

**DETERMINANTS OF HOME DELIVERY AMONG MOTHERS OF UNDER-FIVE CHILDREN IN MALAM-SIDI COMMUNITY, GOMBE STATE, NORTHEAST, NIGERIA**Ibrahim R.<sup>1\*</sup>, Muhammad F. Y.<sup>1</sup>, Abubakar Z. A.<sup>2</sup> and Danladi M. U.<sup>2</sup><sup>1</sup>Department of Community Medicine, Gombe State University, Gombe, Nigeria.<sup>2</sup>Department of Biological Science, Gombe State University, Gombe Nigeria.**\*Corresponding Author: Ibrahim R.**

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**ABSTRACT**

Reasons for the preferred home delivery among women in some rural communities of northern Nigeria need to be elicited to prevent higher number of untold complications associated with the practice. This study aimed to determine the prevalence of home delivery and the factors that influence home delivery among mothers of under five children in Malam-Sidi community of Gombe State. A cross-sectional study was conducted in which information was obtained from 301 respondents who fulfilled the inclusion criteria. Chi-square test was used to compare the proportions of home delivery among the various groups and logistic regression was used to find the predicting factors of home delivery among the respondents. A P-value of <0.05 was considered to be statistically significant. The mean age of respondents was  $22.7 \pm 4.2$  years, Those who are aged 15 - 24years constitute close to two-third (64.5%) of the study population. Of the total studied participants, majority (98.3%) were married and more the half (55.5%) were house wives. About two-third (65.8%) had no formal education. Close to two-third (64.5%) of the respondents delivered at home. Education, occupation religion and ante-natal clinic attendance were found to have significant association with place of delivery ( $P < 0.05$ ). The study concluded that significant proportion of mothers of under-five delivered at home in this community and those who are full term housewives as occupations are more likely to deliver at home than those that have one occupation or the other.

**KEYWORD:** Determinant, Home delivery, malam-sidi.**INTRODUCTION**

Home delivery refers to childbirth taking place outside health facility, either at home or on the way to the health facility, without attendance of a skilled health service provider.<sup>[1]</sup> Various factors such as socio-economic conditions, culture and illiteracy, delays in providing adequate obstetric care and poor accessibility to maternal health care have been implicated in home deliveries and high maternal mortality in developing countries among which is Nigeria.<sup>[1]</sup> It is estimated that 47% of global maternal mortalities occur in Africa with highest levels in sub-Saharan countries where 85% are direct results of complications arising during pregnancy, delivery or puerperium.<sup>[1]</sup> In these countries, home deliveries are over 60% taking place largely in rural areas with unskilled attendants.<sup>[1]</sup>

Although childbirth is a natural phenomenon, it is associated with risks and complications which may result in death. Home delivery may most a time end in uncomplicated labour, and once there are complications; these mothers need to be referred immediately to a nearby health facility. Very unfortunately, when Complications arise, it is too late or the mother is so

weak that she cannot deliver safely. As a result, such mothers die before, during or after delivery. If they happen to survive, they end up with missing babies or/and severe disabilities. Since it is difficult to predict the complications which may arise during child birth, home delivery carries a high risk. In most rural areas, women who deliver at home are assisted by Traditional Birth Attendants (TBA's), family members, friends or neighbors. Worse still, the deliveries are conducted in unhygienic environments predisposing the mothers and babies to postpartum and Neonatal sepsis.

In Nigeria, only about 36% of births take place in a health facility while 63% of women deliver at home.<sup>[2]</sup> Despite the consistent evidence demonstrating its benefits, institutional delivery remains poorly used in Nigeria. Most pregnant women in the country often choose to deliver their babies at home with no access to skilled health care workers.

Several studies have examined the determinants of use/non-use of healthcare facility for childbirth in Nigeria,<sup>[3]</sup> and have reported significant association between place of delivery and a range of socio-

demographic factors including rural-urban residence, maternal age, maternal/husband education level, income. However, to date, available studies have focused mainly on factors associated with institutional delivery among all mothers of reproductive age.

This study aimed to determine the prevalence of home delivery and the factors that influence home delivery among mothers of under five children in malam community of Gombe State.

## MATERIAL AND METHODS

### Study design

A descriptive cross sectional study was carried among randomly selected mothers of under-five children in malam sidi community of Gombe in the month of January 2021 and the information was collected through the use of structured questionnaire to assess respondents on the study objectives.

### Study Area

Mallam sidi situated in Gombe north senatorial district with a population of Nineteen thousand nine hundred and sixty-three (19,963) comprising men, women, youth and children, most of whom are peasant farmers. The area has a mixed population, but the dominant ethnic groups are Kanuri and Fulani. Mallam sidi has one cottage hospital, and a maternity.

### Study Population

Study populations were mothers of under-five children who gave birth within 2 years before the data collection date and were permanent residents of selected households in Mallam sidi. It excluded all those who are visitors and those who are very sick.

### Sample size determination

The calculated sample size was 301 using the Cochran's formula and with a non-response of 10%, minimum sample size was 331.

### Sampling method

A multi stage sampling technique was used to select a community in the first stage from the list communities

using simple random sampling technique by balloting. In the second stage, households were selected. Simple random sampling was used to select the study population.

### Data collection

The questionnaire was pretested in a different community with 60 participants. The questionnaire which was interviewer-administered was adapted from a study,<sup>[4]</sup> and was administered after obtaining verbal consent with the aid of 5 research assistants who were trained for 5 days. It consists of sections on socio-demographic characteristics, respondents preferred place of delivery and respondents determinant factor of home delivery.

### Data analysis

The data were coded, checked, and processed with version 23 Statistical Package for the Social Sciences. Descriptive statistics, such as means, standard deviations (SD), frequencies, and proportions, were used to summarize variables. Chi-square tests were used to identify associations between categorical variables using a P-value of 0.05 at 95% confidence interval as the significance level. Logistics regression was used to find the determinants of home delivery among the mothers.

### Ethical consideration

Institutional approval for the conduct of the study was obtained from Gombe state ministry of health. The study was conducted according to the Principles of the Helsinki Declaration. Before the questionnaire was applied to the respondents, permission was obtained from the local government authority and verbal consent was obtained from all the respondents who participated in the study. The respondents were specifically informed regarding their entitlement to information regarding the study, voluntary participation, privacy issues, their right to refuse to divulge information, and to terminate their participation at any time.

## RESULTS

**Table 1: Socio-demographic characteristics.**

Variable	Frequency (%) n=301
<b>Age (years)</b>	
15-24	194(64.5)
25-34	97(32.2)
>35	10(3.3)
<b>Marital Status</b>	
Married	292(98.3)
Separated	1(0.3)
Divorce	4(1.3)
<b>Education</b>	
None	198(65.8)
Primary	60(19.9)
Secondary	40(13.3)

Tertiary	3(1.0)
<b>Occupation</b>	
House wife	167(55.5)
Civil servant	7(2.3)
Business	127(42.2)
<b>Religion</b>	
Muslim	295(98.0)
Christianity	6(2.0)
<b>Tribe</b>	
Fulani	133(44.2)
Kanuri	67(22.3)
Hausa	45(15.0)
Bolewa	35(11.6)
Others	21(7.0)
<b>Parity</b>	
Primipara	47(14.3)
Multipara	158(52.5)
Grandmultipara	96(31.9)

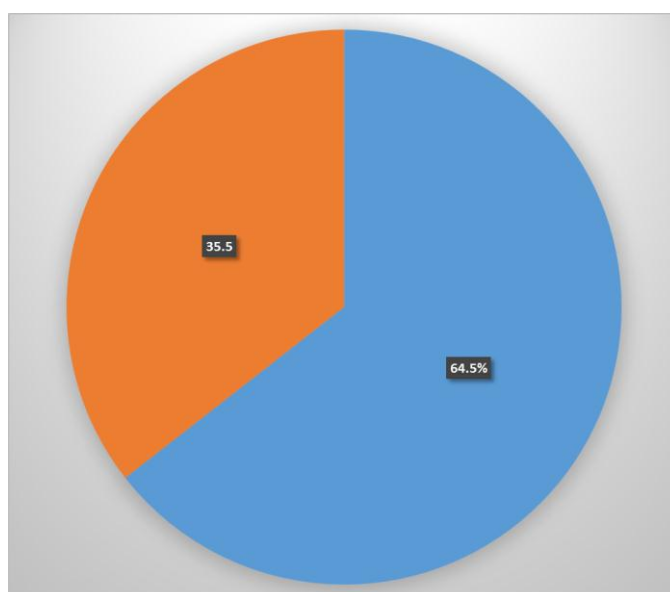


Figure 1: Prevalence of home delivery in Mala-sisd community.

Table 2: Relationship between socio-demographic and other respondent characteristic and place of delivery.

Variables	PD (Home)	PD (Hospital)	X <sup>2</sup>	p-value
Age				
15-24	133 (68.6%)	61 (31.4%)	4.250	0.119
25-34	56 (57.7%)	41 (42.3%)		
>35	5 (50.0%)	5 (50.0%)		
Marital status				
Married	191 (64.5%)	105 (35.5%)		0.751 <sup>†</sup>
Separated	1 (100.0%)	0 (0.0%)		
Divorce	2 (50.0%)	2 (50.0%)		
Education				
None	140 (70.7%)	58 (29.3%)		0.009 <sup>†</sup>
Primary	33 (55.0%)	27 (45.0%)		
Secondary	20 (50.0%)	20 (50.0%)		
Tertiary	1 (33.3%)	2 (66.7%)		
Occupation				
House wife	126(75.4%)	41 (24.5%)		0.000 <sup>†</sup>
Civil servant	2 (42.9%)	4 (57.1%)		
Business	65 (51.2%)	62 (48.8%)		

Religion				
Christianity	1 (16.7%)	5 (83.3%)		0.023 <sup>†</sup>
Islam	193 (65.4%)	102 (34.6%)		
Parity				
Primipara	35 (76.1%)	11 (23.9%)	4.667	0.097
Multipara	103 (65.2%)	55 (34.8%)		
Grandmultipara	56 (57.7%)	41 (42.3%)		
Attended ANC				
Yes	188 (63.9%)	106 (36.1%)		0.047 <sup>†</sup>
No	6 (100.0%)	0 (0.0%)		
Husband choice				
Hospital	84 (51.9%)	78 (48.1%)	24.734	0.000
home	110 (83.7%)	29 (22.3%)		
Distance to health facility				
>30mins	40 (66.7%)	20 (33.3%)	0.160	0.689
<30mins	154 (63.9%)	87 (36.1%)		
Suitable road				
Suitable	157 (63.1%)	92 (36.9%)	1.232	0.339
Not suitable	37 (71.2%)	15 (28.8%)		
Experience complication				
Yes	63 (59.4%)	43 (40.6%)	2.271	0.321
No	131 (68.0%)	64 (33.0%)		

### Fishers exact test

**Table 3: Logistic regression showing determinant of place of delivery.**

Variables	Odds ratio	95% confidence interval	p-value
<b>Occupation</b>			
Housewife	1		0.000
Civil servant	0.356	0.213-0.595	0.000
Business	0.732	0.096-5.558	0.763
<b>Religion</b>			
Christianity	1		
Islam	6.157	0.668-56.709	0.109
<b>Education</b>			
None	1		0.189
Primary	0.557	0.018-17.387	0.739
Secondary	0.982	0.033-29.477	0.992
Tertiary	1.056	0.033-33.434	0.976
<b>Attended ANC</b>			
Yes	1	1.000	
No	0.000	0.000	0.999

### DISCUSSION

This study assessed the prevalence and determinant of home deliveries among mothers of under -five children in Malam sidi Kwami LGA Gombe State. The respondent's mean age in this study is lower than study done in Bagwai town Kano with mean age of 29±6.4.<sup>[3]</sup> and this may be due to different type of population studied. The majority of respondent's occupation in the study which was house wife, was found to be higher than a study conducted in Kaduna 33%.<sup>[5]</sup> but lower to study done in Kano 90.6%.<sup>[3]</sup> Most of the respondent in this were married which is similar to studies done in Zaria 97.8%.<sup>[4]</sup> but higher than a study in Kaduna 72%.<sup>[5]</sup> As regard to educational level of the respondent, greater proportion in the study have no formal education and this higher than study done in Kaduna 15%.<sup>[5]</sup> and this may be due to difference in study area.

This study revealed that greater proportion of the respondent gave birth at home which is similar to what was found in studies in Ethiopia (67.6%).<sup>[2]</sup> Nigeria (69.5%).<sup>[3]</sup> but lower than study done in Zaria (70.2%).<sup>[4]</sup> This may be due to presence of health facility near the community.

The study showed that respondent's level of education, occupation, religion and ANC attendance were found to be statistically significant with home delivery and this is agreement with studies in Kano.<sup>[6]</sup> and Zaira.<sup>[4]</sup> However logistic regression analysis only occupation of the respondents was found to be a determinant of the choice of place of delivery and this is in agreement of most of the studies.<sup>[7]</sup>

## CONCLUSION

Be a housewife as an occupation was found to be a significant predictor of home deliver in this study. Significant proportion of mothers' of under-five delivered at home in this community and those who are full term housewives are more likely to deliver at home than those that have one occupation or the other.

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## COMPETING INTERESTS

The authors have declared that there is no know competing interest existing.

## REFERENCES

1. Mwanakulya E. Simfukwe. Factors contributing to home delivery in kongwa district, dodoma; DMSJ, October 2011.
2. Adewuyi EO, Khanal V, Zhao Y, David L, Bamidele OD, Auta A. Home childbirth among young mothers aged 15-24 years in Nigeria: a national population-based cross-sectional study. *BMJ Open*, 2019 Sep 18; 9(9): e025494. doi: 10.1136/bmjopen-2018-025494. PMID: 31537553; PMCID: PMC6756611.
3. Muhammad Basheer Yahya and Tepanata Pampaibool. Factors influencing the decision to choose a birth center by pregnant women in Gombe state Nigeria. *Journal of Health Research*, 33(1).
4. S. H. Idris, U. M. D. Gwarzo and A. U. Shehu. Determinants of Place of Delivery among Women in a Semi-Urban Settlement in Zaria, Northern Nigeria. *Annals of African Medicine*, 2006; 5(2): 68 – 72.
5. Folashade B. Okeshola. Determinants of Home Delivery among Hausa in Kaduna South Local Government Area of Kaduna State, Nigeria. *American International Journal of Contemporary Research*, May 2013; 3(5).
6. Nwankwo ON, Ani OE, Akpoke M, Ugwa EA. Determinants of choice of place of delivery among women attending two referral hospitals in Kano North-West Nigeria. *Niger Med J [serial online]*, 2019. [cited 2021 Mar 6];60:68-75. Available from: <https://www.nigeriamedj.com/text.asp?2019/60/2/68/263835>.
7. Salisu Abubakar, Dalhatu Adamu Ruqayya Hamza, and Jamila B. Galadima. Determinants of Home Delivery among Women attending Antenatal Care in Bagwai Town, Kano Nigeria. *African Journal of Reproductive Health*, December 2017; 21(4): 73.