Tropical Journal of Obstetrics & Gynaecology
ISSN-Print: 0189-5117
Online: 2543-148X
Official Publication of Society of Obstetrics & Gynaecology of Nigeria

■ Original Research Article

Impact of Naira Scarcity Resulting from Cashless Policy on Health-Seeking Behaviour and Ante-Natal Care Utilisation Among Pregnant Women in A North Central State, Nigeria.

Matthew Olusegun Fijabiyi[1], Adegoriola Olubisi Ojurongbe[2,&], William Oladiran Taiwo[3], Adeola Folasade Afolabi[2], Uche Augustine Akunaeziri[2], Toyin Oluwumi Fijabiyi[4], Oluwasegun Ajala Akanni[2].

[1]Department of Obstetrics and Gynaecology, College of Clinical Sciences, Ladoke Akintola University of Technology, Ogbomoso, Oyo State, Nigeria; [2]Department of Obstetrics and Gynaecology, Federal Medical Centre Keffi, Nasarawa State, Nigeria; [3]The Limi Hospitals, Federal Capital Territotry, Abuja, Nigeria; [4]Department of Family Medicine, Federal Medical Centre Keffi, Nasarawa State, Nigeria

ABSTRACT

Introduction: Cashless policy is a macroeconomic measure aimed at repositioning the nation for economic growth, through reduction of currency notes in circulation, lowering of the inflation, money laundering and other financial related crimes. Unfortunately, the implementation of this policy brought about untoward hardship to the citizens. Among the worst hit by the naira scarcity are the pregnant women, whom by virtue of their physiological state could not endure the long queues at automated teller machine or the banking hall to access cash. Thus, the artificial naira scarcity created could negatively affect the uptake of antenatal care services among pregnant women .**Objectives:** This study sought to determine the effects of naira scarcity on the difficulties encountered in seeking health care among pregnant women attending antenatal clinic, determine the effects of socioeconomic indices on the difficulties in seeking health amidst the naira scarcity and to access the perception of pregnant women on the effect of naira scarcity on their health and pregnancy outcome. **Materials and Methods:** This was a cross-sectional study conducted among pregnant women attending antenatal care in Federal Medical Centre Keffi, Nasarawa State, Nigeria. The study was carried out during the period of naira scarcity between 10th January 2023 and 9th march 2023. During the period, a total of 340 pregnant women were recruited using a convenient sampling method. Consecutive, consenting patients were interviewed through researcher administered questionnaire and information of pregnant women including the sociodemographic, obstetrics, modes of transaction before the naira scarcity and during the scarcity, effect of naira scarcity on their willingness to attend ANC, difficulty in transportation and difficulty in accessing care. Data were got and analyzed using SPSS 25. Categorical variables were presented as frequencies and percentages. **Results:** A total of 340 pregnant women were recruited for this study. Women aged between 30-39 years (60.3%) ranked highest in the study with 246(72.4%) having tertiary level of education. A larger number of the women in the study were unemployed 135(39.7%) while majority of the husbands of the women in the study were civil servants accounting for 195(57.4%). Most of the families in the study earned an average monthly income of >100,000 naira per month. The point of sale (POS) was the most preferred mode of transaction accounting for 34.7% and 44.4% before and during the naira scarcity. The association between level of education and the mode of transaction during the period of the naira scarcity was significant with mobile bank app with a ($P < 0.0001$). About 189(55.5%) women missed between 1-6 antenatal visits due to the naira scarcity. However, association between the average monthly family income of respondents and the number of antenatal care missed was not statistically significant with an overall P= 0.479. Most of the women in their response, believed that the prolonged effect of the naira scarcity on pregnancy outcome and pregnant women's well-being could lead to increased maternal mortality and morbidity. **Conclusion:** The artificial naira scarcity has potential to negatively impact on the health seeking behavior of pregnant women. The effects include difficulty in accessing care, missed antenatal appointments and denial of antenatal care services due to lack of cash.

Keywords: Naira scarcity, Cashless policy, Health, Antenatal Care, Pregnant, North Central

[&]Correspondence:

Adegoriola Olubisi Ojurongbe

Department of Obstetrics and Gynaecology, Federal Medical Centre Keffi, Nasarawa State, Nigeria.
dradegoriola@gmail.com
Phone no: 08036973251.

INTRODUCTION

Cashless policy is a macroeconomic measure aimed at reducing the amount of currency notes in an economy thus making way for modern day electronic based payments such as Automated Teller Machines (ATM) transfer, online banking and mobile banking. This strategic measure is a statutory responsibility of the Central Bank of nations across the World to reduce reliance on currency for transactions.[2,3] Naira redesigning has been done couples of times in the past years, other countries have also done same in the past thus a common development among both developed and developing economies. The rationale for change of design of Naira appears benefiting for Nigerians. Also, it was aimed at intensifying monetary accountability and transparency.

The implementation of Naira redesign and cashless policy caused bank notes denominations such as 1000, 500, 200 to be recouped from the circulation. The resulting cash crisis posed weighty untoward consequences on the wellbeing of many Nigerians.[7-8] Among the worst hit by the naira scarcity are the women, especially the pregnant ones whom by the virtue of their physiological state could not go through the long queues at ATM or at the banking hall in order to access cash. Also, illiteracy and poverty among the rural pregnant women also make it impossible for this vulnerable group to do cashless transactions as many are non-bank account holders and also due to technical difficulties encountered in operating electronic gadgets. Consequently, many developed apathies seeking healthcare since they largely depend on their husbands for healthcare decisions. Moreover, secondary delay in accessing health care was occurring as naira scarcity-imposed hardship on both motorist and those relying on the commercial transportation for movement across locations in quest for health services. Majority of pregnant women and other patients attending government and private hospitals in Nigeria pay out of pocket for the hospital expenses. And thus, with the cash crisis, many of the patients attending the hospital especially pregnant women would likely be faced with different levels of hardship with payment for services, as most hospitals still predominantly engage in cash transactions.

Antenatal care (ANC) services remain sacrosanct for maternal health.[9-10] Nigeria, the most populous nation in Sub- Sahara Africa still has a low proportion of pregnant women who attends minimum of four antenatal clinic. [11]

The country's maternal mortality ratio remains alarming, average of 556 maternal deaths per 100,000 live births. This is a true reflection of low antenatal coverage and utilisation in Nigeria. [12]

Factors influencing ANC uptake and optimal utilisation are multifactorial. They consist of sociocultural factors such as ethnicity, educational status, employment status, religion, level of income, proximity to health center and availability of means of transportation among others. All these factors have been said to contribute to different level of delays in accessing care and thus indirectly impact negatively on maternal mortaliity.[11] Poor uptake of antenatal care services among pregnant women in Sub-Sahara Africa has been ascribed as a major contributor to maternal mortality, risk of maternal complications during antepartum period such as anemia in pregnancy, eclampsia, among other problems which are direct causes of maternal mortality. Fetal complications such as preterm birth, low birth weight and still birth are also common among women with poor ANC attendance. [13]

Problems brought by cash crunch and other associated aftermaths have high tendencies in affecting ANC utilization and thus poor fetomaternal outcomes.

Aims and Objectives

The aim of this study was to evaluate the effects of naira scarcity and cashless policy on the health seeking behaviour among pregnant women attending antenatal clinic in Federal Medical Centre Keffi.

The objectives of the study are as follows:

- To determine the effects of naira scarcity on the difficulties encountered in seeking health care among pregnant women attending ANC clinic.
- To determine the effects of socioeconomic indices on the difficulties in seeking health care amidst the naira scarcity.
- To access the perception of pregnant women on the effect of naira scarcity on their health and pregnancy outcome.

METHODOLOGY

This was a cross sectional study conducted among pregnant women attending antenatal care in Federal Medical Centre Keffi, Nasarawa State, Nigeria. The study was carried out during the period of naira scarcity between 10th January 2023 and 9th march 2023. During the 2 months period, a total of 340 pregnant women were selected using a convenient sampling method. Consecutive, consenting patients were interviewed by the researchers during their antenatal clinic visits. Information including their sociodemographic, obstetrics, modes of transaction before the naira scarcity and during the scarcity, effect of naira scarcity on their willingness to attend ANC, difficulty in transportation, and difficulty in accessing care among many other data were gotten and filled into questionnaire by the

researchers. The data was analysed using SPSS 25. Categorical variables were presented as frequencies and percentages.

Sample Size Determination

According to the recent National demographic and Health Survey report 2018, the rate of antenatal attendance in Nasarawa State is 67.3%. [12]
The sample size was calculated using the formula below.

$n=pqz^2/d^2$
n=minimum sample size
Z= 1.96 which is the standard normal deviation at 95% confidence level.
P= prevalence of antenatal attendance in Nasarawa State
q= 1- p
d= absolute precision level of 5%
Therefore, $n= 0.67 \times (1-0.67) \times 1.96^2/(0.05)^2$
=339.6

Approximately 340 participants.

RESULTS

A total of 340 pregnant women were recruited for this study. The table showed socio-demographic

Table 1: Socio-demographic Data

Variable		Frequency (No.)	Percentage (%)
Age (Years)	<20	1	0.3
	20-29	124	36.5
	30-39	205	60.3
	≥40	10	2.9
Religion	Christianity	235	69.1
	Islam	105	30.9
Ethnicity	Hausa/Fulani	88	25.9
	Igbo	45	13.2
	Yoruba	36	10.6
	Others	171	50.3
Highest level of education	No formal	2	0.6
	Primary	19	5.6
	Secondary	73	21.5
	Tertiary	246	72.4
Occupation	Civil servant	76	22.4
	Trader	88	25.9
	Farmer	13	3.8
	Artisan	28	8.2
	Unemployed	135	39.7
Occupation of husband	Civil servant	195	57.4
	Trader	74	21.8
	Farmer	14	4.1
	Artisan	48	14.1
	Unemployed	7	2.1
	Clergy	2	0.6

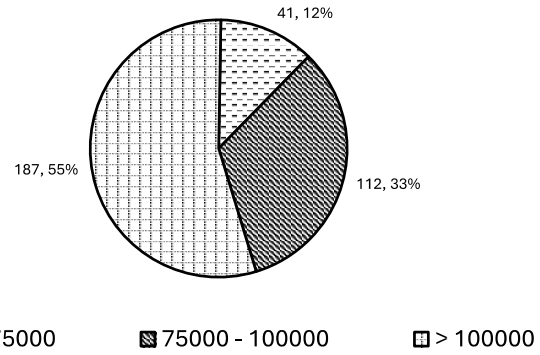

Figure 1: Average Family Monthly Income of Respondents

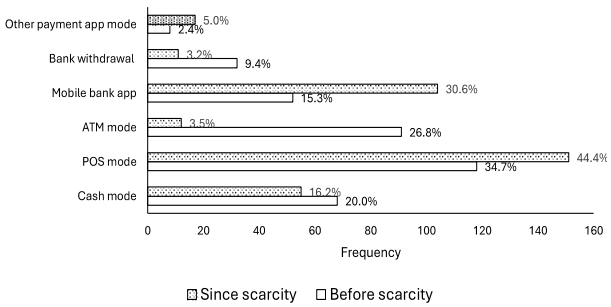

Figure 2: Mode of Transaction Before and During Scarcity.

Table 2: Association Between Level of Education and Mode of Transaction During Scarcity

Mode of transaction since scarcity	Response	Highest level of education				
		No formal	Primary	Secondary	Tertiary	Total
Cash	No	2(0.7)	15(5.3)	57(20)	211(74)	285(100)
	Yes	0(0)	4(7.3)	16(29.1)	35(63.6)	55(100)
POS	No	1(0.5)	6(3.2)	39(20.6)	143(75.7)	189(100)
	Yes	1(0.7)	13(8.6)	34(22.5)	103(68.2)	151(100)
ATM	No	2(0.6)	18(5.5)	69(21)	239(72.9)	328(100)
	Yes	0(0)	1(8.3)	4(33.3)	7(58.3)	12(100)
Mobile bank app	No	0(0)	19(0.081)	55(0.233)	162(0.686)	236(1)
	Yes	2(0.019)	0(0)	18(0.173)	84(0.808)	104(1)
Bank withdrawal	No	2(0.006)	18(0.055)	70(0.213)	239(0.726)	329(1)
	Yes	0(0)	1(0.091)	3(0.273)	7(0.636)	11(1)
Other payment app	No	2(0.6)	19(5.9)	71(22)	230(71.4)	322(100)
	Yes	0(0)	0(0)	2(11.8)	15(88.2)	17(100)

$p > 0.05$ indicates no significant association

characteristics of the study population. Women aged between 30-39 years (60.3%) ranked highest in the study. Majority of the women were Christians accounting for 235 (69.1%). Most of the women belong to other minority ethnic groups, accounting for 171

(50.3%) apart from the major ethnic groups of Yoruba, Igbo and Hausa.

Women with tertiary level of education accounted for 246 (72.4%), while women with no formal education were 2 (0.6%). A larger number of the women in the study were unemployed 135(39.7%), while 13(3.8%) were farmers. On the contrary majority of the husbands of the women in the study were civil servants accounting for 195 (57.4%), as seen in Table 1. Most of the families in the study earned an average monthly income of >100,000 naira per month as shown in Fig 1.

Table 3: Association Between Average monthly income and Mode of Number of ANC Missed

Variable		Average monthly income [Frequency (Percentage)] Low income	Middle Income	High income	Total	Fisher's exact test
How many Anc visits did you miss in the last 3 months	0	16(10.6)	46(30.5)	89(58.9)	151(100)	9.377; 0.479
	1	14(15.9)	27(30.7)	47(53.4)	88(100)	
	2	7(10)	31(44.3)	32(45.7)	70(100)	
	3	4(15.4)	6(23.1)	16(61.5)	26(100)	
	4	0(0)	2(50)	2(50)	4(100)	
	6	0(0)	0(0)	1(100)	1(100)	

The modes of transaction before and during the naira scarcity are as shown in Fig 2. Before the naira scarcity the most preferred mode of transaction was Point of sale (POS) accounting for 34.7%, next was Automated teller machine (ATM) 26.8%, followed by cash 20%, while other payment app mode ranked least 2.4%. During the naira scarcity it was observed that Point of sale (POS) still ranked highest as the preferred modes of transaction accounting for 44.4%, this was followed by transactions through mobile bank app 30.6% and cash ranked third with 16.2%.

The association between level of education and the mode of transaction during the period of the naira scarcity was significant with mobile bank app use (P = 0.0000), while other modes of transactions like Cash, POS, ATM and bank withdrawal were not statistically significant as shown in table 2.

The table 3 showed that about 189(55.5%) women missed between 1-6 antenatal visits due to the naira scarcity but the association between the average monthly family income of respondents and the number of ante natal care missed was not statistically significant with an overall P= 0.479.

The association between the modes of transactions and difficulty in accessing health care during naira scarcity were not statistically significant with P-values P>0.05, as shown in Table 4.

The perception of women in the study on the prolonged effect of the naira scarcity on pregnancy outcome and pregnant women's well-being were 266(78.2%) and 310 (91.2%) respectively as shown in table 5. They are believed to be associated with adverse pregnancy outcome and increased maternal mortality and morbidity.

Table 4: Association Between Mode of Transaction During Scarcity and Difficulty in Accessing Health Care

Mode of transaction since scarcity	Response	Difficulty in accessing health [Frequency (Percentage) No	Yes	Total	Fisher's exact test; p-value
Cash	No	130(45.6)	155(54.4)	285(100)	0.000; 0.551
	Yes	25(45.5)	30(54.5)	55(100)	
POS	No	82(43.4)	107(56.6)	189(100)	0.000; 0.211
	Yes	73(48.3)	78(51.7)	151(100)	
ATM	No	146(44.5)	182(55.5)	328(100)	0.000; 0.036
	Yes	9(75)	3(25)	12(100)	
Mobile bank app	No	110(46.6)	126(53.4)	236(100)	0.000; 0.326
	Yes	45(43.3)	59(56.7)	104(100)	
Bank withdrawal	No	149(45.3)	180(54.7)	329(100)	0.000; 0.380
	Yes	6(54.5)	5(45.5)	11(100)	
Other payment app	No	150(46.6)	172(53.4)	322(100)	2.629; 0.215
	Yes	5(29.4)	12(70.6)	17(100)	

Table 5: Perception of the effect of Naira Scarcity on health of pregnant women

Variable	Response	Frequency (No)	Percentage (%)
Tendency for poor pregnancy outcome due to naira scarcity	No	74	21.8
	Yes	266	78.2
Protracted naira scarcity will adversely affect health of pregnant women	No	30	8.8
	Yes	310	91.2

DISCUSSION

This study assessed the effect of naira scarcity and cashless policy of the central bank of Nigeria on the health seeking behaviour of pregnant women attending antenatal care in Federal Medical Centre, Keffi. The sociodemographic indices from the study shows that majority of the respondents are between ages of 30-39 yrs. This finding is similar to the one conducted in delta state by Yubing Sui et al where predominant age of women attending ANC clinic was 35-39 yrs.[14] Over 70% of the respondents have highest level of education but surprisingly about 40% of respondents were unemployed during the study time frame. It can be inferred from this finding the marginalizations of women in the labour space and the ripple effect in the economy and the overall health status of women. This is similar to findings in a study by Nghargbu where nearly

40% of the respondents were unemployed.[15] The over-reliance on men for economic support, since most women are unemployed significantly reduces the average family income as evident in this study. Thus, the financial constraints brought about as a result of naira scarcity and cashless policy might greatly affect families with just one source of income.

The mode of payments for hospital services was evaluated, and it was found that before the cashless policy and the attendant naira scarcity became a national issue, the use of point of sale (POS) in payment was popular among the pregnant women attending antenatal care in Federal Medical Centre, Keffi. It is not a surprise that this mode of payment still ranked highest, gaining more ground during the harsh realities of naira scarcity contributing a staggering 44.4% as the preferred means of transaction. This is made possible by a well-coordinated electronic payment system adopted by the hospital management.

There is a statistically significant association between the mode of transaction during the period of naira scarcity and educational status of the respondents. This is not far-fetched as about three quarter of the respondents have tertiary level of education, therefore, literate enough to make payment using mobile banking.
Assessing the difficulties encountered in seeking antenatal care and the utilization of antenatal care services during the period of naira scarcity. It was observed that vast majority of the respondents missed antenatal care visits. Over half of pregnant women missed between 1 to 6 antenatal visits between the preceding months of the naira scarcity and time of interview. About 24% of respondents that failed to make their clinic appointments due to scarcity of naira notes missed 1 clinic visit, 21% missed two visits and 0.7% missed four clinic visits. The reasons for failure to make clinic visits were difficulty in paying for transportation (67.5%), lack of cash to pay for hospital consultation and other services (55%). The overall effect of naira scarcity on these vulnerable women could negatively impact their source of income as businesses suffer from the financial constraints thus surge in the poverty level. A study on socioeconomic inequalities in maternal health service utilisation by Nwosu showed that antenatal utilisation is largely influenced by poverty.[16-17]

Assessment of mode of transaction during the study time and the difficulty encountered in accessing antenatal care services shows that there is a significant association between automated teller machine use and difficulty in accessing care with the P value of 0.036. This finding reiterated the enormous burden faced by the respondents that predominantly make payments for services using automated teller machine either for direct payment or cash withdrawal. At the time of scarcity, most automated teller machine outlets including those within the hospital had long queues and long hours of waiting which most pregnant women can't endure due to fatigue.

The perception of respondents on the effect of naira scarcity on wellbeing of pregnant women shows that 78.2% and 91.2% of respondents believed that there is a serious threat to the pregnancy outcome and health of pregnant women respectively should the naira scarcity continues for a long time.

This sums up the socioeconomic impact of government policy on the health status of the people especially the vulnerable groups such as pregnant women in sub- urban and rural areas where poverty and illiteracy predominate.

CONCLUSION

The impact of naira scarcity and cashless policy on health seeking behaviour of pregnant women cannot be overemphasised. Array of problems such as difficulty in accessing care, missed antenatal appointments, denial of antenatal care services due to lack of cash and failure of electronic payment platforms. All the aforementioned caused antenatal care services utilisation to reduce significantly. The resulting effect of this would potentially negatively impact on the maternal health and pregnancy outcome.

Recommendations

Government monetary policy especially those with capacity to affect the well-being of pregnant women should be rightly timed. Also, sensitisation of the citizens especially rural dwellers on the role of technology driven economy and the importance of reducing the over-reliance on cash transactions as many Nigerians still find it difficult to embrace the opportunities that lie in modern day electronic transactions.

Healthcare facilities in Nigeria should embrace the numerous benefits of hospital based central electronic payment platforms for enhancement of healthcare delivery.

Limitations

A multicenter study would have given more information of the impact of this dual monetary policy on the antenatal care services utilisation among pregnant women. Constraints in access to information as this research topic are novel in nature.

Acknowledgement: The authors acknowledged all the patients and doctors whom despite the harsh realities of

naira scarcity attended the antenatal clinics and contributed immensely in making this work a success.

Conflict of Interest: The authors declared no conflict of interest.

Ethical approval: Health research ethics committee of Federal Medical Centre Keffi approved the conduct of this study with the reference number of the ethical clearance FMC/KF/REC/0235/23**.**

REFERENCES

1. Amusan L, Agunyai SC. The Covid -19 pandemic and the crisis of lockdowns in Nigeria: The household food security perspective. Africa's Public Service Delivery and Performance Review 2021;9(1):484.
2. Ejiobih C., Oni AA., Ayo CK., Bishung J, Ajibade, A., Koyejo O &Olushola A. Empirical Review of the Challenges of the Cashless Policy Implementation in Nigeria: A Cross-Sectional Research. Journal of Physics 2021: Conference Series, (1), 1299 012056.
3. Mieseigha EG, Ogbodo UK. An Empirical Analysis of the Benefits of Cashless Economy on Nigeria's Economic Development. Research Journal of Finance and Accounting 2013; 4(17):11-16.
4. Central Bank of Nigeria (2023, March). History of Nigeria Currency. Retrieved from https://www.cbn.gov.ng/currency/historycur.asp
5. Central Bank of Nigeria. (2022, October). Issuance of New Naira Banknotes. Press Remarks by the Governor of Central Bank of Nigeria. Retrieved from Volume 4, Number 14, 2023, ISSN: Print 2735-9344, Online 2735-9352.
6. Peter DO. (2023, March 3) Currency Redesign: what implication does it have for socio- economic development in Nigeria? Association of African Development Financial Institutions (AADFI Blog Post). Retrieved from https://adfi-ci.org/currency-redesign- what-implication-does-it-have-for-socio-economic-development-in-nigeria/#:~:text=Currency%20redesigns%20increase%20a%20currency's,to%20monitor%20the%20money%20supply .
7. Ameh (2023, March 2). Timeline: Naira redesign policy from inception to Supreme Court Judgement. Premium Times. Retrieved from https://www.premiumtimesng.com/news/top-news/585737-timeline-naira-redesign-policy-from-inception-to-supreme-court-judgement.html
8. Ige I, (2023, March, 02). CBN's Naira redesign, swap policy: Implementation, law, politics. Vanguard. Retrieved from https://www.vanguardngr.com/2023/03/cbns-naira-redesign-swap-policy-implemtation-law-politics/#:~:text=According%20to%20the%20new%20directive,N2%20million%20in %20a%20month .
9. World Health Organization. WHO recommendations on antenatal care for a positive pregnancy experience. Geneva: World Health Organization; 2016.
10. World Health Organization. World health statistics 2015: indicator compendium. Geneva: World Health Organization; 2015.
11. Adewuyi EO, Auta A, Khanal V, Bamidele OD, Akuoko CP, Adefemi K, Tapshak SJ, Zhao Y. Prevalence and factors associated with underutilization of antenatal care services in Nigeria: a comparative study of rural and urban residences based on the 2013 Nigeria demographic and health survey. PLoS One. 2018; 13:e0197324.
12. National Population Commission (NPC) [Nigeria] and ICF. 2019.2018 Nigeria DHS Key Findings. Abuja, Nigeria and Rockville, Maryland, USA: NPC and ICF.
13. Olugbenga A. Mokuola, Suleiman BM, Adesiyum OO, Adeniyi A. Prevalence and determinants of pre-term deliveries in the University of Ilorin Teaching Hospital, Ilorin, Nigeria. PMC, US National Library of Medicine, National Institutes of Health. 2010 Jun 18:2(1):3.
14. Sui Y, Ahuru RR, Huang K, Anser MK and Osabohien R. Household Socioeconomic Status and Antental Care Utilization Among Women in the reproductive age. Front. Public Health. 2021; 9:724337.
15. Nghargbu R and Olaniyan R. Determinants of Antenatal Care utilization in Nigeria. Working paper Series. 2019; N 321. African Development Bank, Abidjan, Cote d Ivoire.
16. World Bank: Federal Republic of Nigeria poverty work program: poverty reduction in Nigeria in the last decade. 2016
17. Nwosu CO, Ataguba JE. Socioeconomic inequalities in maternal health service utilisation: a case of antenatal care in Nigeria using a decomposition approach. BMC Public Health 2019; 19:1493.