

Perception and Predictors of Spousal Involvement in Antenatal Care by Women Attending Immunization Clinic at Babcock University Teaching Hospital, Ogun State, Nigeria

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ABSTRACT

Background: The level of spousal involvement in antenatal care (ANC) is not what it should be. This is a concern because a number of preventable maternal and neonatal mortality or morbidity can be attributed to a lack of interest or participation in ANC by their spouses, which usually result in a delay in seeking healthcare and/or delay in reaching a healthcare facility. **Aim:** To assess the degree of spousal involvement in ANC among women accessing care at the Immunization Clinic in Babcock University Teaching Hospital (BUTH), Ogun State, Nigeria. **Patients and Methods:** This was a descriptive cross-sectional study. Two hundred and sixty-eight (268) women who attended the antenatal clinic in their last pregnancy participated in the study. Semi-structured questionnaires were administered in an interview-based manner to each participant. Data were entered and analyzed using IBM Statistical Package for Social Sciences (SPSS version 22.0). **Results:** There was good spousal involvement (56%) in ANC. Statistically significant associations were found between the age, education level, occupation, and income of the spouses and their involvement ($P < 0.05$). **Conclusion:** Spousal involvement in ANC in this study was above average. Measures that can consolidate the identified predictors of good spousal involvement in ANC should be adopted.

KEYWORDS: Antenatal care, Nigeria, spousal involvement

BACKGROUND

Men and husbands getting involved in antenatal care (ANC) have been considered to be a process of sociocultural and behavioral change that is required for males to acquire more roles and responsibilities in antenatal management with the aim of keeping in check the well-being of the mother and child.^[1] ANC refers to the care or management provided by competent healthcare workers to women and girls that are pregnant to guarantee optimum health conditions for both mother and baby during gestation.^[2] Spousal involvement in reproductive health describes the several means by which men participate in reproductive health programs, behaviors, and reproductive health rights.^[3] Such means of involvement include but are not limited to, financial provisions during ANC and childbirth, purchasing birth

kits and choice of place of delivery as well as the recognition of skilled birth attendants.^[4]

In many low and middle-paid countries, men are acknowledged as primary providers as well as key decision-makers in the family, this often determines women’s access to economic resources and influences women’s ability to make choices that affect their health and children’s health.^[3] Engaging men during pregnancy through ANC visits is therefore a strategic way to enhance the mother and child’s health, and to address

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the couple's decision-making dynamics.^[5] Men getting more involved can also be a way to improve their sexual reproductive health and rights, change the status quo, and subsequently promote men's mandate as staunch advocates and representatives for maternal, newborn, and child health.^[5] ANC visits improve men's knowledge about the relevance of maternal, postnatal, and child health services, which can make them get more engaged in the health of their partners and children.^[6] This knowledge acquired can translate into ensuring adequate arrangement and provision for getting appropriate antenatal services such as logistics to the hospital for delivery and making necessary payments, but also as future investments such as early father involvement in the infant's life, which is beneficial for the child's development.^[7]

Several studies in LMICs have reported the pros of male involvement and engagement in ANC visits. These include enhanced maternal access to maternal and postnatal services, use of a skilled birth attendant, rejecting harmful maternal practices such as smoking and alcohol consumption, improved maternal health, reduced postpartum depression, improved maternal nutritional status, decrease in distress, pain and emotional discomfort during parturition, and also increased rates of breastfeeding and in general has long-lasting, positive impacts in the development of children.^[4] Male participation in ANC visits can also provide opportunities for providers to counsel pregnant couples.^[8] It has also been shown that male presence at ANC visits correlates with an improvement in couple communication, an increase in joint decision-making, and an impact in identifying and reducing gender-based violence.^[9]

The World Health Organization (WHO) admits that the nature of evidence about spousal presence at antenatal consultation is presently low and any guess of the consequence is unpredictable.^[10] A longitudinal study conducted in the United States in 2002 with a sample size of 5404 women and their spouses found that females whose partners were involved in their ANC were 1.5 times more interested to be present for ANC schedules in the first trimester. Studies in developing countries have also shown the enhancement of reproductive health outcomes when men are involved in health interventions.^[11]

In a randomized control trial to assess the effects of including male spouses in antenatal health sensitization and accessing maternal health care birth readiness in Nepal, 442 women accessing ANC were divided into three subgroups, which involved wives who received sensitization with their spouses, wives who got the

training alone, and wives who received no training. The outcome revealed that the women who received sensitization with their spouses were more interested or inclined to attend postpartum clinic sessions than women who got sensitized alone or those who did not get sensitized or educated at all.^[12] It was also shown that women who received an education with their partners were also more inclined to make up to three or more birth arrangements compared to others.

Given the importance of male partners' involvement in reproductive health services including ANC, we aimed therefore to assess the degree of perceived spousal involvement in ANC among women accessing care at the Immunization Clinic in Babcock University Teaching Hospital (BUTH), Ogun State, Nigeria.

MATERIALS AND METHODS

Study Design and Setting

This facility-based descriptive cross-sectional study was conducted in 2020/2021 at Babcock University Teaching Hospital (BUTH), Ogun State, Nigeria. Babcock University is a private Christian varsity governed by the Seventh-day Adventist Church in Nigeria. The teaching hospital is located on the main campus of the university which is situated in Ilishan-Remo between Ibadan and Lagos. BUTH is a 185-bed facility that was established in 2012. The hospital has 15 departments including the Community Medicine Department, which runs the Immunization Clinic.^[13] About 25–40 mothers attend the immunization clinic every week in the center. Data collection for the study was done between November 2020 and February 2021.

Study Participants, Sample Size, and Sampling Method

Participants comprised nursing mothers who attended the Immunization Clinic at BUTH and who had had at least two ANC visits during the last pregnancy irrespective of if the ANC was in our center or not. The sample size was determined using the Leslie Kish formula for determining the minimum sample size when the sample is above 10,000 people.

$$N = \frac{Z^2 pq}{d^2}$$

Where N = minimum required sample size in a proportion greater than 10,000. The standard normal deviate (Z) was set at a 95% confidence level; the prevalence (p) of spousal engagement in ANC in a previous study in Ibadan^[14] was 19.6% with an acceptable margin of error of 5% (d = 0.05), q = 1 – p. After computation, the result was 242.1. The addition of 10% attrition for non-response made the minimum size to be 268. The

purposive sampling method was used to select study participants. Participants were recruited consecutively during routine clinic visits until the required sample size was reached.

Data Collection/Data Collection Tool

Data collection was carried out using an interviewer-administered semi-structured questionnaire. The questionnaire elicited information about the social demographic characteristics of the respondents and their spouses as well as the level of spousal involvement in the ANC during the last pregnancy. Data were collected by trained research assistants who had tertiary-level education.

Data Management

Scoring System

The questionnaires were crosschecked for errors and cleaned. Information obtained from the questionnaires was entered into IBM Statistical Package for Social Sciences (SPSS version 22.0) software program for analysis and statistical calculation. Composite variables (aggregate scores) for spousal involvement were computed from items on the questionnaire. There were eight items assessing male involvement. Every activity performed was scored as 10 while activities not performed were scored as 0. The total involvement was 80. The mean involvement score was calculated to be 65.71 ± 9.55 (approximated to be 66). A score of at least 66 was considered to have good involvement while those who scored below 66 were considered to have poor involvement.^[15]

Data Analysis

Data were summarized using mean, standard deviation, and proportions. Chi-square was used to test for the association between the categorical variables. Logistic regression was used to determine factors responsible for spousal involvement in ANC after controlling for confounders. These factors were variables that were statistically significant (<0.05) during bivariate analysis.

Ethics

The study was approved by the Babcock University Health Research and Ethics Committee (BUHREC579/20). Written informed consent was obtained from all respondents. Respondents were assured of confidentiality regarding the information given. No respondent was penalized in any way if they decided to decline consent or withdraw from the study at any point.

RESULTS

A total of 268 respondents participated in the study, with a mean age of 27.95 ± 3.08 years. Most respondents

Table 1: Sociodemographic characteristics of respondents (n=268)

Variables	Frequency	Percentage (%)
Age		
15–24	56	20.9
25–34	206	76.9
≥35	6	2.2
Religion		
Christianity	231	86.2
Islam	31	11.6
African traditional religion	6	2.2
Ethnicity		
Hausa	5	1.9
Igbo	55	20.5
Yoruba	204	76.1
Edo	4	1.5
Highest level of education		
No formal education	11	4.1
Primary	21	7.8
Secondary	142	53.0
Tertiary	94	35.1
Occupation		
Unemployed	37	13.8
Unskilled	83	31.0
Semi-skilled	47	17.5
Skilled	101	37.7
Type of family		
Monogamous	209	78.0
Polygamous	59	22.0
Average monthly income		
<50,000	107	40.0
50,000–100,000	53	19.8
100,001–500,000	54	20.1
>500,000	54	20.1
Number of people living in the household		
0–5	172	64.2
6–10	96	35.8
Number of living children		
0–5	217	81.0
6–10	51	19.0
Last pregnancy was intentional		
Yes	234	87.3
No	34	12.7
Place of delivery of the last baby		
Home	30	11.2
Traditional birth attendant	11	4.1
Mission house	7	2.6
PHC	10	3.7
Teaching hospital	164	61.2
Private hospital	46	17.2

were in the age group 26–30 years (60.1%). Christians dominated the population (86.2%) with 11.6% being Muslims. Three-quarters of the respondents were Yoruba (76.1%), followed by the Igbo ethnicity with

Table 2: Social demographics of respondents' spouses

Variables	Frequency (n=268)	Percentage (%)
Age group		
15–24	0	0.0
25–34	142	53.0
≥35	126	47.0
Ethnicity		
Hausa	8	3.0
Igbo	51	19.0
Yoruba	205	76.5
Edo	4	1.5
Education level		
No formal education	15	5.6
Primary	22	8.2
Secondary	100	37.3
Tertiary	131	48.9
Occupation		
Unemployed	91	34.0
Unskilled	0	0.0
Semi-skilled	21	7.8
Skilled	156	58.2
Average monthly income		
<50,000	2	0.7
50,000–100,000	203	75.8
100,001–500,000	21	7.8
>500,000	42	15.7

Table 3: Spousal involvement in antenatal care

Variables	Frequency	Percentage
Partner took time to find out what goes on in antenatal care	161	60.1
Spouse discusses maternal health issues with the woman	159	59.4
Spouse participated in the choice of delivery site	255	95.1
Spouse accompanied woman to the antenatal clinic for appointments	215	80.2
Spouse stayed with woman throughout labor and delivery	180	67.2
Spouse provided financial support during the pregnancy	263	98.1
Spouse provided a birth kit for use during delivery	263	98.1
Spouse provided a means of transport during labor	265	98.9
Number of times the spouse accompanied the woman to ANC		
1–2 times	66	24.7
>2 times	202	75.3
Spousal involvement score		
Poor involvement (<66)	118	44.0
Good involvement (≥66)	150	56.0

20.5%. Just a little above half of the respondents (53.0%) had secondary education as their highest level of

Table 4: Spousal characteristics and relationship with perceived spousal involvement

Variables	Spousal involvement		χ^2	P
	Good n (%)	Poor n (%)		
Age				
<35	79 (62.7)	47 (37.3)	4.37	0.037
≥35	71 (50.0)	71 (50.0)		
Ethnicity				
Non-Yoruba	27 (45.8)	32 (54.2)	3.52	0.061
Yoruba	122 (59.5)	83 (40.5)		
Education				
Non-tertiary	60 (43.8)	77 (56.2)	16.86	<0.001
Tertiary	90 (68.7)	41 (31.3)		
Occupation				
Not skilled	53 (47.3)	59 (52.7)	5.84	0.016
Skilled	90 (62.2)	59 (37.8)		
Income				
≤100 000	103 (50.2)	102 (49.8)	11.6	0.001
>100 000	47 (74.6)	16 (25.4)		

Table 5: Spousal characteristics and multivariable analysis with spousal involvement

Variables	Odds ratio	Regression coefficient	95% Confidence interval	P
Age				
<35	1.00			
≥35	0.539	-0.618	0.315–0.924	0.025
Education				
Non-tertiary	1.00			
Tertiary	3.475	1.246	2.008–6.016	<0.001
Occupation				
Not skilled	1.00			
Skilled	2.322	0.842	1.349–3.995	0.002
Income				
≤100,000	1.00			
>100,000	2.865	1.053	1.471–5.580	0.002

education. Only 37.7% of the respondents were skilled, with trading being the predominant occupation. Three-quarters of the population (78.0%) were in monogamous marriage [Table 1]. The mean age of the respondents' spouses was 34 ± 4.41 years with the highest proportion (47.0%) in the age bracket 36–40 years. The respondents' spouses had a similar distribution in ethnicity to that of the respondents with 76.5% being Yoruba, 19.0% Igbo, 3.0 Hausa, and 1.5% Edo. The spouses had tertiary education being the most represented (48.9%). A higher proportion of the spouses were skilled (58.2%) workers. The respondents' spouses generally earned more as 75.7% have an average monthly income of N50,000- N100,000 [Table 2]. Sixty percent (60.1%) of the respondents stated that their partners took time to find out what goes on during the ANC clinic visits. About three-fifths (59.3%) of partners discussed maternal health

issues with their wives. Most respondents (95.1%) stated that their partners participated in the choice of the delivery site, 80.2% were accompanied by their spouses to ANC clinics with 75.3% were accompanied more than two times. Almost all the respondents (98.1%) stated that their partners provided financial support during pregnancy and provided a birth kit for use during delivery. Again, almost all (98.9) of the respondents stated that their spouses provided a means of transport during labor. Overall, 56.0% of spouses had good involvement in ANC while 44.0% had poor involvement in ANC [Table 3]. There were statistically significant associations between spousal age, education, occupation, and income with spousal involvement in ANC. A higher proportion (62.7%) of the younger age group (<35) among spouses had good involvement as compared to the older age group (≥35). For education, spouses with tertiary education had a higher proportion (68.7%) of good involvement as compared to those with non-tertiary education (43.8%). A higher proportion (74.6%) of spouses who earned >100,000 had good involvement as compared to those who earned ≤100,000 (50.2%) [Table 4]. Spouses aged ≥35 years were half as likely to be involved in ANC than those <35. Those with tertiary education, and whose monthly income was >N100,000 were about three times more likely to be involved in ANC than those with non-tertiary education and who earned ≤100,000. Similarly, those who were skilled were about two times more likely to be involved in ANC than those who were not skilled [Table 5].

DISCUSSION

This study assessed the level of male spousal involvement in ANC as perceived by women who attended the immunization clinic at the Babcock University Teaching Hospital Ilisan-Remo, Ogun State, Nigeria. We found a good level of involvement in more than one-half of the spouses. Predictors of good involvement were younger age, higher education, being in a skilled occupation, and higher income.

The level of involvement in this study is higher than what was documented in some other studies.^[1,10,16] This observed difference may be due to the study setting. For instance, our study was conducted in a tertiary institution which is a referral center where more difficult obstetric cases are handled. Thus spouses of antenatal attendees in these centers may be more proactive in supporting their wives in maternity care. The high level of involvement among spouses reported in this current study may reflect some level of efficacy in implementing international and national policies which identify men as key players in the empowerment and health-related matters of their spouses.^[17]

Our study found that age was a predictor of spousal involvement in ANC. Younger men were shown to be more involved as compared to older men. This finding of younger men participating more in ANC agrees with what was reported by Sodeinde *et al.*,^[18] Illiyasu *et al.*^[19] and Kululanga *et al.*^[20] Increased participation among younger men may have resulted from the predisposition of the young to embrace cultural practices of developed climes where women are put in consideration as against what obtains in patriarchal societies like many African settings, which is commonly adopted by the older conformist men.

Spousal education is documented to be a predictor of male involvement in maternity care.^[18,19] Men who were more educated were shown to be more likely to accompany their spouses to both antenatal clinics and labor rooms in a study.^[21] In our study, spousal education was observed to be a significant predictor of male participation in ANC. This finding agrees with what was reported in similar studies in Southern Nigeria^[18] and Northern Nigeria.^[19] It is also in consonance with a similar study conducted in Malawi.^[20] The findings of these studies may be ascribed to the enhanced opportunities for educated men to have more access to information on ANC through various media. King *et al.* have opined that educated men have better knowledge of maternity care.^[22] A study on male involvement in birth preparedness in Nepal however reported that men with no formal education or who only attended primary school were more likely to accompany their wives for ANC.^[23]

In this study, those with skilled work and those with better pay of over N100,000 had increased odds of participation in ANC. This may not be surprising because men are considered breadwinners in many developing, male-dominated societies where men's roles have been considered to be majorly the provision of financial support for their spouses including in the ANC.^[19,24-26] Men believe they have a financial obligation to enable their wives to access maternal health services^[27] and according to Furaha,^[28] saving money is the most common preparation a man can make for childbirth. In a Uganda study, women's absenteeism from the antenatal clinic was essentially attributed to the failure of their spouses to provide money for ANC.^[29] There are several ways by which men are financially involved in ANC such as buying clothes for the baby,^[26,30] buying birth kits,^[28] paying or arranging for the wife's transportation to the clinic,^[30] and arranging for emergency referrals in the event of any complication.^[26,27] Nevertheless, in contrast to this study, Gibore *et al.* reported that being engaged in an occupation had indirect relationships with involvement in ANC.^[31]

This study adopted multivariable analysis in assessing predictors of spousal involvement in ANC. However, the study has some limitations. Its cross-sectional design does not allow for precise causal inferences of factors that are associated with spousal involvement in ANC. Moreover, women rather than their husbands were interviewed and male involvement among men was essentially assessed through the recall by women of such roles carried out by their husbands. This might have led to misinformation, and under and over-reporting by these women.

CONCLUSION

Formal education, young age, being employed, and having higher income were associated with increased odds of participating in ANC among men. The outcome of our study calls for policies and strategies to provide education and employment opportunities for more young men, and raise awareness of the need for male support for ANC among same to consolidate the propensity observed in this study.

Authors Contribution

KS, JE, OmO, OIO, OpO, and GO conceptualized the research and did the original work. JE, OmO, OIO, OpO, and GO collected the data and KS did the data analysis. SA and KS wrote the manuscript's first draft. All authors reviewed the manuscript and approved the final submission.

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Conflicts of interest

There are no conflicts of interest.

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