



# Factors Associated with the Utilisation of Postnatal Care Services in a Rural Community in Abia State

Ijeoma Nduka

Department of Community  
Medicine, Abia State  
University, Uturu, Nigeria

**Corresponding Author:**  
Ijeoma Nduka  
Email:  
drijnduka@yahoo.com

## Abstract

**Background:** Postnatal period is as important as pregnancy and childbirth. Half of all postnatal deaths occur during the first week after birth. During postnatal period, the mother's body undergoes major changes from pregnancy. Therefore, there is need for continuity of care after birth to prevent and manage complications that may arise during postnatal. This study was carried out to determine factors associated with the utilisation of postnatal care services in a rural community in Abia state.

**Methods:** This was a descriptive cross-sectional study conducted from March 2019 to May 2019 among women living in Amuvi community in Arochukwu Local Government Area (LGA) of Abia state. The study participants were women of reproductive age group (15-49 years) who had at least been pregnant once, carried pregnancy to full maturity and delivered at term. Data was collected using pre-tested semi-structured interviewer-administered questionnaire.

**Results:** Four hundred and sixty-seven (467) women participated in the study. Four hundred and forty-three (95.1%) women attended postnatal visits while 23 (4.7%) did not. Reasons given for attending postnatal care by respondents were; routine check-ups, counselling on family planning, appointment with health workers 54 (11.7%), same day appointment as child's immunisation, child was sick. Respondents who were married were 2 times (AOR=2.587, 95% CI:-0.878-0.120) more likely to use postnatal care services than single mothers. Mothers who had an occupation were 2 times (AOR=2.897, 95% CI: 0.051-0.267) more likely to use postnatal care services than those who did not. Husband's occupation was statistically significant with utilisation of postnatal services.

**Conclusion:** Utilisation of postpartum care services was high among women in Amuvi community of Abia state. PNC services utilisation were associated with marital status, mother's occupation and husband's educational status.

**Keywords:** Postnatal care, utilisation, factors, rural community, Abia state

## Introduction

Postnatal is the period from birth to six weeks after the birth of a baby. This period is sensitive to the survival of mother and child. A woman's

body undergoes changes as a result of pregnancy related hormones during postnatal period. Hormonal changes from pregnancy can cause pain as the uterus

involutes, bleeding, depression, and hypertension (1). Care for the mother and child is therefore important at this time for timely intervention of complications that could lead to maternal and neonatal morbidity and mortality.

Postnatal care (PNC) services are given to women soon after child birth. The process into postnatal starts from antenatal care (ANC) to six weeks after birth. During antenatal visits, mothers are taught how to take care of their children and encouraged to utilise PNC services where available (1,2). Unfortunately, studies have shown non-compliance to ANC by pregnant women in Sub-Saharan Africa (3-6).

Half of all postnatal deaths occur during the first week after birth (7). Haemorrhage is the leading cause of maternal death accounting for 34% of deaths within the first 24 hours while sepsis and infection another 10%. Reports (8) show that women who are HIV positive are likely to die during the postnatal period than those who are HIV-negative. Every year in Africa, at least 1.16 million babies die in the first 28 days of life with 850,000 of these deaths occurring in the first week of life (9). As high as 10-27% of neonatal deaths could be prevented if PNC and curative care services are accessed by 90% of mothers and their children (10). This means that PNC services can save up to 310,000 babies yearly. Utilisation of PNC services is low in Sub-Saharan countries like Ethiopia where 90% of mothers did not receive PNC within the first six weeks (11). Other countries like Mali, Nigeria and Rwanda have also reported low access to PNC services (12-14).

The World Health Organisation recommends (15) strategies to promote easy access to PNC services. Postnatal care services can be received in the health facility or a combination of health facility PNC attendance and home visits by the health worker. PNC services where the health worker visits the mother at home is recommended a better option for mother friendly uptake of PNC services (16), while evidence suggests that women who delivered with skilled birth attendants are more likely to return to the health facility for PNC (17,18).

Despite several strategies to improve maternal health in Nigeria, less than 50% of women attend postnatal care in health facilities (14). The Integrated Maternal, New born and Child Health (IMCH) strategy was established (18) to improve maternal, neonatal and child health, including postpartum health. Postnatal care interventions in Nigeria aim at recognising

danger signs following birth, promote exclusive breastfeeding, (19) prevent mother-to-child transmission of HIV, provide family planning services, routine immunisation, help babies breathe and provide special care for children with low birth weight (20). However, researches conducted in Nigeria show unacceptable low rates of utilisation of PNC services (19,20). This study therefore aims at determining factors associated with the utilisation of PNC services in a rural community in Abia state, Nigeria with a view to proffering recommendations for improvement.

## Methodology

This study was a descriptive cross-sectional study conducted from March 2019 to May 2019 among women living in Amuvi community in Arochukwu Local Government Area (LGA) of Abia state. Arochukwu LGA is located in Abia State, South-east, Nigeria with a population of 169,339 as at the last census of 2006. Amuvi is one of the 19 villages in Arochukwu LGA of Abia state. The residents speak predominantly Igbos. The residents of this community are mostly farmers and petty traders. There is one general hospital in Arochukwu LGA, numerous Primary Health Care Centers and private hospitals. There are also traditional birth attendants and patent medicine dealers.

### Study population

The study participants were women of reproductive age group (15-49 years) who have at least been pregnant once, carried pregnancy to full maturity and delivered the baby at term.

### Sample size determination

Sample size was determined using single population proportion formula assuming proportion of women using postnatal care services to be 74.27%, (21) 95% confidence level and 4% margin of error (absolute level of precision). Thus substituting the formula:  $n = Z^2pq/d^2$

$$N = 1.96^2 * 0.7427(1-0.7427) / 0.04^2$$

= 459. Adjusting for 2% non-response rate, a total sample size of 468 was calculated. One questionnaire was discarded for incompleteness giving a total of 467 women that participated in the study.

### Sampling Technique

Amuvi community in Arochukwu LGA was purposefully selected considering the remote location and lack of previous researches on maternal health in the community. Cluster sampling technique was used

to group the households into clusters. Due to the large sample size, all eligible women who gave consent to participate in the study were selected until the minimum sample size was reached.

**Study instruments/ Tools**

Data was collected using pre-tested semi-structured interviewer-administered questionnaire.

**Data analysis and presentation**

Data collected was analysed using SPSS software version 21.0. Data was presented in frequency tables. Inferential statistics was used to test association between categorical variables. Crude Odd Ratio was used to determine the relationship between independent and dependent variables. Adjusted odds ratio was used to determine the relationship between many independent variables and an outcome variable. Confidence limit of 95% was used and p-value of <0.05 was taken to be statistically significant.

**Ethical clearance**

Ethical clearance was obtained from the research and ethics committee of Hospitals Management Board. Advocacy visits were done to the traditional ruler of the community and permission obtained prior to start of the study. The aim and objectives of the study was explained to the participants and informed consent obtained before commencement of study.

**Results**

Four hundred and sixty-seven (467) women participated in the study giving an overall response rate of 100%.

Table 1 shows the socio-demographic characteristics of respondents. Majority of the participants 109(23.3%) were in the age-group 26-30years. Nearly two-thirds of the respondents 294(63.0%) were married and 63(13.5%) were single mothers. Two hundred and seventeen (46.5%) respondents had secondary education and 27(5.8%) had no formal education. Regarding husband’s educational status, 37 (12.6%) had no formal education, 52 (17.7%) had primary education, 76 (25.9%) had secondary education, 49 (16.7%) post-secondary education while 80(27.2%) attained tertiary education. Majority of the respondents were civil servants and petty traders 118(25.3%) and 113 (24.2%) respectively.

Table 2 shows Obstetrics characteristics of respondents. About 58.4% of the respondents were multipara while 41.6% were primipara women. A total of 429 (91.86%) of the respondents had antenatal care (ANC) in health facilities with skilled birth attendants while 38 (8.14%) attended ANC with unskilled

personnels. Three hundred and six participants gave birth in a health facility while 161 (34.5%) delivered with non-skilled attendants. Table 3 shows places of Postnatal visits by the participants. One hundred and eighty-eight (41.1%) respondents had their postnatal visits in the same facility they delivered their babies, 30 (6.6%) in a different facility from where they delivered, 21 (4.6%) with traditional birth attendants, 89 (19.5%) in Primary Health Centers (19.5%), 69 (15.1%) in general hospitals, 53 (11.6%) in private hospitals and only 7 (1.5%) did not attend any form of PNC visit. Table 4 shows Participants postnatal visits. Four hundred and forty-three (95.1%) attended postnatal visits while 23 (4.7%) did not attend postnatal visits. Table 5 shows reasons given for attending PNC by respondents. Reasons were; routine check-up 260 (56.4%), counselling on family planning 94 (20.4%), appointment with the health worker 54 (11.7%), same day as child’s immunisation 33 (7.2%), child was sick 15 (3.3%). Table 6 shows predictors of postnatal care. Respondents who were married were 2 times (AOR=2.587, 95% CI:-0.878-0.120) more likely to use PNC services. Mothers who were civil servants were 2 times (AOR=2.897, 95% CI: 0.051-0.267) more likely to use PNC services than the housewives.

**Table 1. Socio- demographic Characteristics of respondents**

Variable	Frequency	Percentage (%)
<b>Age( Years)</b>		
< 25	59	12.6
26 – 30	109	23.3
31 – 35	69	14.8
36 – 45	73	15.6
> 45	77	16.5
<b>Total</b>	467	100
<b>Marital Status</b>		
Single	63	13.5
Married	294	63.0
Divorced	52	11.1
Widowed	58	12.4
<b>Total</b>	467	100
<b>Education</b>		
None	27	5.8
Primary	47	10.1
Secondary	217	46.5
Post – secondary	64	13.7
Tertiary	112	24
<b>Total</b>	467	100

Husband's Education	n=294	
None	37	12.6
Primary	52	17.7
Secondary	76	25.9
Post - secondary	49	16.7
Tertiary	80	27.2
<b>Total</b>	294	100
Occupation		
Self- employed	68	14.6
Petty trading	113	24.2
Teaching	77	16.5
Farming	52	11.1
Civil servant	118	25.3
Housewife	39	8.3
<b>Total</b>	467	100

**Table 2. Obstetrics Characteristics of Participants**

Variable	Frequency	Percentage(%)
Parity		
Primi - para	194	41.6
Multi - para	273	58.4
<b>Total</b>	467	100
Antenatal visits		
Institutional	429	91.86
Non - institutional	38	8.14
<b>Total</b>	467	100
Place of delivery		
Institutional	306	65.5
Non - institutional	161	34.5
<b>Total</b>	467	100
Awareness of Post-natal services		
Yes	443	95.1
No	23	4.7
<b>Total</b>	467	100

**Table 3. Place of Visit after 6 weeks of Childbirth**

Variable	Frequency	Percentage (%)
Same place of Delivery	188	41.1
Another health facility	30	6.6
TBA	21	4.6
Primary Health Care Centre	89	19.5
General Hospital	69	15.1
Private Hospital	53	11.6

None	7	1.5
<b>*multiple responses</b>		

**Table 4. Post-natal visits**

Postnatal visit to a health facility	Frequency	Percentage
Yes	443	95.1
No	23	4.7
<b>Total</b>	467	100

**Table 5. Reasons for Post-natal visits**

Variable	Frequency	Percentage (%)
Check - up	260	56.4
Counselling on family planning	94	20.4
Appointment with health worker	54	11.7
Same day as immunization	33	7.2
Child was ill	15	3.3

**\*Multiple responses**

**Table 6. predictors of Post-natal Care Utilization**

Variable	95% CI			P-Value
	AOR	Lower	Upper	
Marital Status	2.587	- 0.878	-0.120	*0.010
Educational status	1.748	- 0.033	0.569	0.081
Husband's education	2.799	1.72	4.36	*0.001
Age	1.039	- 0.04	0.16	0.29
Occupation	2.897	0.051	0.267	*0.004
Parity	1.194	- 0.248	1.016	0.233

**\*Statistically significant**

## Discussion

The objective of this study was to determine factors associated with the utilisation of postnatal care services among mothers in Amuvi community in Abia state, Nigeria. Nigeria's maternal and child health strategy recommends two ways mothers can access PNC services which are visit to the health facility and/or home visits by a health worker (22). Research reveals comparable outcomes between the two when there are no complications during pregnancy and childbirth (23). With complications, postnatal care in health facilities is recommended (24). This study showed 95.1% of the women attended PNC in a health facility. This differs from a population based study

carried out in Nigeria where 37% of the women received PNC services in a health facility (25) and the National demographic and health survey (NDHS) report of 2013 where 42% received PNC services (14). The differences in the reports might be due to the years the surveys were conducted. The population based study was in 2008 while the NDHS was in 2013. The population-based study showed a lower PNC utilisation than the national survey of 2013. The high rate of uptake of PNC services in this study is a marked improvement from the two reports. Other reasons such as increase in public enlightenment and concerted efforts of government to promote maternal and child health services might further explain the differences. Nigeria invested in maternal health by creating a budget line for procurement of family planning commodities amounting to about \$3 million per annum from 2012 to 2015 (25) and providing incentives of cash transfers of \$31.25 to mothers who met certain preconditions including at least 4 antenatal care visits and immediate postpartum care visits.<sup>25</sup> This study showed that 91.86% of the respondents attended ANC in a health care facility. This is similar to a study carried out in four Mesoamerican countries (26) where a statistically significant association was reported between ANC and PNC in the pathway of continuum of care. According to the WHO (27), a woman is expected to make at least four antenatal visits to receive essential evidence-based services. A study carried out in South-Western Nigeria (28) showed low attendance to ANC as well as PNC services among respondents in rural Orire local government, Oyo state Nigeria. According to the study, only 7.8% of respondents received PNC while a Cambodian study revealed that uptake of PNC services was associated with birth by skilled birth attendants. (29) The study demonstrated that increasing the use of skilled birth attendants and especially delivery at health facilities could lead to improved use of PNC services. This study revealed a statistically significant association between birth place in a health facility and uptake of postnatal care services in those facilities. There was also a statistically significant association between husband's education and utilisation of PNC services. Been married and having an occupation increased the use of PNC services in Amuvi community. This result is consistent with previous studies (26,30). The findings from this study can be applied in planning of health services. Health programmes that focus on maternal health

should aim at empowering and educating women. When women are educated and employed, they can take decisions regarding their health and those of their children. The quality of ANC determines acceptance of maternal and child health services by women of child bearing age (31). Antenatal care affords pregnant women the opportunity to get relevant information, education and advice on pregnancy, childbirth and post-natal care (26). Educating and counselling mothers on family planning is an essential component of maternal health. In this study, 90 (20.4%) respondents gave family planning counselling as reason for attending postnatal care in health facilities during the postnatal period. This is similar to a Ghanaian study (32). Future studies should aim at assessing the relationship between counselling on family planning during antenatal and actual uptake of contraceptive methods. Another finding from this study was that some respondents [33 (7.2%)] attended postnatal care because it was same day for their child's immunisation. This is an interesting finding and important for policy makers. Postnatal and child care services including immunisation could be done on the same day for convenience and cost-saving for the family.

This study adds to existing literature on utilisation of postnatal care services in Nigeria. However, one of its strengths is that it explored some positive reasons that encouraged the use of postnatal care services unlike previous studies (6,12,19). Being a community-based study, it provided opportunity to discover other birth places in Amuvi community.

### Conclusion

Utilisation of postpartum care services was high among women in Amuvi community of Abia state. Positive reasons for use of PNC services were for routine checks, family planning counselling, appointments by health workers, same day as child's immunisation. These were striking as could form a basis for planning of maternal services. PNC services utilisation were associated with marital status, mother's occupation and husband's educational status.

### Study Limitations

Incentives provided by the government to mothers might have influenced the use of PNC services. Further studies should be carried out to determine sustainability of this programme and its yield in

maternal and child health services. Also, being a cross-sectional study, it is difficult to determine a cause-and-effect relationship.

### Recommendations

Government should promote women education and empowerment. When women are empowered and educated, they can take useful decisions concerning their health and those of their children. Sustainable programmes that promote maternal and child health services should be encouraged in Nigeria. Reasons provided by respondents for attending postnatal care in health facilities should be explored and developed further as possible ways to improve maternal and child care services in Nigeria.

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### Competing interests

None

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