualitative approach was used to collect information related to factors associated with home de-

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livery and challenges faced by mothers after home delivery. Qualitative approach helped to explore community views on all factors that influence home delivery and their related challenges.

This research was conducted in Nyaruguru District among the women who delivered at home in 2018. Nyaruguru District is located in Southern province of Rwanda; the district has 14 sectors including Cyahinda, Busanze, Kibeho, Mata, Munini, Kivu, Ngera, Ngoma, Nyabimata, Nyagisozi, Muganza, Ruheru, Ruramba and Rusenge. The district has 1010 km2 total surface areas, 294334 total populations living in 63613 households and population density of 291 habitats/km2 according to 2012 Rwandan census.

Target population

The target population of this study was all women of Nyaruguru District who have delivered at home in the 2018. The target population became 485 women as they delivered at home in 2018 basing on data found in health facilities monthly reports.

Sample size

Qualitative researchers agreed that samples in qualitative research tend to be small in order to support the depth of case-oriented analysis that is fundamental to this mode of inquiry. Additionally, qualitative samples are purposive, that is, selected by virtue of their capacity to provide richly-textured information, relevant to the phenomenon under investigation [8]. These studies agreed that a qualitative sample of between 30 and 70 may lead to generalizable results.

Therefore, a purposive sampling was used to select 4 mothers in each sector to make a total of 56 mothers for interview. Except three sectors with a high number all other sectors are normally distributed in terms of numbers as indicated on appendix. Focus group discussions were carried out in three sectors with more than 40 home deliveries in 2020. In each sector, one focus group discussion composed of 7 participants was conducted. A total of 21 community members serve as a sample for focus group discussion.

Sampling technique

The list of women who gave birth at home in each sector in 2018 was generated from the routine reports of Community Health Workers and select randomly 4 mothers in each sector. Selected women were interviewed at their home with a help of community health workers. Purposive sampling was used to select respondents for both interview and focus group discussion. Each focus group discussion was composed of 7 participants including 2 mothers, 2 Community Health workers (CHWs), one nurse, one community member and in charge of social affairs at sector level.

Data collection instruments

Key interview guide was used to collect data from study participants. Some questions used during interview with mothers and focus group discussion were adopted in a study conducted in Ghana. The research tools were found valid and reliable in that study conducted in Ghana [9]. The questions were contextualized to meet local context (Table 1).

Themes	Subthemes
Individual/Family socio-economic factors	Lower risk perception
	Awareness of maternal health services
	Pain of leaving children and livestock
	Poverty
Cultural factors	Pregnancy and delivery is normal
	Home delivery is natural
	Housewarming facilities delivery
	Death is unavoidable
	Hearsays on death of women or a child in a health facility
Challenges	Distance to health facility
	Unwelcoming healthcare providers
	Limitation of provider's competence
	Limitation or no supplies and equipment at health facility

Table 1: Categories of themes and Subthemes.

Data analysis

Qualitative data were systematically coded and analyzed using content analysis with in vivo 10© (QSR International Pty Ltd, Doncaster, Australia). The texts were first coded to a theme and then to directionality; these were then explored during analysis to identify common issues or instances mentioned by respondents.

Under each theme, subthemes were defined as detailed in Table 1 and verbatim quotes that represented collective opinions were applied to substantiate results. Quotes were translated to English from Kinyarwanda as local language used in this study. Findings categorized under such themes and sub-themes were then analyzed, interpreted, and pre-

sented.

Ethical consideration

The researcher seeks the ethical approval from Mount Kenya University Rwanda, School of Public Health. Also, the permission to carry out the study was obtained from Nyaruguru District. The purpose of the study was explained to the study respondents. Verbal consent was obtained from all mothers. The researcher informed respondents that they had the right to refuse any participation in the study; Guarantee confidentiality regarding any information collected from them and promise to use it exclusively for this assignment.

Results

The present study was conducted to identify factors influencing home delivery and related challenges in Nyaruguru District. Deep interview was carried among 56 mothers who delivered at home, and focus group discussions were conducted with 21 community members.

Socio-demographic characteristics of mothers who delivered at home

A total of 56 mothers participated in the study as primary respondents. Of them 25(44.6%) were aged above 30 years, 41(73.2%) had primary education, 25(44.6%) attended only one ANC, 46(82.1%) were farmers, 36(64.3%) had monthly family income between 20,000 to 50,000 RWF. The majority of respondents use community based health insurance 46(82.1%) (Table 2).

	Frequency	Percentage
Age group		
21-<25	10	17.9
25-<30	21	37.5
≥ 30	25	44.6
Education level		
None	10	17.9
Primary	41	73.2
Secondary	5	8.9
Number of ANC		
1	25	44.6
2	16	28.6
3	15	26.8
Occupation		
Agriculture/Farming	46	82.1
Employed	10	17.9
Monthly Income		
Less than Rwf 20,000	5	8.9
20,000-50,000	36	64.3
More than 150,000	15	26.8
Religion		
None	10	17.9
Catholic	36	64.3
Adventist	5	8.9
Protestant	5	8.9
Medical Insurance		
Community Based Health insurance	46	82.1
RSSB/RAMA	10	17.9

Table 2: Socio-demographic characteristics of mothers who delivered at home in Nyaruguru District.

The majority of mothers who delivered at home in Nyaruguru District 21(55.4%) had delivered 1-3 children at home. Regarding complications acquired during home delivery, 40(71.4%) had excessive vaginal bleeding, 6(10.7%) reported severe headaches/fever. The majority 46(82.1%) were assisted by family members during delivery, 30(53.6%) reported that their child did not cry at birth. After getting complication 46(82.1%) reported to health facility to seek for advanced care (Table 3).

	Frequency	Percentage
Number of children delivered at home		
1-3	31	55.4
4-6	25	44.6
Maternal complications during home delivery		
Excessive vaginal bleeding	40	71.4
Labor pains for more than 12 hours	5	8.9
Severe headaches/ Fever	6	10.7
Breathlessness and tiredness	5	8.9
Person assisted during home delivery		
Family member	46	82.1
A friend	10	17.9
Child complications developed after home delivery		
Did not cry	30	53.6
Did not breath	11	19.6
Died	15	26.6
Seeking care after complications		
Traditional midwives	10	17.9
Health care facilities	46	82.1

Table 3: Maternal and child characteristics of Respondents.

The socio-economic factors that influence home delivery in Nyaruguru District

This study explores socio-economic factors the influence home delivery in Nyaruguru district. The findings show that personal, family socio-economic factors played an important role in influencing women to give birth at home.

Financial dependence and lack of transport to health facility

Dependence on the husband for financial support and decision making was reported as one of the main reasons that influence women's

to deliver at home. The husband was perceived as the most important person in the decision making process and his decision is usually final and most pregnant women would accept it.

All interviewed mothers who delivered at home respondents and most FGD respondents mentioned that in Nyaruguru District pregnant women depended financially on their husbands.

" It is known here in Nyaruguru District, if the husband did not have enough money to provide for his wife, he would either delay making the decision to allow the wife to go to the clinic or stop her all together; in this case, she prefer deliver at home" (38 year IDI respondents/mother from Kibeho Sector).

"Most women here in Nyaruguru district fail to go to deliver at the health facility because of their husbands. They financially depend on their husbands to allow and provide necessary means to go to deliver at health facility" (43 year FDG participant/a community health worker).

Directly or indirectly, family economic condition significantly delays the decision to use a healthcare facility for delivery specifically in rural area like Nyaruguru district. In this study, nearly all nurses and community health workers interviewed have mentioned the cost of hospital delivery as a main factor that influence women in Nyaruguru district to deliver at home. The majority of the nurses interviewed explained the issue using the following expression "Cost of delivering at hospital is a major factor that continue to influence some mothers to deliver at home here in Nyaruguru District to seeking care" (a 27 year IDI respondent/A nurse at Muganza Health center).

A CHW addressed the issue this way:

"One day I visited a pregnant mother at her home, when I told her that she must be been taken to hospital for delivery, her husband sat and cried that I do not have money to pay for delivery services as we do not have Insurance" (A 42 year FGDs participant/a CHW).

The majority of mothers' who delivered at home argued that their families did not prepare for childbirth and that their husbands did not support them to find resources to use when staying at the health center or hospital, waiting for delivery. Therefore, they prefer to deliver at home and take all the associated risks.

In actual practice delivery services are usually provided in public health facilities at low costs. However, families may not afford to buy drugs and pay for transportation and other travel related expenses including ambulance in case needed.

"Usually, rural women don't have money and their husbands do not save money for such cases, they have to sell domestic animal when something happens... same for hospital expenses... so there is no readily available cash to pay for emergency medical events" (45 years, FGD participants, community leader in Ngoma sector).

"Nyaruguru District is remotely located, this affect the access to the transport even due to some poor quality roads" (59 years IDI participant/a Male CHW in Muganza Sector).

"Considering health center location, it is not easy to carry a pregnant woman on a locally made stretcher and then walk for hours. That is why sometimes delivery takes place at home" (33 years FGD participant in charge of social affairs in Muganza Sector).

"During my first pregnancy, I was examined at Muganza health center, after investigation the community health worker told me that I must give birth at a health center under supervision of a skilled person. When the time came I wanted to go but couldn't because my village is too far from the health center, there was a heavy rain, it takes at least two hours to walk to health center, no money to pay for ambulance services. Thus, I was forced to deliver at home". (23 years FGD participant/a mother who delivered at home in Munganza Sector).

Low risk perception

Low risk perception regarding their personal susceptibility to pregnancy and labor complications was one of the main reasons why most old women with many children delivered at home. Majority of respondents explained that although most old mothers were aware of the severity of labor complications, most of them believed that, compared to younger women, their personal susceptibility to pregnancy and labor complications was low and that they were not personally at risk of developing such complications, because of their experience with childbirth.

"Most women with many children do not even worry about labor complications because they believe that they are used to it, and that they know themselves that they do not face problems when giving birth. They say that even if I experience problems, they will call the mother/grandmother or give me some herbs to drink; and then I will deliver" (36-year-old FGD respondent/mother).

Concerns about children, livestock and heavy workload

During in depth interviews and focus group discussion, it was found that those who delivered at home were often concerned about their children and livestock they left behind.

"During this last delivery, my husband was away from home searching for money to feed our family and there was no one to look after my children and livestock. I was quite worried about what could happen to them if I go to the health facility. So, delivering at home was the only option I have since I do not have someone to care for my children and livestock in my absence" (27 year IDI participant/a mother who deliver at home).

In the rural community like Nyaruguru district, women are engaged in household chores throughout the day to meet their basic daily needs and of children and husband.

"In our village, some mothers do not seek ANC services and deliver at home because they cannot be away from the family due to the excess workload they shoulder daily and the family is entirely dependent on them for household matters … such mother do not want the family to be in trouble … so, they work until delivery" (45 years FGD participants/A CHW from Muganza sector).

A rural woman with poor education level did not like to seek ANC services in some instances they do not even know the expected delivery date, therefore continues strenuous work until they actually deliver at home.

A participant said, "Some mother start labor pain whilst away from

home to conduct their routine work often ending with home delivery. You know, some mothers also experience a very short or no labor pain preceding the delivery of a baby, which makes them deliver quickly at home" (41 years, FGD participant/a Nurse at Kibeho Health center).

The cultural factors contributing to home delivery

Most of the women who delivered at home invariably argue that pregnancy and childbirth is normal.

"Pregnancy and childbirth is a natural life process and is not an illness. So, I do not see why I should visit a health center during pregnancy and for delivery" (42 years, IDI participant/a mother who delivered at home in Ngoma Sector).

A 20-year-old mother living approximately 3 km away from the health center pointed out: "Delivery in a health facility is an option when labor is taking longer and painful. Thanks to God I delivered my first son at home assisted by my mother without any problems".

"I have four children and all were born at home without any complication, I do not see a need to go health as I do not had any complications as well" (44 years IDI participants/A mother who delivered at home in Muganza Sector).

Furthermore, the cheering and supportive mood at home during labor with experienced women around was argued to be helpful. Although institutional delivery is considered useful, some women still believed that are several socially sanctioned rituals that may be missed by delivering at facility said in charge of social affairs in Kibeho Sector.

"I like delivering at home because my mother will stay with me during the labor and I also feel more secure and fearless when the family is with me" (29 years, IDI participants/a mother who delivered at home in Kibeho sector).

"I feel more comfortable with home delivery … I see my neighbors and friends taking care of my children and domestic animals … that makes me relaxed and the process less stressful" (33 years, IDI participant/a mother who delivered at home in Muganza Sector).

Lack of confidence in health workers

The unfriendliness of some health workers discourages pregnant women from seeking care at the health center. FGD participants also mentioned that some health workers lack proper skills and confidence to handle delivery.

Mothers who delivered at home were also concerned about the privacy they lack at the health center. One mother described it as follows: "I laid down on the delivery couch exposing private parts to literally everyone in the health center. There is no privacy... different people (staffs) come frequently to the delivery room, there is no such a problem at home...". (25 years FGD participants, a mother who delivered at home in Muganza sector).

Participants also complained about the lack of equipment, supplies, and drugs necessary for maternity care in health centers.

"At most of health centers even at Munini Hospital, health workers give us a paper to buy the drug and other supplies including stitching materials and gloves. Although we were informed during pregnancy follow up that our community health insurance will cover the most of delivery, we spent a lot of money to purchase medicine and other supplies. Those who can´t afford are discouraged by this and prefer to deliver at home". (28 years FGD participant/a mother who deliver at home in Ngoma Sector,).

Discussion

The study revealed a combination of supply and demand side factors to be responsible for home delivery in Nyaruguru district. Demand side issues include financial constraints, distant health facilities and traditional/cultural practices. Supply side barriers include lack of skills, poor quality services, failure to protect privacy during delivery service, lack of maternity waiting areas and limited ambulance services. Similar factors that influence home delivery have been reported in a study conducted in Ethiopia where poverty is the most frequently cited reason for preferring home delivery [10]. Other major factors reported in a study conducted in Malawi including traditional views, religious fallacy, poor road conditions, limited access of women to decision making in the family, lack of transportation to reach the nearest health facility [11].

Our findings revealed that women aged of more than 30 years are likely to deliver at home as and this corroborate with the findings of Mahavir Nakel where they have seen that women with advanced age are likely to deliver at home compared to young women [12].

In this study most of mothers who delivered at home said that they cannot afford the cost of delivery at health center facility. This leaves women with no choice but to deliver at home with assistance of their mother/grandmother or traditional birth attendant (TBA). Poor people do not have sufficient money to spend on delivery and the cost of facility delivery is much higher than a home delivery because a facility based delivery requires patients to pay for the cost of medicines, hospital facilities, transport, etc. [13,14].

Poor education was found as an important factor that contributes to home delivery in Nyaruguru district. Previous studies also describe how educational status influences care seeking from hospitals [15,16]. In particular, women with more education are more likely to go to a facility for child birth. It is well known that illiteracy and unawareness regarding delivery complications contribute to women preferring delivery at home.

Conclusion

The perception that women received better care at home; financial constraints; perceived poor quality of care and conduct of skilled birth attendants; and lack of access to healthcare facilities in accounted for majority of the factors that influencing women in Nyaruguru District to give birth at home.

References

1. WHO (2013) Community performance-based financing to improve maternal health outcomes: Experience from Rwanda. WHO.
2. Kuril BM, Pund SB, Doibale MK, Ankushe RT, Kumar P, et al. (2017) Study to access the socio-demographic determinants and the reasons for preference of place of delivery in rural women Paithan Aurangabad. IJCMPH. 4(8): 1-7.

3. Per B, Joseph M (2007) A medical birth registry at kilimanjaro christian medical centre. East Afr J Public Health. 4(1): 1-4.

4. Muranda E (2013) Factors influencing women's preference for home births in the Mutare District, Zimbabwe. Public Health, University of South Africa.

5. Dahal KR (2013) Factors influencing the choice of place of delivery among women in eastern rural Nepal. IJMCH. 1(2): 30-37.

6. Sayih BA (2016) Factors determining choice of delivery place among women of child bearing age in Dega Damot District, North West of Ethiopia: A community based crosssectional study. BMC. 16: 229.

7. NISR (2015) Rwanda demographic and health survey 2015. Calverton: INSR & ORC Macro.

8. Polit FD, Hungler PB (2004) Nursing research: Principles and methods (7th edn). Philadelphia: JB Lippincott.

9. Nanang LM, Atabila A (2014) Factors predicting home delivery among women in bosomtwe atwima-kwanwoma district of Ghana: A case control study. Int J Med Public Health. 4(3): 287-291.

10. Teferra AS, Alemu FM, Woldeyohannes SM (2012) Institutional delivery service utilization and associated factors among mothers who gave birth in the last 12 months in sekela district, North West of Ethiopia: A community-based cross sectional study. BMC pregnancy and childbirth. 12(1): 74.

11. Seljeskog L, Sundby J, Chimang J (2006) Factors influencing women's choice of place of delivery in rural malawi: An explorative study. Afr J Reprod Health. 10(3): 66-75.

12. Nakel MP, Gattani PL, Goel AD (2018) Study of risk factors associated with home deliveries: A cross sectional study in rural areas of Marathwada. NJRCM. 3(3): 238-244.

13. Otieno JO (2015) Factors associated with home delivery in west pokot county of Kenya. Advances in Public Health. 2015: 1-6.

14. Gabrysch S, Cousens S, Cox J, Campbell O (2011) Distance and quality of care strongly influence choice of delivery place in rural Zambia: A study linking national data in a geographic information system. J Epidemiol Community Health. 65(1): 1.

15. Umurungi YS (2010) Determinants of the utilization of delivery services by pregnant women in Rwanda. University of the Witwatersrand, Rwanda.

16. Nduka I, Nduka E (2014) Determinants of noninstitutional deliveries in an urban community in Nigeria. J Med Investigations Practice. 9(3): 102-107.

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