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Prevalence and Risk Factors Associated with Unattended Home Deliveries in Sunkutu Village of Kasama District-Zambia

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Abstract

Background: Unattended home delivery is when the pregnant woman is unassisted or only attended by a lay person, perhaps their spouse, family, friend, or a non-professional birth attendant, sometimes also called free-births. The prevalence of home deliveries shows regional variations with South East Asia showing values reaching as high as 65%; Europe less than 2% and Africa with estimates reaching as high as 62% in some areas. In sub-Saharan Africa, statistics on deliveries that occurred at home showed prevalence rates of 19% in Namibia, 43%in Malawi, 52% in Zambia and 53% in Tanzania. At the provincial level, 68.4%of the deliveries in Northern Province occurred at home followed by Central Province and Luapula Province at 66.1 percent and 64.3 percent respectively. Home deliveries in developing countries that are largely unplanned, accidental and unhygienic have contributed to ninety-nine percent of maternal deaths occurring worldwide. Births occurring outside the health facility in Zambia are more likely to have pregnancy complications that may result in maternal and fetal deaths due to lack of skilled attendance. Socioeconomic variables and physical distance from a health facility influence the place of delivery. Sunkutu village is one of the rural areas in Kasama District with high maternal morbidity and mortality. No particular study has been done in the area on prevalence and risk factors of home deliveries hence this study.

Objectives: To determine the prevalence and risk factors of unattended home births in Sunkutu village of Kasama District.

Methods: An analytical cross sectional study was employed aimed at determining the prevalence and risk factors of unattended home births in Sunkutu Village of Kasama District. The target population will comprise women of child bearing age (15-49 years).

Results: Out of the 252 respondents who took part in the study, 108 reported that they had a home delivery a year prior to the time of the study, while 144 said that they delivered at a health facility. The prevalence of home deliveries was found to be 43%, 95% CI (38.62, 47.48). Among the objectives of the study was to find out the determinants associated with home deliveries in Sunkutu village. On cross tabulations; distance to the nearest health facility (p-value 0.001), educational level of mothers (p-value 0.005), school years for mothers (p-value <0.001), educational level of the child's father (p-value 0.005), school years for child's father (p-value 0.005) and the household income (p-value <0.001) showed significant statistical associations with the place of delivery. On multivariate binary logistic regression analysis, women who had four years of schooling or less, were 63%(AOR=1.63, 95%CI) more likely to deliver at home than a health facility compared to those who had at least five years of schooling. Women coming from households that had a combined monthly income of less than 150ZMK were 73% (AOR=1.73, 95%CI) more likely to deliver at home than at a health facility when compared to those whose household income was greater or equal to 150ZMK. Women who lived within a radius of 5 kilometers to the nearest health facility providing maternal health and delivery services were 39% (AOR=0.61, 95%CI) less likely to deliver at home compared to those who lived more than 5 km away.

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Conclusion: The occurrence of home deliveries in a low income rural setting of a developing country was associated to the distances of villages to health facilities and the household incomes as well as the number of years that mothers spent in school. These observed determinants alone however, do not entirely explain the circumstances under which each home delivery occurs and thus the personal experiences of mothers and the perspectives of community members and considerations of tradition and beliefs, combined with the afore mentioned determinants offer a better understanding of what factors determine a home delivery in Sunkutu village of Kasama District.

Keywords: Pregnant woman • Zambia • Household income • Multivariate binary logistic • Kasama district

Introduction

Home delivery is childbirth occurring after 28 weeks of gestation outside the confines of a hospital, rural health centre or birthing centre. Home deliveries may be either attended or unattended. Attended home delivery is when the pregnant woman is assisted through labor and birth by a professional, usually a midwife, and rarely a general practitioner. On the other hand, unattended home delivery is when the pregnant woman is unassisted or only attended by a lay person, perhaps their spouse, family, friend, or a non-professional birth attendant, sometimes also called free-births. Home deliveries that are largely unplanned, accidental and unhygienic have contributed to ninety-nine percent of maternal deaths occurring worldwide. These deliveries have been associated with increased fetal and early neonatal mortality bordered on the inexperience of the attending party (traditional birth attendants) in cases of complications. The place of delivery and its determinants have long been on the research agenda. Socioeconomic variables and physical distance from a health facility influence the place of delivery. In rural Tanzania for instance, 84% of women who gave birth at home intended to deliver at health facility but did not because of distance and transportation problems. On the global scale, home deliveries in the developed western countries constitute a very marginal share of total deliveries, being mainly below 2% with the exception of the Netherlands where home deliveries are above 30%. The prevalence of home deliveries shows regional variations with South East Asia showing values reaching as high as 65%; Europe less than 2% and Africa with estimates reaching as high as 62% in some areas. In developing countries home deliveries constitute a larger share of all deliveries with statistics usually above 50% (NIPS and Macro International Inc 2008; NPC and ICF Macro 2009). In sub-Saharan Africa, statistics on deliveries that occurred at home showed prevalence rates of 19% in Namibia, 43%in Malawi, 52% in Zambia and 53% in Tanzania. In Zambia the percentage of births attended by skilled providers in health facilities is about 47%, contributing to the slow progress in meeting global targets on maternal mortality. Zambia's National Health Strategic Plan (2011-15), aimed to increase the number of births supervised by a skilled attendant to 65% by 2015.

Home deliveries in Zambia accounted for 52 percent of all births in the five year period preceding the health survey of 2007. At the provincial level, 68.4% of the deliveries in Northern Province occurred at home followed by Central Province and Luapula Province at 66.1 percent and 64.3 percent respectively. Births occurring outside the health facility in Zambia are more likely to have pregnancy complications that may result in maternal and fetal deaths due to lack of skilled attendance. The conditions under which child delivery occurs in unattended home deliveries and whether it safety for both the mother and baby, is one of the reasons for the unending contentious debate affiliated to child birth. It is for this reason that arguments on this topic have become further complicated by the inclusion of criteria such as consideration of whether the delivery occurs under planned or unplanned home setups, since arrangements for a skilled attendant with necessary equipment and or an ambulance to the nearest referral center are usually available in planned setups unlike when it's unplanned. The availability of services to mothers in developed countries may not necessarily also be at the disposal of women in poor developing countries. The World Health Organization has attached the condition of a skilled birth attendant among other things as a required prerequisite for a safe home birth. This factor alone may make it difficult for developing countries like Zambia to encourage home deliveries as most of these deliveries are still being done by traditional birth attendants. Therefore, the advocacy for home deliveries in developed countries though supported by research evidence as being comparable to deliveries done in health institutions may still fall short of meeting the expectations of poor countries like Zambia that still lack equitable distribution of services which may only be more readily available in the urban as opposed to the rural areas.

Sunkutu village is one of the rural areas in Kasama District with high maternal morbidity and mortality. No particular study has been done in Sunkutu Village of Kasama District on prevalence and risk factors of unattended home deliveries. This could have contributed to the unresolved high maternal morbidity and mortality in the area, hence this study. The findings of this study will be crucial to the formulation of interventions in maternal morbidity and mortality in the aforementioned area. Policy change and formulation may be tailored to combating the modifiable risk factors of unattended home deliveries based on the findings of this study, thereby encouraging more pregnant women to seek health personnel aided deliveries.

Literature Review

Several studies have demonstrated different assertions about the effects that home births have, with regard to maternal and neonatal outcomes when compared to hospital conducted deliveries. Some show that home deliveries have harmful effects on fetal and maternal outcomes when compared to those conducted in the hospital setting; while other studies demonstrated no such observed differences but to the contrary reported that home delivered births had lower measurements of serious maternal morbidities when compared to those that took place in the hospital. The contention in the disputes over adverse effects on maternal and neonatal outcomes as a result of either a hospital or home delivery by some studies has been failure by them to account for whether the home or hospital settings allowed for the role of prior planning of the delivery either in the home or the

hospital environment. In Sub-Saharan Africa (SSA), South Asia, and Southeast Asia, more than 70% of all births in the lowest two wealth quintiles occurred at home. In SSA, 54.1% of the richest women reported using public facilities compared with only 17.7% of the poorest women. Among home births in SSA, 56% in the poorest quintile were unattended while 41% were attended by a Traditional Birth Attendant (TBA); 40% in the wealthiest quintile were unattended, while 33% were attended by a TBA. Seven per cent of the poorest women reported cost as a reason for not delivering in a facility, while 27% reported lack of access as a reason. The most common reason given by both the poorest and richest women for not delivering in a facility was that it was deemed "not necessary" by a household decision maker. Among the poorest women, "not necessary" was given as a reason by 68% of women whose births were unattended and by 66% of women whose births were attended [1].

Education of women

Some studies have shown that women who are less educated or illiterate are associated with having home deliveries. Low maternal education of less than grade 5 was significantly associated to a home delivery Other studies were also able to illustrate that mother educational levels that were lower than primary or indeed of those that had not attended school at all, as being associated to delivering at home. The odds of a home delivery was 3.2 times higher among women who were illiterate than those who were literate.

Cultural values and ethnicity of the family

Differences in the ethnicity of women in Uganda with respect to not belonging to the largest ethnic Mugandan group showed an association with delivering at home. In Nepal, a study by, where there were ethnic differences among the indigenous people, showed that other ethnic groups other than the Tamang, delivered at home with a higher odd of 3.7. The place of delivery was also found to be determined by ethnic group differences among indigenous people in Tanzania. Though certain ethnicity differences were seen to influence place of delivery, they could not be statistically associated with home deliveries after adjusting for amenity scores. According to a study in Kenya by Caulfield, among the cultural values that have been associate with preference for home births include to conceal non-circumcision from others, so that birth rituals can be observed, cultural practices and beliefs about births are respected, association of illness with health facilities and belief that women who deliver alone are courageous while women who deliver in health facilities are weak able.

Patriarchal issues

The gender of the head of the household was significantly associated with place of delivery. This was also demonstrated by Hodgkin in a study about "household characteristics affecting where mothers deliver in rural Kenya", that households that delivered in the formal sector were less likely to be headed by a male.

Occupation of the couple

In a study by Thind, it was found that women who delivered in their home, compared to hospital delivery, were more of those who engaged in small trade, casual employment, or none. Nuwaha and Amooti-Kaguna, found the occupation of the father to be significantly associated with home delivery, whereas this was not the case in the study done by Wagle and others where the occupation of the mother other than office work was insignificant after adjustment [2].

Parity of the woman

Women with home deliveries were more likely to be multiparous. This association was also shown by who found that women with more than three children delivered at home. Thind and Banerjee also found home deliveries by women to be associated with a higher birth order, as did Adhikari and Dahal whose study showed that the odds for home deliveries was 2.5 times higher among multiparous women compared to primiparous women. On the other hand Nuwaha and Amooti-Kaguna found parity to be non-significant after multivariate analysis as some multiparous women still preferred home delivery due to previous less cordial experience with health personnel.

Maternal age

The age at first pregnancy of less than 18 years was associated with home deliveries in Nigeria. However, found that younger mothers were more likely to deliver at health institutions and not at home. In two other studies, age was not found to be associated to women who delivered at home.

Distance to health facility

Living more than an hour's distance away from a health facility was associated with a higher prevalence proportion for home deliveries. In the study by Nuwaha and Amooti-Kaguna, distance was a non-significant finding probably because other factors were not included. Households that had home deliveries were on average further away from the nearest maternity bed when compared to those where a facility delivery took place. However, under a non-linear hypothesis the probability of using formal care was not shown to decrease by larger amounts with each successive mile to be travelled.

Income of the household

Lower yearly income and being in low income families was associated with a highe risk for home deliveries. Homesteads that were not of high social class were found to favor delivery at home. In generating qualitative findings, summarized that women delivered at home due to lack of money and that they found delivering at home to be cheaper. The lack of transport was also reported to be a contributing factor. Hodgkin similarly attributed delivering at home to the cheaper cost and that those who delivered at a health facility were likely to have had a family member with health insurance.

Antenatal care

Most of the studies were able to find a statistically significant association with the lack of antenatal care attendance and delivering at home. Many women still delivered at home even after they had attended antenatal care services at least once in the course of their pregnancy. The antenatal attendance in the preceding delivery did not influence the choice for a hospital delivery, did not influence the

choice for a hospital delivery, as 46% of respondents still delivered at home despite having attended at least four ANC sessions.

Methodology

Study site

The study was conducted in Sunkutu Village of Kasama District, Northern Province-Zambia. Sunkutu Village is a rural area with a population of about 668 people comprising much of children and young women of child bearing age. The area has about 163 households, and agriculture is their main economic activity. Namulundu Clinic in the neighbouring village about 5km away is the nearest health care facility for the people of Sunkutu Village.

Target population

The target population comprised women in child bearing age (15-49 years) who had had a delivery in the past one year prior to commencement of the study.

Study design

An analytical cross sectional study was employed aimed at determining the prevalence and risk factors of unattended home births in Sunkutu Village of Kasama District. This study design was employed so as to not only characterize the prevalence but also determine the risk factors and outcome differences between risky groups and non-risky groups. The prevalence was measured by the number of home births divided by the total number of births for the past 1 year.

Sampling procedure

A simple random sampling was used to select the participants/ respondents in the study. Households of respondents were picked at random and respondents from same household were asked individually.

Plan for data collection

A semi-structured questionnaire was developed and used as a personal interview guide to obtain information from the respondents on distance to the nearest health facility, household size, household income status, use of antenatal care and the place where delivery occurred among other areas of focus.

Plan for data processing and analysis

All the qualitative components of the data set was grouped into themes and entered into Nvivo computer software for analysis. Quantitative data was computer coded and entered into Epi data software and then exported for analysis to the Statistical Package for Social Sciences (SPSS) for windows. The test for associations between variables was made with chi-square tests with the expected frequency for cells less than 5 set at 20% in order to get valid results and also with univariate and multivariate binary logistic regression. A 95% confidence interval and P values was used to test for 15 statistical significance of associations between the dependent variable, place of delivery and the independent variables namely: maternal age, distance, marital status, parity, household size, the educational level of mothers, the educational level of the child's father, the occupation of the child's father, household income and antenatal care attendance by the mothers [3].

Ethical consideration

Ethical approval was sought from the Tropical Disease and Research Centre (TDRC) ethics committee. Consent was sought from all respondents and adequate information about the study was given to ascertain informed consent. Respondents were treated with respect and confidentiality was highly upheld.

Study limitations

The success of the study was dependent upon the co-operation of respondents, time and financial factors.

Results

Participation and socio-demographic characteristics

Out of the 263 eligible participants, 252 consented to take part in the study while 11 refused giving a response rate of 96% (Table 1). Of the 252 respondents who were interviewed 78 (31.1%), were aged 18-24 years while 49 (19.4%) were aged 35 years and above. The majority of the respondents were married 218 (86.6%), and only 11 (4.2%) were single.

Eligible	263
Consented	252
Refused	11
Not found	0
Response rate	96%

Table1: Participation rates among females who consented for the survey in Sunkutu village.

Out of the 252 respondents interviewed, 169(67.2%) had three or more children, while 50 (20%) had only one child. The study revealed that, only 10 (4.0%) of the women who took part in the study reported to have attained secondary school education and reached the tenth or a higher grade. The majority 213 (84.6%) of the mothers attained only primary level of education and some had no formal education at all (Table 2).

Description	% (n=252)
Age	
≤24 years	31.1
25-29 years	28.4
30-34 years	21.1
≥35 years	19.4
Marital status	
Single	4.2

Married	86.6
Others	9.2
Parity	
One child	20
Two children	12.7
≥Three children	67.2
Educational level of mothers	
None/Primary level	84.6
Junior Secondary level	11.5
Upper Secondary/college level	4

Table2: Socio-demographic characteristics of respondents.Prevalence and general determinants of home deliveries in Sunkutu village

Prevalence of home deliveries: Out of the 252 respondents who took part in the study, 108 reported that they had a home delivery a year prior to the time of the study, while 144 said that they delivered at a health facility. The prevalence of home deliveries was found to be 43%, 95% CI (38.62, 47.48), refer to Table 3.

Place of delivery	Frequency	
	%	(n/N)
Home	43	109/252
Healthy facility	57	144/252

Table3: Proportion of deliveries occurring at home in Sunkutu village.

Determinants of home deliveries: Among the objectives of the study was to find out the determinants associated with home deliveries in Sunkutu village. Cross-tabulations, univariate binary logistic regressions and multivariate binary logistic regressions were computed. On cross tabulations; distance to the nearest health facility (p-value 0.001), educational level of mothers (p-value 0.005), school years for mothers (p-value<0.001), educational level of the child's father (p-value 0.005), school years for child's father (p-value 0.005) and the household income (p- value<0.001) showed significant statistical associations with the place of delivery (Table 4).

On multivariate binary logistic regression analysis, women who had four years of schooling or less, were 63% (AOR=1.63, 95%CI [1.06, 2.51]) more likely to deliver at home than a health facility compared to those who had at least five years of schooling. Women coming from households that had a combined monthly income of less than 150ZMK were 73% (AOR=1.73, 95%CI [1.06, 2.81]) more likely to deliver at home than at a health facility when compared to those whose household income was greater or equal to 150ZMK. Women who lived within a radius of 5 kilometers to the nearest health facility providing maternal health and delivery services were 39% (AOR=0.61, 95%CI [0.41, 0.90]) less likely to deliver at home compared to those who lived more than 5 km away.

Factor	Prevalence (%)	Adjuted odds ratio (AOR) 95% CI	P-value
Distance			
≥6 km	55.7	1	0.012
≤5 km	44.3	0.61 (0.41, 0.90)	
Educational level of mothers			
Secondary and higher	15.4	1	0.09
None/primary	84.6	1.70 (0.92, 3.14)	
School years of mothers			
≥5 years	64.9	1	0.027
≤4 years	35.1	1.63 (1.06, 2.51)	
Marital status			
married/others	95.8	1	0.43
single	4.2	1.53 (0.54, 4.38)	
Educational level of child's father			
Secondary and higher	43	1	0.381
None/primary	57	0.83 (0.54, 1.27)	

Table4: Determinants of home delivery in Sunkutu village; results of multivariate binary logistic regression.

Qualitative findings

The study found that 71 percent of the respondents were agreeable to have a home delivery, while 25 percent said they wouldn't. On the home as a place of delivery, 73 percent of the respondents did not think delivering at home was safe, while 17 percent thought it was (Table 5).

Individual perception	Frequency (n=252)		
Would not deliver at home	25.00%	Would deliver at home	71.00%
No comment	4.00%		

Table5: Perceptions about delivering at home.

Long distances to health facilities: Most of the group discussions of the study revealed that the distance from the mother's homes to the health facilities was very far. This finding coupled with lack of transport, made it very difficult for women in labor to walk for very long distances in an effort to get to the health facility. Even with the few available transportation options, it was reported that sometimes it was just difficult to travel, as the geographical terrain in the area was bad. As for water transport, the situation was even worse during the rainy season when it gets windy and boats are usually not available, as they cannot be used during a storm. Some of the findings revealed that women were further hampered from reaching a health facility using water transport when labor started at night as most of the boats would have been taken away for fishing.

Lack of health workers in most health facilities: The lack of health personnel in most health facilities was another reason that the participants in the study identified for preference to deliver at home.

Most of the women pointed out that there are no Health workers in the health facilities and as such; going to deliver from there was as good as delivering from home. Some women felt it was a better choice to deliver from home as there was no difference either way because even if they went to the health facilities, they were likely be delivered by non-medical staff (traditional birth attendants). At times, even when there are health workers at the facility, they complain about being tired and often mothers feel they would have rather remained and delivered at home [4].

Advice and following instruction: Some of the participants in the study reported having delivered at home simply because they were advised to do so or because they were instructed to do so by close relatives or husbands. They further reported that the basis of this advice and instruction differed. In some cases it could be based on the inability to meet the requirements at the health facilities such as gloves, soap, nappies and other things that may be required at the time of delivery. In other cases women were advised to deliver at home for fear of operations at the health facility. This was true as evident by a woman who pointed out that, „my grandmother advised me to deliver at home because I would have had an operation if I went to the health facility like she had when the hospital staff discovered that her pregnancy was imbedded outside the womb ‟ (Focus group discussion female 22 years). In addition to this, some women were advised to deliver at home because there were some traditional birth attendants in the villages who were available.

Circumstances beyond control: Some women who participated in the study reported having delivered from home due to circumstances beyond their control. Some women deliver at home because they have other responsibilities like taking care of their children or a sick relative. In some cases, women are turned away from the health facility because it has been turned into an epidemic control centre especially during the times of cholera outbreaks. „I delivered at home because I had a three year old child whom I could not leave at home as no one was around to look after him and at the time people were being chased away from the clinic because of the cholera outbreak ‟(In-depth interview female 29 years).

Availability of traditional birth attendants: Most women who took part in the study reported having delivered at home because of the availability of the traditional birth attendants. In one group discussion, it was pointed out that traditional birth attendants who trained at the clinic were accorded great respect because of their work and as such, most women and their husbands preferred to use them for deliveries as opposed to going to the health facility. It was also pointed out that owing to the many challenges that women face with regards to delivering at the health facility, such as transport, the long distances they have to endure, requirements like gloves and soap, they end up using traditional birth attendants as with them, most of these things were not required. In one community, women reported that they are delivered at home because women in their community are allowed to be delivered by traditional birth attendants unless the traditional birth attendant decides to refer them to the health facility.

Myths and traditional beliefs: Myths and traditional beliefs were another reason given to explain why women delivered at home. Most women decided to deliver at home because they needed their grandmothers to give them traditional medicines that could enable them deliver quickly without complications and also be treated for incila. Incila, according to the participants, was a situation where the partner or husband of the pregnant woman or indeed the pregnant woman herself engaged affairs with other people during the woman‟s pregnancy. This incila may cause the woman to have difficulties at delivery because of the man‟s extra marital affairs or her own extra marital affairs. Incila was a traditional belief that made most women to deliver at home because they believed that they could only be treated using traditional medicines/ herbs for that condition and not the health facility, and thus had no alternative otherwise the baby or the mother may die at the time of delivery. In most cases, it was the elderly women, who were also traditional birth attendants who knew the medicines and hence the preference by most women to be delivered by them [5].

Religious beliefs and misconceptions: Some of the participants in the study noted that some women delivered at home due to their religious beliefs and those of their spouses. „Sects such as “ba Milonda” or “ba Apostolo” will not go to the conventional health facilities such as clinics and hospitals. These congregants may even be delivered by their own husbands instead and that is the reason why the chief has even banished them from the village to the outskirts‟ (Focus group discussion female 37 years).

Core determinant of home delivery: Distance and income

The findings of the study revealed that distance, number of years of schooling and household income emerged as the determinants of home deliveries from the quantitative data set. However, only the distance from the respondent‟s village to the health facilities and income were prominently captured as determinants for home deliveries in the focus group discussions and the in-depth interviews. The reflections on income from the qualitative findings revealed that it had a bearing on the ability to hire bicycles or vehicles especially when the distances to the nearest health facilities were appreciably too far for women who were in labor to cover on foot.

The distances were reported to hamper the accessibility of health facilities and proved to be a major source of concern especially at night times. These two determinants therefore, emerged as core explanatory reasons for deliveries that took place at home.

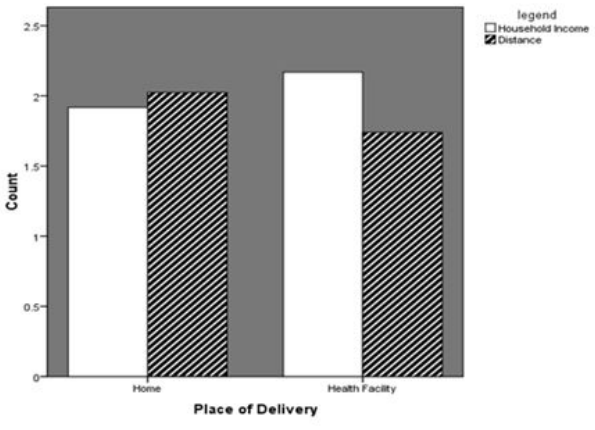

Figure1: Comparison of the place of delivery by income and distance.

Discussion of the Findings

Prevalence and determinants of home deliveries

A prevalence of home deliveries in Sunkutu village is unacceptably high. A comparison with the reported deliveries occurring at home in Sunkutu village by traditional birth attendants and extracted from the Health Management Information System (HMIS) for Kasama district, stood at 20.2% in 2017, a prevalence which is also unacceptably high. This is because antenatal evidence suggests that most home deliveries still remain largely unreported and thus are not captured in the district aggregated information system, reflecting that the burden reported in this study might be an under estimation. The study did not find any association between the mother's current age, their marital status, their parity, nor the occupation of the child's father. On multivariate logistic regression analysis, only the number of years of schooling by mothers; the household income and the distance of the mother's village to a health facility were found to be significantly associated with births that occurred at home. The perceptions on home deliveries varied on the basis of individual and community perspectives and revealed that following instruction, advice and personal experiences may have a bearing on women delivering at home irrespective of the proximity of their villages to a health facility. The distance to the health facility remained a prominent reason for home deliveries in our study area as most villages are only accessible by foot paths and most of the roads in the rainy season become impassable. This made it very difficult for expectant women to travel to the health facility, especially when labor commenced at night. This finding regarding the inaccessibility of health facilities to women who lived far away was similar to studies in Burkina Faso and Indonesia that reported distance as an impediment for women who delivered at home. In our study, the distance of the respondent's village was estimated in kilometers using the known designated routes from the nearest health facility to the village where the respondents were interviewed. Our findings, therefore, may not necessarily be similar to those from Nepal that measured distance in terms of the time it took to travel to the maternity hospital and not by the number of kilometers [6].

Our findings on the education of mothers are comparable with those of a study done by Osubor, Fatusi and Chiwuzie in Nigeria which reported that education had a significant association with place of delivery while the age and marital status were found to have no association with respect to the place of delivery. Another study in Senegal by Faye and others also reported that having at least primary schooling, showed an association with child birth at home (OR: 0.59, CI 95% [0.46, 0.74]), as did the study by Lukumar and Pathmeswaran in Sri Lanka where low (<grade 5) maternal education (OR=3.5, 95% CI [1.8, 6.6]) had an association with home deliveries. The household income was based on the reported monthly average combined income that the respondent said she earned from any gainful activity whether by herself, her spouse or indeed both of them. Our study findings showed a significant association between household income and delivering at home. These findings were not, however, similar to those in Sri Lanka who reported a non-significant association.

The study found that the majority of the mothers while agreeing to be able to deliver at home (71%) also indicated that they found home deliveries to be unsafe (73%). These findings were comparable with those of a study that was done in rural Turkey where 75.5% of mothers reported that home deliveries were unsafe with the exception that this perspective in our study was obtained from women who delivered either at home and at a health facility a year prior to our study whereas those were obtained from mothers who had delivered only at home at one time or the other. Our study reported staff attitudes and inadequate workforce as a reason for preference by women to deliver at home. Some women felt they were not offered encouragement by health workers at health facilities and that to the contrary most health workers usually complained of being tired. This finding in our study may be related to both the lack of adequate health workers in a health facility and the work load that a single health worker may not accomplish on their own as reported in Indonesia. In a rural area of Tanzania, staff attitudes were also among the reasons presented for influencing the place of delivery.

Abrupt and unexpected labor was another contributory reason for home deliveries. Our study found that women reported having had no option but to deliver at home because of such circumstances. This element coupled with the unavailability of transportation due to a total lack of money to hire a vehicle or bicycle; made many women to opt to labor at home with the assistance of a traditional birth attendant or at times with no assistance at all. These findings were comparable to those found in Burkina Faso and Tanzania. The following of instruction or merely being advised to deliver at home with a traditional birth attendant's assistance also emerged as a reason for delivering at home. Our finding in this study was that mothers were willing to follow instructions given by their spouses and more importantly their own parents about the place where they should deliver. This was also a finding in Indonesian where aspects of trust for traditional birth attendants and following instruction from family members were mentioned. The study found a number of traditional beliefs and cultural practices that explained why women delivered at home. Issues of infidelity in marriage at the time of the woman's pregnancy either by herself or the spouse came out prominently and were given as reasons for necessitating certain practices that could only be performed by elderly women or traditional birth attendants in the confines of a home environment and not at the health facility. Requirements to keep secret a woman's confession of infidelity at labor also contributed to women preferring to be delivered at home as the elders performed the cultural duties to safeguard the unborn child. Our study found that women were even prepared to travel to another village in order to avoid a traditional birth attendant who could not keep secrets. These aspects of reasons for making women deliver at home were in the context of our study setting and may not necessarily have been the same for other studies.

Bias considerations

The study was conducted among women who were attending immunization posts. This may have biased our findings with regard to the prevalence of home deliveries as most of our respondents may have had a preference for seeking health services.

Conclusion and Recommendations

The occurrence of home deliveries in a low income rural setting of a developing country was associated to the distances of villages to

health facilities and the household incomes as well as the number of years that mothers spent in school. These observed determinants alone however, do not entirely explain the circumstances under which each home delivery occurs and thus the personal experiences of mothers and the perspectives of community members and considerations of tradition and beliefs, combined with the afore mentioned determinants offer a better understanding of what factors determine a home delivery in Sunkutu village of Kasama District. With the growing population and the need for more health facilities, the ministry of health in addition to the direct entrant midwifery programme should consider scaling up further, the availability of skilled personnel by training community midwives who may be able to conduct deliveries in the community. This approach will not only supplement the efforts of increasing health workers but is necessary because the majority of women and mothers still have difficulties attending health facilities due to long distances. As the majority of deliveries in Zambia are still occurring at home and some without any form of care, community midwives may lessen the burden of distances and afford mothers an opportunity to be attended by a skilled health provider who may quickly refer them to a health facility for further management in the event of complications.

The Zambian education system should allow for the education of the girl child to reach grade nine level even if they have not met the minimum standard requirement of passing a primary school grade seven examination. This will allow more women who attain child bearing age of fifteen years make better decisions regarding their health and that of the unborn baby and therefore improve the health of mothers and babies at delivery. Local strategies for improving the care provided to mothers at delivery should involve the education and sensitization of community members who have an influential stake in the livelihood of mothers and women in their respective villages. This will enhance community participation in mother safety programs at community level and thus reduce the barriers to professional care with regard to cultural and traditional practices. There should be no requisition of items needed at delivery from women who attend health facilities for delivery. This will encourage mothers who are unable to afford them to deliver at health facilities where they can receive professional care. The limitations for the present study included lack of resources and time, that would have made it possible to carry out a cross sectional study of residences in the area, preferably using households that have already been mapped for other programmes and research taking place in the district.

References

1. Adhikari, R K, and Dahal L H. "Factors Affecting Place of Delivery in Dhading District." *J Insti Med Nepal* 30 (2008): 42-48.
2. Bolam, A, Manandhar D S, Shrestha P, and Ellis M, et al. "Factors Affecting Home Delivery in the Kathmandu Valley, Nepal." Health Poli Plan 13 (1998): 152-158.
3. Faye, A, Wone I, Samb O M, and Tal-Dia A. "Study of the Contributing Factors to Home Delivery (Senegal)." Bull Soc Pathol Exot 103 (2010): 246-251.
4. Hatt, Laurel, Stanton Cynthia, Ronsmans Carine, and Makowiecka Krystyna, et al. "Did Professional Attendance at Home Births Improve Early Neonatal Survival in Indonesia?." Health Poli Plan 24 (2009): 270-278.
5. Hodgkin, Dominic. "Household Characteristics Affecting Where Mothers Deliver in Rural Kenya." *Health Econo 5 (1996): 333-340.*
6. Idris, S H, Gwarzo U M D, and Shehu A U. "Determinants of Place of Delivery among Women in a Semi-Urban Settlement in Zaria, Northern Nigeria." *Ann Afric Med* 5 (2006): 68-72.

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