

# DETERMINANTS OF REFERRALS PRACTICES OF CLIENTS BY UNSKILLED BIRTH ATTENDANTS IN NORTHERN SENATORIAL DISTRICT OF CROSS RIVER STATE, NIGERIA

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## Abstract

The study examined the determinants of referrals practices of clients by Unskilled Birth Attendants in Northern Cross River State, Nigeria. The study adopted a descriptive survey. The total population of unskilled birth attendants in the study area was two hundred and fifty five (255). All the unskilled birth attendants were used and no sampling technique was used. A validated questionnaire with reliability coefficient of 0.85, which served as an interview guide, developed by the researchers was used for the data collection. Data derived from the questionnaire were subjected to inferential statistic. Chi-square, Analysis of Variance and independent t-test were used to establish relationships between variables. Findings revealed that there was no relationship between unskilled birth attendants' educational attainment and knowledge of cases for referrals. Also, there was no significant association between years of experience and practice of referrals of cases. However, a significant difference existed between trained and untrained unskilled birth attendants in the practice of referrals of cases to the next level of health care facilities. Based on these findings, it was recommended that Training and supervision of the unskilled birth attendants should be in tandem with strengthening of the referrals system and ensuring that all women have access to referral facilities capable of providing emergency obstetric care.

**Keywords:** Determinants, Unskilled Birth Attendants, referral practices, training and years of experience.

## INTRODUCTION

Maternal mortality is the most important indicator of maternal health and wellbeing in any country,<sup>1</sup> From recent estimates, the number of deaths each year from maternal causes worldwide decreased from 536,000 in 2008 to 273,000 in 2011.<sup>2</sup> Even though maternal mortality is a worldwide phenomenon, the central issues associated with it are most profound in developing countries. Hence, of the estimated figure for maternal deaths worldwide, developing countries account for 99 percent

with an estimated 265,000 maternal deaths occurring in sub-Saharan African.<sup>3</sup>

The reasons adduced for this was persistent tradition in deliveries in domiciliary settings in unsafe and unhygienic conditions by untrained or poorly trained traditional birth attendants.<sup>4</sup> Still most women prefer to patronize the unskilled birth attendants because they were accessible, available and provide cheap services. Unskilled birth attendants deliver the majority of women in Nigeria as in other developing countries. According to,<sup>5</sup> 70 – 75% of all deliveries in Nigeria are undertaken by unskilled

birth attendants and this percentage is much higher in rural areas where public health intervention is at a poor state. More than 80% of maternal deaths in Nigeria occur due to unskilled birth attendants' patronage,<sup>5-6</sup> In their study on perception and utilization of Traditional Birth Attendants (TBAs),<sup>7</sup> reported that 80% of maternal mortality was due to late presentation and late referrals of women by TBAs. Also,<sup>8</sup> reported that majority of the trained TBA's studied failed to refer client promptly to next level of care. In a study on knowledge of referral practices among traditional birth attendants and factors influencing referrals in Geita District,<sup>9</sup> the result showed that out of 233 TBAs used for the study, 71(66%) of TBAs had practiced for 11 years and above. Those who practiced 11 years and above referred less clients to health facilities than those who practiced for less than 4 years 42(80.4%) and 5 – 10 years 72(92.3%). The difference was statistically significant ( $P < .05$ ). In the same study, he also discovered that TBAs who had completed primary education 108(46.4%) referred complicated cases than those who had no formal education. This difference was statistically significant ( $P < 0.05$ ). Out of 233 TBAs, 84(36.1%) could not read nor write, while 133 (57.1%) knew how to read and write and referred complicated cases to health facilities. On relationship between training on delivery care with referral to the health facilities and referral timing, out of 233 TBAs, 80(34.3%) received training on delivery care, those who received training on delivery care 78(97.5%) referred cases to the health facilities compared to those who did not receive training 107(69.9%).<sup>10</sup> Out of 185(79.4%) who referred cases to the health facilities, 110(59.5%) TBAs were referring on time. Among those TBAs who received training, 55(70.5%) TBAs referred on time compared to those who did not receive training 55(51.4%). It was recommended that improvement in social conditions such as education and training of unskilled birth attendants will lead to prompt referrals to modern health facility and subsequent reduction in maternal death,<sup>10</sup> carried out a study on determinant of referral practices of clients by Traditional Birth Attendants in Ilorin, Nigeria. The result showed that most of the respondents 104(64.2%) had at least primary education. The respondents were mainly part time TBAs 8(5.8%). Overall 34(24.0%) of the respondents practiced appropriate and timely referral, while

128(79%) did not. Five out of seven representing 71.4% in age 20-29 referred their client appropriately compared to 8 out of 70(11.4%) and 5 out of 42(11.9%) respectively in the age 40-49 and >49 years of age. The differences in the referral practice with regards to age was statistically significant ( $p = 0.0000$ ). With regards to educational status, the highest proportion that did not refer their client appropriately was those among those that have primary education 67 out 75 (89.3%) followed by those with secondary education 16 out of 20 (80%) trained TBAs referred their client appropriately, 9 out of 13 (69.2%) referred client appropriately than untrained TBAs ( $p=0.0000$ ). The higher the trainings, the more appropriately the referral ( $p<0.05$ ) was. Regular training and retraining of TBAs with routine monitoring and supportive supervision will promote prompt referral of high risk and complicated pregnancies and deliveries,<sup>11-12</sup> carried out a study on Traditional Birth Attendants and women's health practices: a case study of Patani in South-South part of Nigeria, a Cross-Sectional descriptive design was used. The results from the study indicated a high (88.8%) knowledge of TBAs but poor (51.1%) perception about their practices. The result also indicated a significant relationship ( $P < 0.05$ ) between education and frequency of usage of TBA services by women studied. The more educated the client is the more likely she would not use the services. Those with no formal education or with only primary education are more likely to use the services often. There was no significant relationship ( $X^2 = 1.177$ ,  $P < 0.05$ ) between the skills of the TBAs and their ability to cope with birth complications. Efforts need to be harnessed for training of unskilled birth attendants through the ministry of health and primary health care facilities close to their area of practices,<sup>13-15</sup> carried out a study on knowledge and practice of TBAs concerning risk factors in pregnancy, labour and puerperium, time series study was carried out to identify TBAs knowledge of risk factors in pregnancy, labour and puerperium and their practice of referrals. Study findings revealed that only 35% of the subject could recognize the risk factors to be referred during pregnancy and labour, TBAs' knowledge of referrals was not significantly different between previously trained and untrained TBAs, but practice was significantly related to prior training ( $P=0.001$ ). After teaching, both knowledge and practice of

referrals increased significantly. Regular training was recommended for TBAs. In a study on role of institution factor in maternal mortality reports indicated that mothers who suffered mortality were more likely to be those who did not receive antenatal care, those who reported late in hospital when they developed complications or those who were attended to at delivery by unskilled health personnel and were brought to hospital in critical condition.<sup>16</sup>

Since the use of unskilled personnel (including TBAs) were argued to be among the reasons for high maternal mortality and from the empirical evidence reported, there is bound to be an increase in the incidence of maternal mortality due to delays and late presentation of cases. The question is; do the unskilled birth attendants have knowledge of cases for referrals; do they have the proper criteria for referrals; which kind of cases do they actually refer when they do and are these determined by their demographic status. These challenges motivated the researcher to assess the determinants of referral practices of clients by unskilled birth attendants in Northern Senatorial District of Cross River State.

**Purpose of the Study:** The purpose of this study is to examine the determinants of referrals practices of clients by unskilled birth attendants in Northern Senatorial District of Cross River State, Nigeria.

Specifically, the objectives of the study are to:

- 1 Examine the association between educational attainment and referrals practices of clients in Northern senatorial district of Cross River State
- 2 Examine the influence of years of experience on referrals practices of clients by unskilled birth attendants
- 3 Determine the influence of unskilled birth attendant's training status on referral practices of clients

**Hypotheses 1** There will be no significant association between educational attainment and knowledge of cases for referrals among unskilled birth attendants in Southern Senatorial District of Cross River State.

- 2 There will be no significant difference between trained and untrained unskilled birth attendants in their practice of referrals of cases to the next level of health care facility.

## METHODS

**Research Design** Descriptive survey design was used for the study.

**Area of Study:** The study area was Northern Senatorial district, it is made up of five LGAS namely Ogoja, Yala, Bekwarra, Obudu and Obandiku. The area was chosen because despite the availability of one tertiary health facility and four secondary health facilities in the study area, there was high maternal mortality rate (241/100,000) live birth and high home delivery (44%)<sup>14</sup>.

**Population of Study:** The total number of unskilled birth attendants in the study area was 255. This number was gotten from the president of unskilled birth attendants in Cross River State. No sampling technique was used as the number was adequate for the study.

**Criteria for Inclusion:** These include Unskilled Birth Attendants who were:

- ☐ Currently providing delivery care having past one year records of deliveries.
- ☐ Willing to participate in the study
- ☐ Present at the time of the study.

**Instrument for Data Collection:** Instrument for data collection was a questionnaire which serves as an interview schedule/guide developed by the researchers

**Reliability of the Instrument:** A reliability coefficient of 0.85 obtained was considered as appropriate using Cronbach's alpha coefficient

**Ethical Consideration:** After due consideration by the ethical committee, the ethical clearance was granted for the study by Cross River State Ministry of Health Research and Publicity Committee with no. CRS\MH\HREC\017\Vol.v\198.

**Method of Data Analysis:** Chi-square, Independent t-test and One-way analysis of variance (ANOVA) were used to determine the associations and relationships between the variables at 0.05 level of significant. All analysis was done with the aid of International Business Machines Corporation Statistical Package for Social Sciences (IBM SPSS) version 20.

## RESULTS

Table 1 Association between socio-demographic data and unskilled birth attendants' practice of cases for referrals n=255

Socio-demographic characteristics	Practiced of cases for referrals		Total	X <sup>2</sup> P-value
	Preferring cases to health facility (%) n=223	Not referring cases to health facility (%) n=32		
<b>Educational attainment</b>				
No formal education	67(87.1)	10(12.9)	77(31.7)	X <sup>2</sup> = 3.1 df = 3 p<0.05
Primary Education	89 (93.7)	6(6.3%)	95(37.2)	
Secondary Education	40(74.1)	14 (25.9)	54(22.2)	
Tertiary Education	27(93.1)	2(6.9)	(11.9)	
<b>Years of experience</b>				
< - 10years	38(76.0)	12 (12.4)	50(19.6)	X <sup>2</sup> = -2.74 df = 3 p<0.05
11 – 20years	70 (87.5)	10(12.5)	80(31.4)	
21-30years	100(95.2)	5(4.8)	105(41.2)	
31years and above	15(75.0)	5(25.)	20(7.8)	
<b>Training status</b>				
Trained TBAs	147 (88.0)	20(12)	167(65.5)	X <sup>2</sup> = 14.6 df = 1 p<0.05
Untrained TBAs	76(86.4)	12(13.6)	88(34.5)	

As presented in table 1, out of the 255 unskilled birth attendants that were interviewed, 223 (87.5%) referred complicated cases to the health facilities while 32 (12.5%) did not referred complicated cases to the health facilities those with no formal education 67 (87.1) referred complicated cases to the health facilities, those with primary education 89 (3.7%) referred complicated case, 6 (6.3%) did not refer, 40 (74.1%) unskilled birth attendants with secondary education practice referral of cases, 14(25.9%) with secondary education did not refer, while in tertiary education 27 (93.1%) unskilled birth attendants referred and 2 (6.9%) unskilled birth attendants with tertiary education did not practice referral of cases. In years of experience unskilled birth attendants with less than 10 years 38 (76%) referred cases, 12 (24%) did not practice referrals of cases. Seventy (87.5%) unskilled birth attendants with years of experience between 10-20years practices referral of cases, while 10(12.5%) did not. Unskilled birth attendants with years of experience between 21-30, 100(95.2%) practiced referrals of cases, while 5 (4.8%) did not. Unskilled birth attendants with above 31 years of experience 15 (75%) practice referrals of cases, while 5(25%) did not, out of 167 (65.5%) unskilled birth attendants that were

formally trained, 147 (88%) practiced referral of cases while 20(12%) trained unskilled birth attendants did not practice referral of cases. Seventy six (86.3%) untrained unskilled birth attendants practices referral of cases, while 12(13.5) did not. In the association between socio-demographic data and unskilled birth attendants practice of cases for referrals there was not statistically significant ( $p<0.05$ ) association with  $\chi^2$  calculated of 3.1 for educational attainment and 2.4 for years of experience. Only training status was statistically significant with  $\chi^2 = 14.6$

Table 2 Cross tabulation between Unskilled birth attendants educational attainment and knowledge of cases for referrals (n=255)

Unskilled birth attendants educational attainment	Knowledge of cases of referrals			Total (%)
	Low(%)	Moderate (%)	High (%)	
No formal education	45(83.3)	7(3.0)	2(3.7)	54(100)
Primary education	31(32.6)	60(63.2)	4(4.0)	95(100)
Secondary education	20(26.0)	48(62.3)	9(11.7)	77(100)
Tertiary education	2(7.9)	3(10.3)	24(82.8)	29(100)
Total	98	118	39	255

Table 3 *Chi-square test (Cross tabulation) between unskilled birth attendants' educational attainment and knowledge of cases for referrals*

	Value	Df	Asymp. Sig (2sided)
Pearson Chi-square	9.459	6	.396
Likelihood ratio	11.749	6	.228
Linear-by-linear Association	1.437	1	.231
No. of valid cases	255		

a 1 cells (6.3%) have expected count less than 5. the minimum expected count is 2.70

The result as presented above on cross tabulation between unskilled birth attendants educational attainment and knowledge of cases for referrals showed that out of the 54 (100%) respondents with no formal education, 45 (83.3%) had low knowledge level, 95 (100%) had primary level of knowledge. Out of the 29 (100%) unskilled birth attendants with tertiary education, 24 (82.8%) had high level of knowledge. It therefore means that as the level of education is high so is the knowledge of cases for referrals high. The result on chi-square test analysis showing the association between educational attainment and knowledge of cases for referrals revealed that cells (6.3%) have expected count

less than 5. The minimum expected count is 2.70. Since the minimum expected count 2.70 is lesser than expected count of 5 the null hypothesis is upheld. It therefore means that unskilled birth attendants' educational attainment was not statistically associated with knowledge of cases for referral.

Table 4 *Group means and standard deviation of Unskilled birth attendants' years of experience on practice of referrals of cases (n=255)*

Practice of referral	Group	N	X	SD
Inadequate practice of referral	<10years	50	15.60	3.20
	11-20years	80	15.70	3.212
	21-30years	105	15.75	3.18
	31 and above	20	15.84	3.08
Moderately adequate referral practice	<10years	50	16.29	2.75
	11-20years	80	16.40	2.68
	21-30years	105	16.48	2.64
	31 and above	20	16.53	2.68
Highly adequate referral practice	<10years	50	15.26	3.32
	11-20years	80	15.31	3.17
	21-30years	105	15.41	3.22
	31 and above	20	15.61	3.20

Table 5 *One way analysis of the influence of unskilled birth attendants' years of experience on practices of referrals of cases*

Practice of referral	Sources of variance	Sum of squares	Df	Ms	F
Inadequate practice of referral	Between Groups	28.737	3		
	Within Groups	13139694	252	14,368	1,308
	<b>Total</b>	<b>131681430</b>	<b>255</b>	<b>10,986</b>	
Moderate adequate practice of referrals	Between groups within groups	613.316	3	30,658	
		15839.414	252		2.316
	<b>Total</b>	<b>15900731</b>	<b>255</b>	<b>13,244</b>	
Highly adequate practice of referral	Between groups within groups	33,242	3	16.621	
		21096.638	252		.943
	<b>Total</b>	<b>21,129,880</b>	<b>255</b>	<b>17.639</b>	

Not significant at 0.05 level of significant df = 3, 252, critical f = 2.64

The information above revealed that the calculated f-values of 1.308, 2.316 and 0.943 for the influence of unskilled birth attendants' years of experience on inadequate practice, moderately adequate practice and highly adequate practice of referrals by respondents were respectively less than the critical f-ratio of 2.64 required for significance at the 0.05 level of significance with 3 and 252 degrees of freedom.

This means that the years of experience does not influence the unskilled birth attendants' practice of referrals. Hence, the null hypothesis that there is no significant influence of years of experience on unskilled birth attendants' practice of referrals was not rejected at the 0.05 level of significance. With this result the null hypothesis was upheld.

Table 6 *Independent t-test analysis of difference between trained and untrained unskilled birth attendants and their practices of referrals to the next level of health facility (n = 255)*

Practice of referral	Unskilled birth attendants training status	N	X	SD	T
Inadequate practice of referral	Trained TBAs	167	19.11	3.23	2.81
	Untrained TBAs	88	18.22	3.48	
Moderate adequate practice of referrals	Trained TBAs	167	19.11	2.87	2.03
	Untrained TBAs	88	18.22	2.96	
Highly adequate practice of referral	Trained TBAs	167	20.25	3.54	1.99
	Untrained TBAs	88	18.73	3.48	

\* significant at the 0.05 level of significance df = 253, critical-t = 1.98

The result as presented above revealed a statistically difference between trained and untrained TBAs relationships with referrals of practice. The trained TBAs were statistically different from untrained TBAs when the t-calculated of 2.81, 2.03, and 1.99 were respectively greater than the critical-t of 1.98 with 253 degrees of freedom. With this result the null hypothesis was rejected. Hence, there was statistically significant difference between trained and untrained TBAs and their practices of referrals to the next level of health facility.

clients with high risk and complicated pregnancies. In this study majority of the TBAs had primary education and majority could not read nor write. Being literate is an obvious determining factor for people in comprehending basic facts and acquiring knowledge which was reflected by the findings in this study. The better practice of referrals among those with higher education was most likely be attributed to better understanding of the instruction during trainings and a more positive perception of possible complications that might arise if referral was late.

## DISCUSSIONS

Results shows that only unskilled birth attendants with tertiary education referred out cases but in testing the hypothesis, unskilled birth attendants educational attainment was not statistically associated with their knowledge of cases for referrals. So there was no significant association between educational attainment and knowledge of cases for referrals. In this study, few unskilled birth attendants with tertiary education referred client appropriately. The above finding is in line with the study conducted by ,9 who found that TBAs with higher educational level were more likely to refer

The findings of this study also revealed that unskilled birth attendants' years of experience do not significantly influence their practice of referrals of cases. The findings revealed that unskilled birth attendants with longer duration of practice refused to refer their client promptly to the next level of care. This findings was also in line with the findings of ,8 who discovered that longer durations in practicing delivery by TBAs was significantly associated with less referral practices to the health facilities. This has been established in this study since it was found that respondents who have practiced delivery care services for long duration were referring cases less to the health facility compared to respondents who has

practiced for short durations. In line with the above,<sup>17</sup> indicated that experience influences referral to the health facilities, since it was found out in their study that those who have practiced for short duration were referring appropriate than those who practiced for long time. In this study as years of experience increases, the practice of referrals of cases reduces

Data analyzed showed that there was statistically significant difference between trained and untrained unskilled birth attendants and their practices of referrals to the next level of health facility. This finding was so because training brings awareness on complicated cases and the way to act upon it. Also training brings a link between unskilled birth attendants and modern health system that was why respondents who were trained were referring complicated cases to the health facilities than untrained respondents. In line with the above findings,<sup>17</sup> indicated that training does make a difference in unskilled birth attendants awareness of high risk pregnancies and referrals practices. Although opponents of unskilled birth attendants training argued that in general unskilled birth attendants have low literacy levels, making them unlikely candidates for traditional classroom training and that it is much easier for them to forget what they have been taught.

### Limitation

There were variations in cultural practices and tolerance in some communities so that what is permissible in one rural setting may not be permissible in another setting. This study could not control for these variations.

### Conclusion

There was a negative relationship between unskilled birth attendants' educational attainment and knowledge of cases for referral. There was a negative relationship between unskilled birth attendants' years of experience and practice of referrals of case. Also, there was a positive significant difference between trained and untrained unskilled birth attendants and their practice of referrals to the next level of health facility

### Recommendations

1. Nurses and midwives should also sensitize the government to provide materials in terms of human and finance for the training of the unskilled birth attendants on identification of complicated cases during pregnancy and labour and referrals to the modern health facilities.
2. The government should budget for supervising both trained and untrained unskilled birth attendants since supervision is a motivator to unskilled birth attendants to refer cases to health facilities.
3. The government at the council level should continue to improve social services such as education for all, health care for all, and infrastructure so as to improve maternal health outcomes.

Conflicts of Interest: There is no conflict of interest.

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