ORIGINAL ARTICLE

Home births and postnatal practices in madagali, North-Eastern Nigeria

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Abstract

Background: Home births are common in resource poor countries and postnatal practices vary from one community to the other.

Objective: To determine the proportion of home births, reasons for home delivery, and evaluate postnatal practices in Madagali, north-eastern Nigeria.

Materials and Methods: This was a cross-sectional descriptive study of 400 women of reproductive age, who had put to birth in the past 1 year. The study was carried out over a period of 8 weeks from April to June 2010. The multistage method of sampling was used to select respondents. In the first stage, four of the five health districts were chosen randomly, namely, Gulak, Madagali, Sukur, and Duhu. The questionnaires were evenly distributed among the four health districts. In the second stage, from each district, two villages were chosen by simple random sample. In the third stage, two wards were selected in each village by simple random sampling.

Result: Of the 400 respondents interviewed, 289 (72.2%) were aged between 20 and 39 years, and most, 374 (93.5%) were married. Only 14 (3.5%) had tertiary education. Most respondents, 224 (56.0%) were farmers and grandmultiparae, 187 (46.7%). A total of 196 (49.0%) women delivered at home, whereas 204 (51.0%) delivered at the hospital. Of the 196 respondents who delivered at home, the bedroom 142 (72.4%), was the preferred place of birth. The most common reason for home birth was short duration of labor in 71 (36.3%) cases. Delivery was conducted by untrained persons in 50, (25.4%), whereas 99 (50.8%) and 31 (15.5%) deliveries were supervised by Traditional Birth Attendants (TBAs) and Midwives/Nurses, respectively. Postpartum, the majority, 235 (58.7%) respondents used sanitary pads to stanch lochia, whereas 140 (35%) used rags.

Conclusion: A significant number of births take place in the home and supervised by unskilled persons. Against the backdrop of poor education and low socio-economic status of respondents, perineal hygiene can be adjudged satisfactory. There is the need to increase on the number of hospital birth and also trained TBA who conduct most of home deliveries.

Key words: Home births, Madagali, practices, postpartum

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Introduction

Home births are a common phenomenon in Nigeria and many resource poor countries.[1-3] Although unplanned home births are associated with adverse outcomes for both mother and baby;[4] planned home delivery is not associated with increased maternal or perinatal morbidity and mortality.[5-7]

Studies in resource poor countries cite financial constraints among the leading reason for home births[8,9] but there is dearth of literature on economic implications of home births.[10] Although home births in most resource poor countries are unplanned and therefore associated with increased perinatal

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and maternal morbidity and mortality,[4] home births in Western countries are usually planned and attended to by skilled birth attendants. Consequently the outcomes of such deliveries are not significantly different from hospital deliveries.[5,6] In recent times, patient satisfaction with services rendered is assuming important proportion even in resource poor countries. Studies in Belgium and the Netherlands revealed that those who had planned home births were more satisfied than those who had hospital delivery.[7] Unplanned home births especially those attended to by unskilled person in unhygienic conditions can lead to infections and long-term morbidity like infertility.[11-14]

There are variations in postpartum beliefs and practices with some having health benefits and others harmful to maternal and child health.[15,16] Nigeria, with 774 local governments and 374 ethnic groups[1] has a variety of customs and traditions relating to child birth and postnatal practices. In this study, we aim to determine the proportion of home births and reasons for such preference and also determine the postpartum practices with a view to making appropriate recommendation for policy makers in one of the local governments in north-eastern Nigeria, predominantly inhabited by the Margi ethnic group.

Materials and Methods

This study is part of a larger study that was carried out over a period of 8 weeks from April to June 2010, to assess the prevalence of puerperal sepsis in Madagali Local Government Area (LGA) of Adamawa State.

Setting

Madagali LGA lies in the northern part of Adamawa State and it is one of its 21 LGAs. It is in the north-eastern part of Nigeria. Madagali LGA is a Sahel savannah zone with total area of 19, 800 square kilometers. The LGA shares International boundary with the Republic of Cameroun in the east.

The rainy season commences around late April and usually lasts for 5 months with an approximate annual rainfall of 26 inches. The dry season is between November and April with temperature of 31-41°C. Madagali LGA has estimated population of 142,483 inhabitants based on the 2006 population census.[17] There are 224 settlements. The local government is grouped into five health districts, also known as the administrative districts. There are total of seven dispensaries and four maternity homes situated at various locations in the LGA. There is also a cottage hospital and four comprehensive health centers. The socio-economic status of the people is generally low. About 90% of the people are peasant farmers. The crops grown include maize, millet, guinea corn, groundnuts, beans, and bam-bara nuts.

Study design

This was a cross-sectional descriptive study. The study was carried out over a period of 8 weeks and involved the cooperation of the local government Chairman, local government Secretary, Head of Service, Primary Health Care (PHC) Coordinator, and District Heads. Ethical approval was obtained from the ethics committee of the University of Maiduguri Teaching Hospital and the study permit was obtained from the community gate keepers listed above.

Sampling method

The multistage method of sampling was used to select respondents. In the first stage, four of the five health districts were chosen randomly, namely, Gulak, Madagali, Sukur, and Duhu. Potential participants were identified as women who put to birth in the past 1 year. These women were identified by the community gate keepers who help in location of the households. All participants were given full explanation of the methodology and purpose of the study and an assurance of confidentiality. Participants were also assured that their participation in the study was voluntary and that they could refuse to participate at any time during the interview. The anonymous questionnaires were administered by the study team after verbal consents were obtained before commencement of the interview.

A minimum sample size was calculated using a standard formula for known population size for a cross sectional study,[18] and was found to be 356. However, to overcome risks of nonresponses or poorly answered questionnaires the number obtained was divided by the expected response of 80% and this brought the sample size to 441participants, but only 400 questionnaires had complete information for analysis.

The sample size was calculated using Yamane formula[18] as follows:

$n = N/1+(N \times e^2)$

where n = sample size

N = population size

e = significant level

N = population of Madagali = 142483[17]

e = significant level 0.05

Substituting n = 142483

$1+ (142483 \times 0.05^2) = 142483$

$1+ (142483 \times 0.0025)$

$n = 356$

Minimum sample size = 356

To adjust the estimated minimum sample size for nonresponses/incompletely filled questionnaires

$$N = \frac{\text{Minimum sample size}}{\text{Expected response rate}}$$

Expected responses rate of 80% (0.8)

$$N = \frac{356}{0.8}$$

$N = 441$

Sample size of the intended study is therefore 441.

The questionnaires were evenly distributed among the four health districts. In the second stage, from each district, two villages were chosen by simple random sample. In Gulak district, Gulak town and Dar village were selected; in Madagali district, Madagali town and Sabon-gari were selected; in Duhu district, Duhu town and Shuwa were selected. In Sukur district, Mildu and Mataka villages were selected. In the third stage, two wards were selected in each village by simple random sampling. In each ward, with the help of the Bulama (ward head), interviewers were led to households with women who had delivered in the past 1 year and questionnaires were administered. A total of 250 questionnaires administered to respondents in the households and 150 questionnaires administered in the health care centers had complete information for analysis. Care was taken not to administer questionnaires twice on the same respondent.

Inclusion criteria

In the household and health centers, women within the age range of 15 to 49 years who have delivered within the past 1 year were chosen to respond to the questions on one-on-one interviews.

Data collection

Data were collected using pretested and validated questionnaire. The questionnaire comprised of mainly close ended questions, with a few open ended questions.

Data analysis

The information obtained were analyzed using statistical software Epi info™ version 3.41 (CDC, Atlanta, Georgia, USA, 2007).

Results

Table 1 shows that of the 400 respondents interviewed, 289 (72.2%) were aged between 20 and 39 years, and most, 374 (93.5%) were married. Only 14 (3.5%) had tertiary education. Most respondents, 224 (56.0%) were farmers and grandmultiparae, 187 (46.7%).

Table 2 depicts the delivery practices of interviewees. A total of 196 (49.0%) women delivered at home, whereas 204 (51.0%) delivered at the hospital. Most women 314 (78.5%) had spontaneous delivery of placenta, but 86 (21.5%) had interventions to deliver the placenta. Furthermore, 346 (90%) had no intervention during delivery, whereas 5 (1.3%) and 25 (6.5%) respondents had interventions comprising Gishiri cut and episiotomy. Genital tear was reported by 66 (17%) of the respondents.

Table 3 shows that, out of the 196 respondents who delivered at home, the bedroom, 142 (72.4%), kitchen 21 (10.7%), and bathroom 17 (8.7%) were the major sites of delivery. The remaining 16 (8.3%) delivered either in the back yard, veranda, etc., Fifty (25.3%) respondents preferred home delivery to delivering in a health facility. Short duration of labor 71 (36.3%) was the main reason for home delivery while financial constraint was the reason given by 26 (13.5%) of women. Other reasons

Table 1: Socio-demographic characteristics of respondents

Characteristics	Frequency	Percentage
Age		
<20	23	5.8
20-29	155	38.7
30-39	134	33.5
40-49	88	22.0
Total	400	100
Marital status		
Single	1	0.3
Married	374	93.5
Divorced	6	1.5
Separated	5	1.3
Widowed	14	3.5
Total	400	100
Educational status		
None	146	36.5
Quranic	38	9.5
Primary	110	27.5
Secondary	92	23.0
Tertiary	14	3.5
Total	400	100
Occupation		
House wife	84	21.0
Civil servant	20	5.0
Farming	224	56.0
Trading	58	14.5
Others	14	3.5
Total	400	100
Tribe		
Marghi	259	64.8
Maafa	33	8.2
Higi	24	6.0
Sukur	30	7.5
Others	54	13.5
Total	400	100
Religion		
Christianity	241	60.3
Islam	155	38.7
Others	4	1.0
Total	400	100
Parity		
1	50	12.5
2	50	12.5
3	41	10.3
4	72	18.0
≥5	187	46.7
Total	400	100

Table 2: Delivery practices of respondents

Delivery practice and experience	Frequency	Percentage
Place of delivery		
Home	196	49.0
Hospital	204	51.0
Total	400	100
Delivery of placenta		
On its own	314	78.5
Manuel removal by TBA	27	6.8
Intervention by a medic	57	14.2
Herbs/incantation	2	0.5
Total	400	100
Intervention		
*None	346	90.0
Gishiri/traditional cut	5	1.3
Episiotomy	25	6.5
Others	9	2.3
Total	385*	100
Genital tear		
Yes	66	17
No	318	83
Total	384*	100
Treatment of genital tear		
No treatment	25	26.0
Treated by an untrained person	3	4.0
Treated in the hospital	48	50.0
Traditional medication	8	8.0
Others	12	12.0
Total	96	100

*The shortage in the total number of respondents can be explained by the number of those who had cesarean section to whom these questions do not apply. TBA: Traditional Birth Attendants

Table 3: Home delivery practices

Practice	Frequency	Percentage
Place of delivery at home		
Bathroom	17	8.7
Kitchen	21	10.7
Bedroom	142	72.4
Others	16	8.2
Total	196	100
Reason for delivery at home		
Preferred home delivery	50	25.3
Hospital was too far	23	11.4
Lack of finance	26	13.5
Short duration of labor	71	36.3
Husbands decision	10	5.1
Religion	7	3.6
Inaccessible road	5	2.6
*Others	4	2
Total	196	100
Supervision of delivery		
Untrained person	50	25.4
TBA	99	50.8
Midwife/nurse	31	15.5
Others	2	1.0
None	14	7.3
Total	196	100
Use of gloves during delivery		
Yes	49	25.0
No	147	75.0
Total	196	100

*Culture and lack of transportation at night. TBA: Traditional Birth Attendants

included, cultural beliefs 2 (1%), husband's decision 10 (5.1%), religion 7 (3.6%), inaccessible roads 5 (2.6%), and lack of means of transportation at night 2 (1%). The deliveries of 50 (25.4%) respondents were supervised by untrained persons, whereas 99 (50.8%) and 31 (15.5%) were supervised by Traditional Birth Attendants (TBAs) and Midwives/Nurses, respectively. Fourteen (7.3%) deliveries, however, had no form of supervision. Most of the deliveries 111 (57.5%) were supervised without gloves on.

Table 4 details the postnatal practices among respondents. Most, 183 (47.4%) respondents used sanitary pads to clean the perineum, whereas 25 (6.5%) used rags. A reassuring number, 235 (58.7%) also used sanitary pads to stanch lochia.

Discussion

The high number of home births in our study can be explained by the fact that most respondents were uneducated and unemployed. Paradoxically, a good number had satisfactory hygienic postpartum practices. This is reassuring as unhygienic postnatal practices can predispose to puerperal sepsis, which is a leading cause of maternal mortality in resource poor countries.[19]

Although, most of the home births in our cohort were unplanned and attended to by TBAs, there were no interventions in the majority of deliveries. Less intervention among home births is in keeping with studies from the Western world were planned home births were attended to by skilled personnel.[5,6] The low number of interventions in terms of removal of the placenta and episiotomy/Gishiri cut should not lead to complacency as other morbidities unidentified by the parturient or unskilled attended may be obvious to the skilled attendant. The 17% prevalence of genital tear reported by our respondents may be a consequence of poor delivery techniques by the TBAs. However, this figure may be an underestimate as recall bias is a factor to consider, especially as most of the respondents were uneducated. The period of 1 year of delivery considered as the inclusion criteria might have minimized recall bias. Increasing access to antenatal care and training of TBAs are important short-and medium-term measure to reduce postpartum morbidity.

The proportion of home births among our cohort of 49%

Table 4: Postnatal practices

Post natal practice	Frequency	Percentage
Perineal hygiene after delivery		
Cloth/wrapper	36	9.3
Sanitary pads	183	47.4
Rags	25	6.5
Tissue paper	1	0.3
Water (bath)	131	33.0
Hospital towel	10	2.5
Total	386*	100
Perineal hygiene during puerperium		
Sanitary pads	235	58.7
Foam	5	1.3
Rags	140	35.0
Underwear	20	5.0
Total	400	100
Choice of intervention		
Medical attention	9	2.3
Traditional medication	12	3.0
Do nothing	376	93.9
Others	3	0.8
Total	400	100
Time of intervention		
Immediately	363	90.7
Wait for days	28	7.0
Till she is unconscious	3	0.8
Others	6	1.5
Total	400	100

*The shortage in the total number of respondents can be explained by the number of those who had cesarean section who could not answer this question

is in agreement with 46% from KwaZulu[20] but lower than 88.8% reported from Bangladesh and 96.6% from India[21,22] Lower home birth rate of 26.3% has been reported from Lebowa.[9] Among the location of home births, the bed room was the most common site of delivery in our study. This may be because of convenience or choice by the TBAs. Many reasons were proffered for home births by our respondents; the leading was short duration of labor followed by preference of home delivery. Unexpected onset of labor was also reported as leading reason for home births in KwaZulu.[20] It is possible that many women have difficulty knowing when labor is established such that delivery becomes imminent when preparations are made to convey parturient to hospital. Enlightenment of couples on the signs of labor and early recourse to medical care will reduce the number of respondents who gave short duration of labor as the reason for home delivery. Interestingly, despite the fact that most of our respondents were farmers and therefore not economically buoyant, financial constraint was the reason for home delivery in only 13.5% of respondents. This suggests that the farmers have a way of using the proceeds from their farm to prepare for events of labor. Preference for home delivery as observed in our study was reported in a previous study.[23] Other studies report physical distance, financial limitations, negative staff attitude and lack of privacy as common reasons for home births.[8,9] The reasons offered for home births by our respondents are all modifiable. Those who just prefer home births can be encouraged to attend antenatal care and deliver in places of their choice under skilled supervision with easy access to health facility in the event of a problem. Building maternity units close to settlement using the concept of bottom-up approach will address the problem of "hospital was too far" syndrome.

In our study, only 15.5% of home births were conducted by skilled birth attendants. This is comparable to 14.4% reported from Bangladesh.[21] Most of the home births were conducted by TBAs. This is comparable to many studies from developing countries.[3,9,20,21,22] The choice of TBAs is an indication of the confidence the women have in them. One way of improving the health of mothers in such settings is to train the TBAs so that they can offer quality service to those who fervently believe in their services. However, training of TBAs alone may not lead to utilization unless the women are educated on the need to patronize trained TBAs.[22] Because majority of the deliveries were conducted by TBAs, it is no wonder that no gloves were used in two-thirds of home births in our study. This further underscores the importance of training TBAs and educating women on the need for asepsis during delivery.

Our study has some limitations. First, the 250 women interviewed at home and the 150 interviewed in health facilities may differ in their perceptions, although the random selection has ensured that the external validity is not significantly affected. Second, not all women who delivered in the past 1 year prior to the study were captured, as some would have travelled out, others would have relocated, and some might have died. Third, reliance on those who delivered in the previous year was not based on statistics but on community gate keepers.

Conclusions

A significant number of births take place in the home and supervised by unskilled persons. Against the backdrop of poor education and low socio-economic status of respondents, perineal hygiene can be adjudged satisfactory. There is the need to increase on the number of hospital births and also train TBAs who conduct most of home deliveries. Women who prefer to be attended to by TBAs should be educated to patronize trained TBAs, who by their training are expected to refer cases they cannot handle to the nearest health facility.

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