

## ORIGINAL ARTICLE

## Utilization of Skilled Birth Attendants at Delivery among Urban Women in Nnewi Nigeria

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**DISCLOSURE**

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**ABSTRACT**

**Background:** Maternal mortality ratio remains high in Nigeria and the Presence of skilled birth attendants at delivery is a key strategy towards reducing the rate.

**Objective:** To determine the rate and factors that affect utilization of skilled birth attendants (SBA) among Igbo women in Nnewi, South-Eastern Nigeria

**Methodology:** A cross sectional survey of 400 market women using semi structured questionnaires and focus group discussions.

**Results:** The rate of utilization of SBAs at birth was 88.4%. Majority (72.8%) of the women delivered in the private health facilities while 15.6% delivered in a government health facility. Majority of the women who did not assess SBAs at their last delivery, delivered in the maternity homes (65.2%), followed by Traditional Birth Attendant's place (26.1%; n=12). The main reasons for non-utilization of SBA at delivery were the long distance to the health facilities (65.0%), exorbitant hospital fees (34.8%), culturally unacceptable hospital practices (32.6%) and unfriendly attitude of the hospital staff (26.1%).

Women aged 24-29 years ( $X^2=25.84$ ;  $P=0.00$ ) and those who had attained tertiary education ( $X^2=8.39$ ;  $P=0.03$ ) were significantly more likely to utilize SBAs at delivery than the other women Marital status ( $X^2=1.42$ ;  $P=0.48$ ), occupation ( $X^2=7.34$ ;  $P=0.12$ ) and religion ( $X^2=0.87$ ;  $P=0.92$ ) did not significantly affect the utilization of SBAs at delivery.

Most focus group discussants indicated that distant location of the hospitals; high cost of services and the unfriendly attitude of the workers were the major reasons for not utilizing SBAs at deliveries.

**Conclusion:** There is a good rate of utilization of SBAs among Igbo women in Southeast Nigeria. There is need for even distribution of health facilities and reduction in the cost of services to further improve the rate of utilization

**Key words:** Antenatal care, Place of delivery, Postnatal services, Nurses, Maternity homes

## INTRODUCTION

A skilled birth attendant (SBA) refers to an accredited health professional (doctor, nurse or midwife) who has been educated and trained to proficiency in the skills needed to manage uncomplicated pregnancies, childbirth and the immediate postnatal period; and in the identification, management and referral of complications in women and newborns.<sup>1</sup> Skilled attendants can provide emergency obstetric first aid and facilitate prompt referral to emergency obstetric care services.

Evidence shows that countries that have successfully reduced maternal mortality have included a strong focus on training, recruiting and supporting skilled birth attendants at deliveries.<sup>2</sup> Therefore, the presence of SBA at deliveries is held as the single most critical intervention for safe motherhood in the African region. In addition to being able to identify abnormalities, manage them or make appropriate referrals, skilled birth attendants also provide counseling on postnatal contraception to the mothers.

Skilled attendants are also indispensable in preventing mother-to-child transmission of Human Immuno-deficiency Virus(HIV) infection which begins pre pregnancy with HIV counseling and testing, provision of antiretroviral therapy, counseling on infant feeding and advising on safer sex practices including the use of condoms. These services continue in labour by choosing appropriate modified obstetric practices; and also in postnatal period by supporting the mother in her choice of feeding the baby and family planning counseling.

However, despite these advantages, the provision of adequate number of skilled birth attendants has remained a big challenge within sub-Saharan Africa. This is largely due to political, social and cultural problems. In the early 1990s, it was estimated that one in four women in developing countries gave birth alone, or with only a relative or a neighbour to assist; fifteen years later, this figure is still the same.<sup>3</sup> Even in cases where women do receive skilled care at birth, their

health may still be jeopardized by receiving poor quality care.<sup>4</sup>

Going by the WHO estimates, to extend coverage of maternal and newborn care in the next 10 years in 75 countries requires at least 334,000 additional midwives (or equivalent attendants), as well as additional training for 140,000 existing professionals providing first-level care and for 27,000 doctors who are not currently qualified to provide back-up care.<sup>5</sup>

Nigeria constitutes about 1% of the world population but accounts for 10% of the world's Maternal and under-5 Mortality rates.<sup>6</sup> It is estimated that 52,900 Nigerian women die every year from pregnancy related complications and a woman's chance of dying from pregnancy and childbirth in Nigeria is 1 in 13, while it is 1 in 5000 in developed nations.<sup>6</sup>

In Nigeria, the utilization of skilled attendants at delivery varies according to the regions. But generally, only about 39% of births are assisted by skilled attendants.<sup>6</sup> To address this imbalance, the federal ministry of Health under the auspices of the primary Health care development agency has embarked on the "Midwives Service Scheme" (MSS).<sup>7</sup>

This initiative seeks to provide an emergency stop gap to the shortage of skilled attendance in the primary health care system. The scheme recruits both fresh midwifery graduates and retired midwives who are deployed to MSS designated Primary Health Care (PHC) facilities. The midwives are trained to offer emergency obstetric and neonatal care service as a referral backup for those already working at the various primary health care facilities where they will be posted. They are expected to offer antenatal, intra-partum and post-natal services, and will be given refresher training including additional skills in the management of common childhood illness as part of Maternal, Neonatal and Child health initiative. Renovation of the facilities and provision of adequate consumables are also part of the plan. Since the inception of the scheme, over 30,000 midwives have been deployed.<sup>7</sup>

Therefore it is important to determine the rate of utilization of skilled birth attendants by women in a given locality and the factors that limit access to skilled care at birth. The information obtained from the survey will be useful in the current effort at scaling up the use of SBAs at deliveries. This study evaluated the utilization of skilled birth attendants at delivery among women in Nnewi, an urban town in the southeastern part of Nigeria.

## METHODOLOGY

### Study Area

Nnewi is a semi urban town located in Anambra state within the South-East region of Nigeria. It has four quarters: Otolu, Nnewichi, Uruagu and Umudim. The town is known for commercial activities; it has the largest motorcycle and motor vehicle spare parts market in Africa. Therefore the inhabitants are predominantly traders. Apart from the central market, each of the quarters has its own daily market that caters for the routine needs of its people.

The health facilities in the area include the government facilities which include the primary health centers, general hospitals and a teaching hospital. There are private hospitals which are either specialist hospitals or general practice hospitals (owned by the non-specialist doctors). The maternity homes referred to in this work are owned by non-formally trained midwives who acquired experience from working at the private hospitals over a long period of time.

### Study Design

This is a cross sectional descriptive study using both quantitative and qualitative approaches.

The minimum sampling size was determined using the statistical formula of Fischer for calculating sample size<sup>8</sup> utilizing the proportion of births assisted by SBAs in Nigeria which is 39.0%.<sup>6</sup> A minimum sample size of 366 was calculated which was increased to 400 to improve the power of the study. Therefore, 400 questionnaires were distributed

### Study Population

The study population comprised market women who delivered their last child within the past three years preceding the study (2007-2010). Equal numbers (100) of women were selected from each of the four markets, representing the four quarters of the town. Women, who withheld consent or who had not delivered a child were excluded from the study.

### Data Collection

Data was collected from eligible women using pre tested semi-structured questionnaires that were either interviewer or self administered depending on the convenience or educational status of the women. The information obtained included socio-demographic characteristics, the place of delivery, the use of skilled attendants at the last delivery and the reason for the choice of place of delivery. Skilled birth attendants were defined as "a qualified nurse/midwife or doctor".

The data was augmented with information from focus group discussions (FGDs) involving selected women. The FGDs consisted of ten to fifteen participants, a facilitator, tape recorder and a note-taker. The discussions took place in the evenings between 16:00 and 18:00 hrs when the women had closed their business for the day. The venues were either in a building within the market or any other building that provided confidentiality. The language was a mix of the local language (Igbo) and English language as determined by the convenience of the participants. In all a total of 8 focus group discussions were held- two for each of the markets. The parameters used in choosing participants included socio-demographic characteristics likely to affect the likelihood of utilization of skilled birth attendants at delivery.

### Data Analysis

The collected data were analyzed using EPI INFO version 3.5.1(2008) software. Descriptive statistics such as mean, median and mode were computed for continuous variables and proportions for nominal characteristics of the women. The Pearson's

Chi-square test was used to assess significance of associations between two nominal variables and a *p*-value of 0.05 at 95% confidence interval was taken as significant. The results are presented in tables.

### Ethical Considerations

Ethical clearance was obtained from the ethical committee of the local government area. As much as possible, the rights of the participants were protected in this research work and questionnaires were only administered to women who gave their consent for the work.

### RESULTS

Out of the 400 questionnaires distributed, 398 were properly filled and returned giving a response rate of 99.5%.

### Socio-demographic Profile

Table 1 shows the socio-demographic characteristics of the respondents. The modal age group was 25-29 (34.2%, 136/398) while the modal parity group was 2-4 (56.8%, 226/398). Literacy level was very high (85.1%, 339/398) and majority of the respondents were traders (81.7%, 325/398). Almost all of the women were Christians (99.7%; 397/398) with a preponderance of the Roman Catholic denomination.

### Pattern of Utilization of Facilities for Delivery at the Last Pregnancy

As shown in table 2, an equal proportion of the women (36.4%, n=145) delivered in private specialist and private general practice hospitals while 15.6% (n=62) delivered in a government facility. 11.5% (n=46) delivered outside a formal health facility.

### Places of Delivery for the Women Who Did Not Utilize SBA at Their Last Delivery

Table 3 shows the choice of places of delivery for the women who did not utilize SBA. Majority of them delivered in maternity homes (65.2%; n=30), followed by Traditional birth Attendant's place (26.1%; n=12) and deliveries at home (6.5%; n=3). Delivery in the church accounted for 2.2% of these deliveries.

### Reasons for Non-Utilization of SBA at Last Delivery

Table 4 shows the main reasons for non-utilization of SBAs at the last delivery. The main reasons given by the women for non-utilization of SBA during their last pregnancy were the distant location of the health facilities from their homes (65.0%; n=30), exorbitant hospital fees (34.8%; n=16), culturally unacceptable hospital practices (32.6%; n=15) and unfriendly attitude of the hospital staff (26.1%; n=12).

**Table 1.** Socio-demographic profile of the Respondents

Socio-demographic profile	Frequency	%
<b>AGE</b>		
<25	33	1.2
25-29	136	34.2
30-34	119	29.9
35 and above	110	27.7
<b>PARITY</b>		
1	76	19.0
2-4	226	57.1
5 and above	95	23.9
<b>MARITAL STATUS</b>		
Married	387	97.2
Widowed	10	2.5
Divorced /separated	1	0.3
<b>OCCUPATION</b>		
Trader	325	81.7
Housewife	30	7.5
Artisan	23	5.8
Public servant	11	2.8
Student	9	2.3
<b>HIGHEST EDUCATIONAL QUALIFICATION</b>		
No Formal Education	9	2.3
Primary	50	12.6
Secondary	262	65.8
Tertiary	77	19.3
<b>RELIGION</b>		
Anglican	102	25.6
Catholic	188	47.2
Islam	1	0.3
Pentecostal	102	25.6
Others	5	1.3

### Influence of Socio-Demographic Characters on Utilization of Skilled Attendants in Delivery

Table 5 shows the influence of socio-demographic characters on utilization of skilled attendants in delivery. Women aged 24-29 were significantly more likely to utilize SBAs at delivery than the other women ( $X^2=25.84$ ;  $P=0.00$ ). Also the

**Table 2.** Pattern of utilization of facilities for delivery at the last pregnancy

Place of delivery (last pregnancy)	N=398	%
Private general practice hospital	145	36.4
Private Specialist hospital	145	36.4
Government facilities	62	15.6
None	46	11.6

**Table 3.** Places of delivery for the women who did not utilize SBA at their last delivery

Place of delivery for the on-users of SBA	N=46	Percent
Maternity Home	30	65.2
TBA's place	12	26.1
At Home	3	6.5
Church	1	2.2

**Table 4.** Reasons for non-utilization of SBA at last pregnancy

Reasons for non-utilization of SBA at last pregnancy	N=46	%
Hospital is too far from my house	30	65.0
Hospital fees are too expensive	16	34.8
Cultural unacceptable hospital practices	15	32.6
Unfriendly hospital staff's attitude	12	26.1
Not Necessary to visit a hospital	10	21.7
Husband's refusal	8	17.4
Some had more than one reason		

likelihood of utilization of SBAs significantly increased with increasing level of education, being highest among women who had attained tertiary education ( $X^2=8.39$ ;  $P=0.03$ ). Marital status ( $X^2=1.42$ ;  $P=0.48$ ), occupation ( $X^2=7.34$ ;  $P=0.12$ ) and religion ( $X^2=0.87$ ;  $P=0.92$ ) did not significantly affect the likelihood of using SBAs at delivery. This is shown in table 5.

### Focus Group Discussions

Most focus group discussants indicated that distant location of the hospitals; high cost of services and the unfriendly attitude of the workers were the major reasons for not attending hospitals, especially the government hospitals. They recommended reduction of fees and orientation of the hospital workers as means to encourage patronage of these hospitals.

**Table 5.** Influence of Socio-demographic characteristics on utilization of skilled attendants in delivery

Socio-demographic profile	Utilization of SBA in the last pregnancy			X <sup>2</sup>	P- value
	Yes (%)	No (%)	Total		
<b>AGE</b>					
20-24	21 (65.6)	11	32	0.86	0.52
25-29	130 (95.6)	6	136		
30-34	107 (89.9)	12	119		
35 and above	99 (90.0)	11	110		
<b>PARITY</b>					
1	65 (85.5)	11	76	0.92	0.82
2-4	201 (88.9)	25	226		
5 and above	85 (89.5)	10	95		
<b>MARITAL STATUS</b>					
Married	341 (88.1)	46	387	1.42	0.48
Widowed	10 (100.0)	0	10		
Divorced / separated	1 (100.0)	0	1		



<b>OCCUPATION</b>					
Trader	291 (89.6)	34	325		
Housewife	25 (83.3)	5	30	7.34	0.12
Artisan	17(73.9)	6	23		
Public servant	11(100.0)	0	11		
Student	8(88.9)	1	9		
<b>HIGHEST EDUCATIONAL QUALIFICATION</b>					
No Formal Education	8(78.0)	1	9	8.39	0.03
Primary	39(88.5)	11	50		
Secondary	232(88.9)	30	262		
Tertiary	73(94.8)	4	77		
<b>RELIGION</b>					
Anglican	90(88.2)	12	102	0.87	0.92
Catholic	165(87.7)	23	188		
Islam	1(100.0)	0	1		
Pentecostal	92(90.2)	10	102		
Others	4(80.0)	1	5		

## DISCUSSION

In this study, 88.4 % of the women had access to skilled birth attendants at their last delivery. This is high, and more than the national average of 38.9%.<sup>6</sup> However, this rate of utilization of SBAs may relate to the presence of a teaching hospital and numerous hospitals in the area. Moreover, most of the women were traders with the financial capacity to utilize care at the hospitals. Also Nnewi is a semi urban town. At the rural area with poor socioeconomic strata, the rate will likely be lower than what we found as it has been shown that there is a significant differential in utilization of skilled care in labour in Nigeria between the urban and rural dwellers.

Majority of the women who did not access skilled care in labour delivered mainly at the maternity homes and at the Traditional Birth Attendants (TBAs) place. The people who run these places are not formally trained in the care of pregnant women. Although, they have acquired some experience overtime, but they lack the scientific basis of the practice, may not be able to recognize complications early and may not appreciate the need for prompt referral. The implication is an increased mortality and morbidity for these women.

The relevance of the TBAs in reducing maternal mortality in the developing countries has been an issue of constant debate. While some practitioners feel that there is no place for the TBAs, others argue that the TBAs, with proper training and supervision can, to a reasonable extent fill in the gap in service delivery occasioned by lack of trained personnel in these countries. In the final analysis, the challenge would be for the Governments of these countries to ensure the training and deployment of adequate skilled personnel such that all pregnant women will have access to skilled birth attendants at delivery.

Majority of the women delivered in the private hospitals mainly on account of the availability of more friendly staff on a more regular basis. This preference for private hospitals against the government hospitals had been variously reported in Nigeria.<sup>9,10</sup> This shows a lack of confidence in the public hospitals by the population, and this carries negative implication for health care delivery in the country as these hospitals are profit driven and may not be at the reach of the poor segment of the society.

The negative attitude of the Nigerian healthcare workers to the patients, especially

at the public hospitals has been recognized as a major obstacle to accessing care by these women.<sup>11</sup> Majority complain about long waiting hours and unfriendly attitude of the staff. The other reported deterrents to patient's access to care at the hospitals in Nigeria include perception of poor quality of services by the patients and failure of the providers to respect the culture of the people.<sup>12,13,14</sup>

We also found out that high cost of services deterred some of the women from utilizing skilled care at delivery. The place of cost of services militating against effective use of healthcare services is well established.<sup>15,16,17</sup> All these factors have to be addressed, if the country will make headway in reducing both maternal mortality rate and infant mortality rate. Recruiting health care personnel may not be enough. They need to be trained on friendly approach to patients in order to encourage women to access services at these hospitals.

In this study, the likelihood of utilizing SBAs at delivery increases with increasing maternal education and parity. The positive impact of maternal education on the utilization of maternal health services has been recognized such that women's education and empowerment is a key long term strategy in maternal mortality reduction efforts.<sup>18,19,20,21</sup>

## CONCLUSION

The rate of utilization of SBA at delivery among Igbo women in South-Eastern Nigeria is high. The identified obstacles to SBA utilization are distant location of hospitals, unfriendly attitude of workers and high cost of services. There is need to address these issues to improve access to skilled care in labour.

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