

Knowledge and Attitude of Women and Its Influence on Antenatal Care Attendance in Southwestern Nigeria

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Citation: Ogunba BO, Abiodun OB (2017) Knowledge and Attitude of Women and Its Influence on Antenatal Care Attendance in Southwestern Nigeria. *J Nutr Health Sci* 4(2): 207

Abstract

Interview of 250 women with infants between the ages of 0-18months was done by simple random sampling technique. The mean of ANC attended was 10.24 ± 7.364 , knowledge (2.39 ± 0.535) and attitude (2.44 ± 0.593). However, 56.4% had a medium level of knowledge about ANC attendance and 49.2% had a positive attitude. Correlation analysis ($r = -0.276$, $p = 0.000$) showed that a significant relationship exist between the respondent's attitude and ANC attendance. However, there was no significant relationship between the attendance of ANC ($r = 0.055$, $p = 0.388$) and knowledge of mothers. It was concluded that the respondents had a moderate level of knowledge about the importance of ANC while a few had a positive attitude towards ANC. It is therefore recommended that the importance and benefits of attendance of ANC should be emphasized, especially the number of ANC visits that should be made before delivery.

Keywords: Pregnancy; Antenatal care; Attendance; Knowledge; Attitude

Introduction

Antenatal care (ANC) is the care a woman receives throughout pregnancy in order to ensure that both the mother and child remain healthy. A healthy diet and lifestyle during pregnancy is important for the development of a healthy baby and may have long-term beneficial effects on the health of the child [1]. Almost 90% of maternal deaths occur in developing countries and over half a million women die each year due to pregnancy and childbirth related causes [1]. Proper ANC is one of the important ways in reducing maternal and child morbidity and mortality. Unfortunately, many women in developing countries do not receive such care [2]. According to recent estimates, each year more than 500,000 women between the ages of 15 and 49 die of causes related to pregnancy and child birth a leading cause of death among women in that age group [3]. Almost all maternal deaths (99%) occur in the developing world, and more than half occur in Africa [3]. Understanding maternal knowledge and practices of the community regarding care during pregnancy and delivery are required for program implementation [4].

Antenatal and postnatal care services are amongst the major interventions aimed at reducing maternal and newborn deaths worldwide [5,6]. Antenatal care services help pregnant women by identifying complications associated with the pregnancy or diseases that might adversely affect the pregnancy [5]. Some researchers identified socio-demographic characteristics, geographic area, attitudes towards pregnancy, and negative attitudes towards child immunization, language fluency, perceived cost of health services, transportation costs and efficiency, and childcare as factors and/or barriers related to the initiation of prenatal health services [7].

Another research revealed that women's understanding and perception of the need of early initiation of ANC in Niger-Delta, Nigeria for antenatal and postnatal care can also play a more dominant role in attending ANC [8]. Physical proximity to health services and limited availability of health services were major problems that influence the attendance of pregnant women at antenatal and postnatal clinics.

Adequate nutritional intake during pregnancy has been recognized as an important factor for healthy pregnancy and desired birth outcomes [9]. It was found that deficiency of nutrients during gestation may cause the fetus to receive suboptimal micro and macro nutrients, causing inadequate intrauterine growth and development, inherited malformations, preterm deliveries, and pregnancy complications [10]. Thus, attention to appropriate dietary behavior and proper nutrient intake will supply adequate

nourishment to achieve optimum health for both mother and child [11,12]. This study showed that health advice encouraged expectant mothers to improve their food intake; however another study indicated that higher knowledge of pregnant women was not an indicator to cause them to change their nutritional habits [11].

Through antenatal visits, women benefit from various interventions, including counseling about healthy lifestyles, the provision of iron/folic acid supplements, and tetanus toxoid vaccinations reported to protect newborns against neonatal death [6,13].

Across the countries and territories, 1 in 4 pregnant women receives no antenatal care, and more than 40% give birth without the assistance of a skilled attendant. Therefore, to reduce child mortality, improving the health of pregnant women and new mothers is critical [14]. More than half a million women die each year due to pregnancy-related causes and many more suffer debilitating long-term effects that could be easily avoided through adequate maternal care. Furthermore, improving maternal health is vitally important for a child's prospects of survival [14].

Antenatal care is an essential safety net for healthy motherhood and childbirth, where the well-being of both the prospective mother and her offspring can be monitored [15]. Antenatal care (ANC) is the care a woman receives throughout her pregnancy in order to ensure that both the mother and child remain healthy. A healthy diet and lifestyle during pregnancy is important for the development of a healthy baby and may have long-term beneficial effects on the health of the child. Almost 90% of maternal deaths occur in developing countries and over half a million women die each year due to pregnancy and childbirth related causes [16].

Proper ANC is one of the important ways in reducing maternal and child morbidity and mortality. Unfortunately, many women in developing countries do not receive such care [17]. Ante-natal care (ANC) services indirectly saves the lives of mothers and babies by promoting and establishing good health before childbirth and the early postnatal period [18]. It often presents the first contact opportunities for a pregnant woman to connect with health services, thus offering an entry point for integrated care, promoting healthy home practices, influencing care-seeking behaviors and linking women with pregnancy complications to a referral system; thus impacting positively on maternal and fetal health [18]. The very low maternal/infant morbidity and mortality rates reported for developed countries compared with the extremely high figures in developing countries have been attributed to the higher utilization of modern obstetric services by the former [19]. Studies in developing countries have shown that the use of health-care services is related to the availability, quality and cost of services, as well as to the social structure, health beliefs and personal characteristics of the users [20-22].

Antenatal care (ANC) is a key strategy to decreasing maternal mortality in low -resource settings. ANC clinics provide resources to improve nutrition and health knowledge and promote preventive health practices. Antenatal care (ANC) is a critical strategy in reducing maternal mortality as it facilitates the identification and mitigation of risk factors early in pregnancy [23]. Timely and frequent use of ANC enables delivery of essential services, including malaria treatment, immunizations, and health counseling [24-26].

The study aid in detecting early, the problems associated with pregnancy and post-delivery and prompt treatments before it results in complications. It might also help in alleviating the complications resulting from maternal and child mortality rate in Nigeria. The women are able to know what to do at each stage of pregnancy and the appropriate time for visit for antenatal care.

The objective of this study is to assess the knowledge of women and its influence on the attendance of antenatal care. The specific objectives are to:

- i. Determine the frequency and timing of antenatal care visits of women
- ii. Determine the attitudes of pregnant women toward antenatal care visits
- iii. Determine knowledge on the antenatal care visits

Methodology

The study was carried out by collecting data of 250 women with infants between 0-18 months old in Ife Central Local Government Area of Osun State, Ile-Ife in South-Western region of Nigeria. The sample was obtained by simple random sampling techniques. Data was collected between the months of December 2015 and February 2016 using a structured interview schedule with questions on the maternal socio-economic characteristics, maternal antenatal knowledge and attitude towards antenatal clinic attendance were asked including the child's age, weight and place of birth.

Data collected from the women were analyzed SPSS version 22. The variables were measured with knowledge of the respondents measured with a Three Likert scale with the options including: Agreed, I don't know, and Disagreed; attitude of the respondents measured with a Five Likert scale with the options including: Strongly Agreed, Agreed, I don't know, Disagreed and Strongly Disagreed. The dependent variables are the knowledge and attitude of the respondents and attendance of Antenatal care is the independent variable. The data were analyzed using descriptive statistical analysis such as frequency counts, percentages was used to describe the data that was collected while inferential statistics such as correlation coefficient, was used to established the significant relationships between the women's attitude, knowledge and the attendance of antenatal care of the women.

Result

Socio-economic Characteristics of the Women

Results on Table 1 shows that the mean age of the respondents was 29.26 ± 4.73 , with most of them being married and are Christians. About 65.2% having tertiary education and 30% earning above ₦50,000 and 62.4% having 2-4 children in the family.

Characteristics	Frequency (250)	Percentage (%)
Age of the respondent (years)		
21 – 25	63	25.2
26 – 30	102	40.8
31 – 35	62	24.8
36 – 40	21	8.4
41 and above	2	0.8
Median (29.049) IQR (13.633)		
Formal education		
Primary	6	2.4
Secondary	46	18.4
Tertiary	198	65.2
Number of children		
Primiparous	81	32.4
Multiparous	169	67.6
Number of under-five children		
1	165	66.0
2	79	31.6
3 and above	6	2.4
Marital status		
Single	29	11.6
Married	213	85.2
Occupation		
No job	21	8.4
Civil servant	81	32.4
Artisan	21	8.4
Business	94	37.6
Others	33	13.2
Monthly income (USD)		
Less than 35	19	7.6
36-70	42	16.8
71-105	50	20.0
106-140	33	13.2
141-175	31	12.4
176 and above	75	30.0
Median (120.849) IQR (108.78)		
Religion		
Christianity	169	67.6
Islamic	81	32.4
Ethnicity		
Yoruba	187	74.8
Igbo	46	18.4
Hausa	11	4.4
Others	6	2.4

Source: Field Survey, 2016.

Table 1: Distribution of the socio-economic characteristics of the women

Timing and Frequency of Antenatal Care Clinic Attendance

The mean antenatal care clinic attended by the women was 10.24 ± 7.36 , about 65.6% started antenatal care clinic within the First Trimester and 80.4% attending because concern of the wellbeing of mother and child. 54.8% of the women delay in starting and 49.6% missed antenatal care clinic with no obvious reasons (Table 2).

Attendance of Antenatal Care	Frequency (250)	Percentage (%)
Attended antenatal care clinic		
Yes	230	92.0
No	20	8.0
Started antenatal care clinic (period)		
None	21	8.4
First Trimester	164	65.6
Second Trimester	65	26.0
Third Trimester	0	0.0
Number of antenatal care clinic attended		
None	20	8.0
1 – 6	61	24.4
7 – 12	111	44.4
13 – 18	42	16.8
19 – 24	2	0.8
25 – 30	6	2.4
31 and above	8	3.2
Median (9.378) IQR (9.023)		
Reason for attending antenatal care clinic		
No reason	23	9.2
Wellbeing of mother and child	201	80.4
Advice from family	5	2.0
Recommendation	6	2.4
Personal decision	10	4.0
Others	5	2.0
Reason for delay in antenatal care clinic		
No reason	137	54.8
Money Issues	8	3.2
Busy	66	26.4
Personal issues	26	10.4
Others	13	5.2
Reason for missing antenatal care clinic		
No reason	124	49.6
Sickness/laziness/tiredness	12	4.8
Traveled	13	5.2
Transportation	6	2.4
Busy	79	31.6
Others	16	6.4

Source: Field Survey, 2016

Table 2: Distribution of the timing and frequency of antenatal care clinic attendance

Knowledge on the Importance of Antenatal Care

The mean knowledge on the importance of ANC of the respondents stand at 2.39 ± 0.535 . 87.2% agreed that attending ANC is very important in preventing and correcting malaria, anemia and other pregnancy complication; about 76.4% agreed that ANC can prevent newborn deformity; 84% also agreed that ANC can correct or improve the micronutrients deficiency and 38% disagreed that anemia during pregnancy is as a result of too much amount of iron in the body. It resulted with 56.4% of the respondents having a medium level of knowledge about antenatal care (Table 3).

S/N	Knowledge statements	Agree	I don't know	Disagree
1.	Attending antenatal care clinic is very important in preventing and correcting malaria, anemia and other pregnancy complications	218 (87.2)	28 (11.2)	4 (1.6)
2.	Knowledge on proper child breastfeeding is naturally acquired	135 (54.0)	34 (13.6)	81 (32.4)
3.	Anemia during pregnancy is as a result of too much amount iron in the body	76 (30.4)	79 (31.6)	95 (38.0)
4.	Antenatal care clinic can prevent newborn deformity	191 (76.4)	43 (17.2)	16 (6.4)
5.	Antenatal care clinic can correct or improve the micronutrients deficiency	210 (84.0)	28 (11.2)	12 (4.8)
6.	Fetal movement counting is necessary for checking the wellbeing of the foetus	173 (69.2)	66 (26.4)	11 (4.4)
7.	Adequate antenatal care clinic visits should not be more than four visits or less	82 (32.8)	85 (34.0)	83 (33.2)
8.	Pregnant women need to take extra food as compared with non-pregnant women	198 (79.2)	48 (19.2)	4 (1.6)
9.	Regular and strenuous exercise is dangerous and may be unsafe for the health of the foetus	137 (54.8)	60 (24.0)	53 (21.2)
10.	Increase in micronutrients-rich diet is necessary for good birth outcome	202 (80.8)	40 (16.0)	8 (3.2)
Mean \pm S.D 2.39 \pm 0.535				

Source: Field Survey, 2016.

Table 3: Distribution of the knowledge on the importance of antenatal care

Attitude towards Antenatal Care Clinic

The mean attitude of the respondents stand at 2.44 ± 0.593 . 45.2% agreed that advice regarding proper health during pregnancy can be gotten outside the hospital; about 38.8% disagreed that they prefer postponing the advice till postnatal; 39.2% also agreed that they determine how long to breastfeed their child than to be told and 38% disagreed that they prefer reading their advice online because of the cost of transportation to the nearest antenatal care center. It resulted with 49.2% of the respondents having a positive attitude toward the antenatal care clinic attendance (Table 4).

S/N	Attitude statements	Strongly Agree	Agree	I don't know	Disagree	Mean \pm SD 2.44 \pm 0.593
1.	Limit the frequency of my visit to antenatal care clinic because of the cost of each session	18 (7.2)	78 (31.2)	28 (11.2)	40 (16.0)	86 (34.4)
2.	Advice regarding proper health during pregnancy can be gotten outside the hospital	31 (12.4)	113 (45.2)	12 (4.8)	43 (17.2)	51 (20.4)
3.	Dislike attending antenatal care clinic because it's boring	11 (4.4)	44 (17.6)	29 (11.6)	105 (42.0)	61 (24.4)
4.	Dislike antenatal care clinic because it is time consuming	10 (4.0)	68 (27.2)	25 (10.0)	91 (36.4)	56 (22.4)
5.	Prefer postponing the advice till Postnatal	11 (4.4)	52 (20.8)	27 (10.8)	97 (38.8)	63 (25.2)
6.	Determine how long to breast-feed my child than to be told	29 (11.6)	98 (39.2)	31 (12.4)	39 (15.6)	53 (21.2)
7.	Respect and would only go with my spouse view about the type of care I receive	37 (14.8)	76 (30.4)	46 (18.4)	48 (19.2)	43 (17.2)

S/N	Attitude statements	Strongly Agree	Agree	I don't know	Disagree	Mean ± SD 2.44 ± 0.593
8.	Prefer going for antenatal care because all other pregnant women go too	17 (6.8)	46 (18.4)	26 (10.4)	92 (36.8)	69 (27.6)
9.	Prefer reading my advice online because of the cost of transportation to the nearest antenatal care center	12 (4.8)	45 (18.0)	32 (12.8)	95 (38.0)	66 (26.4)
10.	Attend antenatal care sessions because its counsels are about the women's health alone	21 (8.4)	48 (19.2)	28 (11.2)	89 (35.6)	64 (25.6)
Mean ± SD 2.44 ± 0.593						

Source: Field Survey, 2016.

Table 4: Frequency distribution of the respondent's attitude towards antenatal care clinic

Relationship between Knowledge, Attitude and Attendance of Antenatal Care Visits of Respondents

The results show that a significant relationship ($r=-0.276$, $p=0.000$) existed between the attitude of the respondents towards antenatal care and the attendance of the clinic. However, there existed no significant relationship ($r=0.055$, $p=0.388$) between knowledge and the attendance of the antenatal clinic (Table 5).

Attendance of respondents				
	r	r ²	% determination	p- value
ANC attitude	-0.276	0.048	4.8	0.000
ANC knowledge	0.055	0.063	6.3	0.388

Significant at the level of $P \leq 0.05$

Table 5: Correlation analysis showing relationship between knowledge, attitude and attendance of antenatal care visits of respondents

Discussion of Findings

Poor antenatal care is an important risk factor for adverse pregnancy outcomes among women [27]. In the current study, antenatal care (ANC) visits were made by 92% of women which was higher compared with the study conducted in other parts of India (73.9%) [28]. It may be due to close proximity and therefore easier accessibility of health facilities as stated by Magadi, *et al.* that the frequency of antenatal care is also influenced by the accessibility of antenatal care service [24]. In the present study, majority (80.4%) of women replied the purpose of ANC visits were to know the health condition of the mother and foetus. Among 250 participants, 44.4% (111) attended between 7-12 ANC visits with a mean of 10.24 ± 7.364 which is very high compared with (33.6%) of the study done by Khatib, *et al.* [29].

The study found that maternal educational level is a significant factor in determining the knowledge of ANC. Knowledge not only transforms, but also empowers women and improves their self-esteem. It is expected that educated women are more likely to be aware about their health status and seek health knowledge. This finding is consistent with other studies [30-33].

About half of the women had no reason for attending ANC while 31.6% were Busy, 2.4% having difficulty with transportation, 4.8% due to Sickness, laziness or tiredness, and 5.2% traveled away from their place of residence. This finding is consistent with the findings of Sanjel, *et al.* [34]. Another study in China also reported financial difficulties as the most important reason for not attending ANC [33]. Poor women usually have poor access to education, including health education due to lack of financial resources, early marriage and pregnancy, household responsibilities and unwillingness to invest in the hidden costs of education (fees, transport).

This study confirmed that the utilization of ANC among women with sufficient knowledge about the benefits of ANC and the complications occurring during pregnancy was higher than among women lacking such knowledge; other studies have supported the findings [35,36]. Therefore, each respondent's knowledge has played a very important role in the utilization of ANC, encouraging pregnant women to seek and accept ANC services. Similarly, previous studies have emphasized the importance of raising awareness among women of reproductive age, especially among the uneducated. Improving knowledge about the benefits of ANC for pregnant women is an important element in enabling them to enrich their experiences as well as supporting their effort to better appreciate ways to protect their health and that of their children. Moreover, once they become knowledgeable about ANC, they will take better care of their own health. Healthy mothers who regularly visit ANC during pregnancy will greatly enhance their family's health. A diminishing rate of maternal and child mortality will also reduce a family's expenses and ensure their children's good health.

A good attitude is the most valuable precondition for any healthy behavior. The study showed that 49.2% women who had a positive

attitude towards ANC had a higher proportion of ANC visits than those with a negative attitude. This finding was consistent with that of previous studies which reported that a respondent's attitude was a critical factor in encouraging pregnant women to receive ANC services [35,37,38]. With improved knowledge about the benefits of ANC and the importance of a positive attitude towards it, women are likely to understand that ANC's medical procedures and interventions will do much to save their lives and improve their children's health. In this way, they will be motivated enough to overcome their reluctance. In many ways, changing attitudes and behavior are the most challenging tasks, but are also the least costly. Proper educational campaigns and the improved dissemination of information are investments for the long term.

The results of this study showed that knowledge of women was not significantly related with the attendance of antenatal clinic care. The medium level of knowledge of the women had no significant relationship with attendance of antenatal care clinic.

The limitation of the study is that there might be chances of recall bias among some of the respondents. Since this study was done in an urban area, the study cannot be representative of the whole state.

Conclusion

Knowledge of ANC was found to be moderate with few having positive attitude towards ANC in the study area. However, practices of ANC were found to be satisfactory. Knowledge of ANC was found to be associated with higher educational level, Christianity religion, age, and occupation.

Recommendation

To improve community awareness on the importance and benefits of attending ANC, information, education and communication activities should be increased on ANC from the national level down to the grassroots, through community campaign and mass media like local television channel, radio and local newspapers; emphasizing the number of antenatal care visits that should be made before the child is born which will be at least greater than 4 different visits. There is a need to motivate women to utilize maternal care services which are freely available in all the government health setups so as to detect and prevent any potential problems that would reduce the level of child morbidity and mortality.

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