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CLINICAL ARTICLE

The preference and practice of Nigerian obstetricians regarding focused versus standard models of prenatal care

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ABSTRACT

Objective: To determine preferences, practices, and acceptance of focused versus standard prenatal-care models among Nigerian obstetricians. *Methods:* A cross-sectional survey was performed among clinicians who attended a conference held in Lagos, Nigeria, between November 27 and 29, 2013. The questionnaire assessed sociodemographic characteristics and opinions on prenatal care. *Results:* A total of 201 delegates returned complete questionnaires. All respondents were aware of both models of prenatal care. Although 70 (34.8%) respondents stated a preference for focused care, only 6 (3.0%) used this model in clinical practice. The main reason for their preference was the evidence base (23.4%). Overall, 185 (92.0%) respondents stated institutional protocol determined preference for and practice of standard care, 108 (53.7%) believed patients preferred standard care, and 89 (44.3%) felt standard care had health benefits. Preference for one model over the other was significantly associated with type and level of the healthcare practice ($P = 0.002$ and $P < 0.001$, respectively). Modification of the focused model to meet local, national, and cultural needs was recommended by 171 (85.1%) respondents. *Conclusion:* Most obstetricians are skeptical about focused prenatal care and have not embraced this model owing to personal, institutional, and sociocultural factors.

1. Introduction

Prenatal care aims to ensure that women and their offspring survive pregnancy and delivery. The consequence of failing to provide good prenatal care is reflected in the disturbing maternal and perinatal indices reported by many low-income countries [1,2]. Worldwide, the 10 countries with the highest maternal mortality ratios are in Africa, and 14% of maternal deaths globally occur in Nigeria, where the maternal mortality ratio was 545 deaths per 100 000 live births in 2008 [3]. Between 2009 and 2013, 69 infants and 128 children younger than 5 years died per 1000 live births [3].

The fourth Millennium Development Goal (MDG 4) aims to reduce child mortality, with the target of a reduction in the under-5 mortality rate of two-thirds by 2015 [4]. MDG 5 aims to improve maternal health, with a target of a reduction in the maternal mortality ratio of three-quarters [4]. Safe pregnancy is highly dependent on the type of specialized services that women receive—one of the indicators of MDG 5—so obstetricians are expected to offer evidence-based prenatal care and interventions.

Focused prenatal care is a concept promoted by WHO to provide high-quality services underpinned by a strong evidence base [1]. WHO has placed great emphasis on the use of approaches with known efficacy in the improvement of maternal and neonatal health—e.g. methods that alert pregnant women to potential health issues, education about the appropriate response, and avoidance of interventions that lack proven benefits [1]. These approaches are implemented during four prenatal care visits for women deemed not to be at risk during pregnancy, whereas pregnant women considered at high risk of complications receive specialized care that is tailored to their individual needs [1,2].

Although prenatal care has been updated in high-income countries, the model of care currently practiced in most low-income countries has not [1,2]. This model focuses on risk factors for pregnancy complications. Women are invited to attend prenatal care services every 4 weeks until 28 weeks of pregnancy, every 2 weeks between 28 and 36 weeks of pregnancy, and then weekly thereafter until delivery. However, this model is often poorly implemented and does not necessarily help to enhance the maternal and newborn health [1,2]. In addition, the standard care model assumes that frequent routine prenatal visits should be the norm [1,2,5–7]. Many low-income countries, such as Nigeria, adopted this approach without taking into account the available resources and the unique needs of the obstetric population [2].

The benefits and efficacy of the standard and focused models of prenatal care have not undergone widespread or rigorous evaluation [1].

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However, a multicenter randomized controlled trial to compare these two approaches was implemented by the United Nations Development Programme, the United Nations Population Fund, WHO, and the World Bank Special Program of Research, Development and Research Training in Human Reproduction [1]. The findings suggested that scarce healthcare resources might be diverted to unnecessary care for women with low-risk pregnancies when prenatal care is planned using the standard approach.

Therefore, the standard approach to prenatal care is unlikely to be an efficient or effective strategy to reduce maternal mortality, especially among low- and middle-income countries. Some evidence suggests that risk factors alone cannot predict occurrence of complications in pregnancy: women considered as low risk can experience complications, whereas individuals identified as high risk often deliver without complications [2,6,8]. Moreover, the standard model is associated with long waiting times, high patient load, strain on the available manpower, and reduced quality of care [1].

Most hospitals and care providers in Nigeria practice the standard approach as the standard of prenatal care. However, prenatal coverage is inadequate (15%), fertility rates are high, and obstetric health indices are poor [8]. Notably, the views of staff who work in prenatal clinics have not been systematically sought, even though these individuals have important roles in attempts to change institutional protocols and implement new interventions.

The present study aimed to determine the preferences, practices, and level of acceptance of focused prenatal care among Nigerian obstetricians. Challenges impeding its adoption and implementation as the standard of care of all pregnant women in Nigeria were also assessed.

2. Materials and methods

A questionnaire-based, cross-sectional study was conducted of obstetricians and gynecologists who attended the 47th Annual General Meeting and Scientific Conference of the Society of Gynecology and Obstetrics of Nigeria (SOGON), which was held in Lagos, Nigeria, from November 27 to 29, 2013. Established in 1965, SOGON is an umbrella organization that oversees obstetric and gynecologic practice in Nigeria. The society currently has a registered membership of 874 obstetricians and gynecologists, some of whom are currently practicing outside Nigeria. A total of 242 SOGON members attended the conference. All delegates were approached to participate in the present study. Ethical clearance was obtained from the research and ethics committees of the local organizing committee of the conference and the Federal Teaching Hospital, Abakaliki, Nigeria.

The self-administered questionnaire was tested among 50 clinicians working in the Department of Obstetrics and Gynecology at the Federal Teaching Hospital, Abakaliki. The questionnaire was consequently modified for clarity before distribution to the conference delegates. The survey comprised 16 key themes, each with multiple closed and open-ended questions. Data collected included: sociodemographic characteristics; location, type, and duration of obstetric practice; preference for prenatal-care model (standard or focused); practice of prenatal-care model; reasons for preference and practice of prenatal-care model; and views on the focused care model and its limitations in Nigeria.

Data were analyzed using Epi Info version 7 (Centers for Disease Control and Prevention, Atlanta, GA, USA). A multivariate logistic regression analysis was performed to evaluate the association between sociodemographic characteristics and prenatal model preference. $P < 0.05$ was considered statistically significant.

3. Results

Of the 217 conference delegates who consented to take part in the present study, 201 (92.6%) returned their questionnaires having filled them out completely and correctly. The remaining 16 delegates either did not return the questionnaire or returned an incomplete form. Therefore, among the 242 attendees, the overall response rate was 83.1%.

Table 1
Sociodemographic characteristics (n = 201).

Characteristic	No. (%)
Age, y	
30–40	48 (23.9)
41–50	122 (60.7)
51–60	31 (15.4)
Duration of practice, y	
≤5	27 (13.4)
6–10	88 (43.8)
11–15	57 (28.4)
16–20	24 (11.9)
>20	5 (2.5)
Location of practice	
Rural community	9 (4.5)
Urban community	192 (95.5)
Type of practice	
Public health institution	48 (23.9)
Private health institution	20 (10.0)
Both public and private	133 (66.2)
Level of practice	
Tertiary	165 (82.1)
Secondary	36 (17.9)

The 201 respondents included in the analysis were from the six geopolitical regions of Nigeria: 78 (38.8%) were from South-Western states, 40 (19.9%) from South-Eastern states, 28 (13.9%) from South-Southern states, 21 (10.4%) from North-Central states, 14 (7.0%) from North-Eastern states, and 20 (10.0%) from North-Western states. Sociodemographic characteristics are presented in Table 1. The mean age was 45.8 ± 12.6 years and the mean duration of practice was 15.4 ± 3.3 years. Overall, 194 (96.5%) respondents were male, and 133 (66.2%) practiced in both private and government-owned tertiary hospitals in urban locations.

All respondents were aware of both models of prenatal care (Table 2). Approximately one-third reported that they preferred focused care, but few actually practiced this model (Table 2). Institutional protocol was cited as the main reason underpinning the practice of standard prenatal care (Table 2). When asked the reasons for their preference and practice, respondents stated a preference for focused care owing to its evidence-based nature, the quality of care offered, the fact that it is recommended by WHO, and the ability to detect women at elevated risk early in the pregnancy (Table 2).

Table 2
Attitudes to models of focused versus standard prenatal care (n = 201).

Response	No. (%)
Awareness of prenatal-care model	
Standard only	0
Focused only	0
Both standard and focused	201 (100.0)
Preferred prenatal-care model	
Standard	131 (65.2)
Focused	70 (34.8)
Prenatal-care model practiced	
Standard	195 (97.0)
Focused	6 (3.0)
Reasons for preference and practice (standard prenatal-care model) [a]	
Institutional protocol	185 (92.0)
Patients' preference and satisfaction	35 (17.4)
More revenue from more visits	15 (7.5)
Cheap and simple for care provider	56 (27.9)
Drawbacks to focused model	28 (13.9)
Not proficient in use of focused model	36 (17.9)
Reasons for preference and practice (focused prenatal-care model) [a]	
Evidence-based	47 (23.4)
WHO recommended	13 (6.5)
Provides quality care	23 (11.4)
Reduces workload and waiting time	6 (3.0)
Helpful in the early identification of high-risk pregnancy	12 (6.0)

[a] Multiple responses allowed.