



## Assessment of Knowledge Base of Primigravida about Pregnancy and Antenatal Care at the Time of Booking in a South West Nigerian Tertiary Hospital

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### Abstract

**Background:** It is pertinent for the pregnant woman to understand the concept of what she is embarking on. Antenatal care is a specialized form of health care given to pregnant women in order to have safe delivery for both mother and child.

Pregnant women need to be informed of the meaning and importance of antenatal care and the need for them to avail themselves of the opportunity in order to benefit from expert monitoring of the progress of pregnancy, prompt identification of anything that may jeopardize the outcome of the pregnancy and access to skilled personnel at delivery.

**Objective:** This study assessed the knowledge base of pregnant women about pregnancy and antenatal care as they came for booking in their first pregnancy.

**Study Design:** This study is a descriptive cross-sectional study.

**Methodology:** Questionnaires were used to obtain information on the knowledge base of primigravid women about pregnancy and antenatal care as they come for booking in their first pregnancy a simple structured questionnaire was used to get the pregnant women's basic knowledge about pregnancy and antenatal care. The questionnaire was administered by research assistants already trained with the questionnaire. Data was fed into and analyzed with the Statistical Package for Social Sciences (SPSS) version 20.0.

**Conclusion:** All efforts must be made to ensure that discussions about pregnancy and antenatal care with women starts at younger age as early as in the secondary school days to prepare them for the eventuality of pregnancy, its care and childbirth. The health education aspect of antenatal care should be well organized to fill all information gaps for the pregnant women.

**Keywords:** Primigravida; Pregnancy; Knowledge; Antenatal care

### Introduction

It is pertinent for the woman to understand the concept of pregnancy and antenatal care that she is embarking on which is a specialized form of health care given to pregnant women in order to have safe delivery for both mother and child.

Important services provided at the antenatal clinic are, risk assessment and categorization of pregnant women, identification of concurrent or undercurrent medical health conditions in pregnancy and treating them, birth preparedness, provision of information on pregnancy delivery and child care for the pregnant women and general health information and promotion. Antenatal care should also address the psychosocial and medical needs of the woman within the context of the health care delivery system and the culture in which she lives [1].

Pregnant women need to be informed of the meaning and importance of antenatal care and the need for them to avail themselves of the opportunity in order to benefit from expert monitoring of the progress of pregnancy, prompt identification of anything that may jeopardize the outcome of the pregnancy and access to skilled personnel at delivery.

Women have to know that they have to be pregnant before registering for antenatal care and that the earlier they do so the better for them. This can help them against subsequent pregnancies for early identification and presentation for care and also reduce the incidence of people registering for antenatal care without being pregnant. Apart from absence of menses [2], pregnancy can be

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Received Date: 17 May 2020

Accepted Date: 02 Jul 2020

Published Date: 20 Jul 2020

#### Citation:

Omotayo RS, Akintan AL, Akadiri O, Bade-Adefioye AM, Omotayo SE. Assessment of Knowledge Base of Primigravida about Pregnancy and Antenatal Care at the Time of Booking in a South West Nigerian Tertiary Hospital. *Clin Surg*. 2020; 5: 2868.

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confirmed by urine pregnancy test (with dip stick) or serum pregnancy test in the hospital. Other early pregnancy symptoms include nausea and vomiting in early pregnancy, breast fullness, anorexia/increased appetite. Pregnant women must be informed that these symptoms may be exaggerated at times and may even warrant hospital care [3]. Pregnant women must be informed of the need for early booking [4] for antenatal care in the hospital and the benefits there-in. These include evidence based, goal directed actions to guarantee better pregnancy outcome, qualitative health care by skilled provider.

The importance of giving accurate information to health care provider at booking has to be explained to the pregnant women. Accurate information will enable the provider to appropriately categorize the patient, individualize patients care and plan for possible anticipated complications. Example, history of previous caesarean section and the number need to be volunteered because this can immensely affect the line of management [5]. History of preexisting or current medical conditions should also be given to the doctor so as to put in place appropriate measures to mitigate the adverse consequences such illnesses may have on the pregnancy.

Modes of operation of the antenatal clinic in the particular hospital should be explained to the patient. Information about the various clinic days/time should be provided to the pregnant women in order for them to schedule their clinic attendance with their work to enhance compliance [6]. Information about the location of various places pregnant women will come in contact with in the course of ANC and delivery in the hospital should be given to them.

Pregnant women should know the importance of carrying out the investigations required of them, like Packed Cell Volume (PCV), blood group, genotype, urinalysis and others. When they know the importance they will be willing to do them. Some of these laboratory investigations can actually reveal medical conditions which has been on or just developed in pregnancy but that the woman was not aware of like urinalysis revealing glucose in the urine pointing to possibility of diabetes mellitus [7]. Early ultrasound scan, HIV and HbsAg screening. Early ultrasound scan is important in dating pregnancy especially when Last Menstrual Period (LMP) is doubtful or unclear [8]. They should be able to note when the baby first moved.

The confidence of the pregnant women in the hospital should not be in doubt. This is ensured by carrying them along and let them know about availability of services that can guarantee improved pregnancy outcome for them and their newborns they should also be informed of the availability of adequate preparation for handling emergencies should the case arise and functional referral system if need be.

The causes, ways of detection and effects of other medical conditions like diabetes, hypertension, anemia, preeclampsia etc. on pregnancy should be well explained to them. This will go a long way in enhancing the outcome of the pregnancy. For those that are already diagnosed diabetic and have been on treatment, the need for effective medical and dietary control of diabetes in pregnancy in order to have a favorable outcome must be well explained. They must be informed of the consequences of inadequate treatment.

They must also be informed about other infectious diseases that can affect pregnancy like tuberculosis and syphilis etc. Therefore they must be advised to be screened [9] for these diseases so that prompt treatment could be instituted.

Pregnant women that have other additional risk factors should

also be enlightened on the implications of such. For instance, women with previous caesarean section (c/s) should be informed of signs and symptoms that may indicate danger and the need for regular antenatal visit and hospital delivery. It is also in order to establish possible presence of ongoing domestic violence against the woman with the aim of managing it [10].

Pregnant women should be informed of available measures for preventing complications in pregnancy especially the ones that are common in this part of the world. Malaria is endemic in the subtropical region and can be the cause of various pregnancy complications like febrile illness in pregnancy, abortion, Intrauterine Growth Restriction (IUGR), preterm delivery, small for gestational age babies, other neonatal and maternal morbidities and even mortality [11]. Malaria and its complications can be prevented using Intermittent Preventive Therapy (IPT) an example of which is sulphadoxine pyrimethamine. Other modalities include use of insecticide treated nets, regular cutting of bushes in the surroundings, maintenance and clearing of gutters [12].

The importance of adequate quality nutrition to prevent malnutrition and anemia, various preparations of nutrient supplements like iron [13], multivitamins etc. should be discussed with the pregnant women. Pregnant women should also be aware of specific interventions as appropriate. For example, vitamin A supplementation and anthelmintics to prevent hypovitaminosis A and worm respectively [14]. They should know about the availability of Tetanus Toxoid (TT) immunization to prevent maternal and neonatal tetanus [15] and other vaccines available and applicable to pregnant women.

Pregnant women should know their expected date of delivery with the help of their care-giver, prepare for delivery. They should be informed to make prompt decision on who will assist them at delivery and where she is going to deliver. She should always be conscious of the appropriate facility for emergency [16]. They should however know the danger signs in pregnancy and danger signs in newborn. They should have prior decision on what transportation is reliable and accessible to them especially in odd hours in case of labor or before complication arises. It is also important that the pregnant woman should know that she has to be economically empowered.

A pregnant woman should decide as soon as possible on who she will be comfortable with to make decisions on her behalf especially in an emergency [17]. She should rally support especially from family and community in order to get people to care for her immediate family in her absence and a companion during labor. Arrangement should also be made on how to get blood donor in case of emergency requiring blood transfusion. Needed items for clean and safe birth and for newborn care should be provided ahead of delivery. List of such items (baby list, doctors' list) may be given to the woman at ANC ahead of time [18] Signs of advanced labor and danger signs of labor should be well explained to the patient [19]. Health education should include how to prevent common ailments in pregnancy. For instance, achieving generally clear environment free of breeding sites for mosquito. Other personal protective measures like adequate clothing, mosquito repelling creams and soaps can be adopted [20]. They should be enlightened on how to make hygienic and nutritive food from locally produced cheap materials available.

It is also important for them to know the dangers in the use of potentially harmful substances like tobacco [21], use of herbal

concoction, alcohol [22] and unprescribed drugs. They also need to observe adequate regular exercise and rest as appropriate [23]. They should be dissuaded from all traditional harmful practices and taboos that may have adverse effect on reproductive health such as female circumcision. Gishiri cut and baseless avoidance of particular food items. They should know that there is no harm in sexual activity with their husbands in pregnancy [24] however should Endeavour to engage in only safe sex.

They should be aware of unfavorable signs in pregnancy like vaginal bleeding, fever, severe headache, blurring vision, convulsions, loss of consciousness and labor pains before 37 weeks.

They should be given tips on preventions of home and work accident. Types of comfortable maternity wears (cloths and shoes) that will make them have less tendency to fall and injury [25]. They should also be taught how to care for the breast in pregnancy and lactation and also carry out Breast-Self Examination (BSE) as self screening method for breast cancer [26].

Pregnant women need to know that one of the main implications of HIV in pregnancy is possible transmission to the baby and this is the major contributor to AIDS in children. Light must be shed on the basic mechanisms which have been proposed for vertical transmission which includes intrauterine (transplacental), intrapartum (at the time of delivery), postpartum (mainly through breast feeding). Breast feeding probably contributes to the higher vertical transmission rates; therefore women must be well informed and counseled to make informed decision on breastfeeding of their babies and available options.

Prevention of Mother to Child Transmission (PMTCT) are measures for prevention of transmission of HIV from infected mother to her child which include avoiding unprotected/unsafe sexual intercourse. Abstaining from indiscriminate sex, being faithful to their husband and use of condom when necessary [27]. Counseling on the need for prophylactic antiretroviral drugs and compliance is also expedient. They can also be intimated on effects of elective caesarean section in reducing the risk of vertical transmission [28].

All efforts must be made to avoid discrimination and segregation of HIV positive pregnant women at the ANC. They must be well informed about their condition and that the disease can be managed. They should also be aware of the methods of partner disclosure, screening and encouragement to access care. They need information about side effects of antiretroviral drugs, avoiding unsafe sex and used of condom with positive partner to avoid super infection by different strains and what to do when ready to get pregnant. So also signs and symptoms of advanced disease and what to do in case any such signs are noticed.

Pregnant women need to be intimated of the concept of congenital anomaly. Though not common but they do occur with 6.3% prevalence in Nigeria [29]. Mothers should be aware of predisposing factors to congenital anomaly including: Elderly gravidity (age >35 yrs), diabetes mellitus especially with poorly controlled blood sugar, multiple gestation and family history of anomaly, chronic smoking, alcoholism and consanguinity [30]. Others are exposure to teratogenic drugs in early pregnancy, exposure to irradiation, chromosomal abnormalities and genetic disorders. This will enable pregnant women or women generally to avoid the avoidable predisposing factors and also to disabuse their minds against some traditional beliefs of causation of congenital anomalies. Some of the

false traditional beliefs regarding causation of congenital anomaly include walking at night, intake of some specific food items, pregnant women being outside at one o'clock in the afternoon and quarreling with aged people, wearing bracelets and crossing under a wire fence or ladder [31]. It should be explained to pregnant women at ANC that all these beliefs are baseless and unproven.

Our pregnant women should also be abreast of technological advancement in the area of prenatal diagnosis which enables the fetus to be assessed in-utero in at-risk pregnant women in order for the couple to make informed decision on the malformed baby with the option of termination of the pregnancy or continuing with the pregnancy.

Our pregnant women must be introduced to family planning which is a way of thinking and living that is freely adopted by a woman or a couple upon the bases of knowledge, attitude and understanding to improve the health of the family group and contribute effectively to the development of the nation. The benefits of spacing their children should be well highlighted while the dangers of too many, too frequent pregnancies should be made known to them. They must know about contraception in order to increase its relatively low uptake in our environment [32,33]. They should be appropriately linked to the specific points of provision of these services.

Pregnant women especially primigravida have to be informed about the process of labor and what is expected of them in the labor room so also what they should expect from their care givers during labor. The fears of pregnant women about labor should be allayed to reduced anxiety that may be associated with pregnancy and labor [34]. They should be aware ahead about getting materials that will be needed for both mother and baby in labour and delivery. They can also be informed about various birthing positions and analgesia in labor like epidural, its advantages and side effects [35]. They should know about the advantages of companionship in labor, indications for episiotomy and its post delivery care. Peculiarities of preterm delivery, the possible predisposing factors and causes, and neonatal intensive care unit should be explained to the pregnant women. Some complications that may arise in labor and how to take care of them e.g. retained placenta and manual removal of placenta, labor dystocia and counseling on indications for caesarean section. Patients should be well enlightened on indications for caesarean section and need to cooperate with their doctors when such decision is arrived at. Patients should be informed of the need of doing cervical screening test (Pap's smear) after delivery.

Mothers should be enlightened on schedule of immunization of children against preventable childhood killer diseases. Other important baby care related information includes exclusive breast feeding and its advantages. This can even include practical demonstration of correct positioning and attachment for mother and child during breast feeding which are required for effective breastfeeding, general care of newborn, dangers in force feeding babies and the need to avoid it. They must also be advised against self medication for children and the need to desist from harmful traditional practices like female genital cutting especially in this part of the world where a survey revealed that about 66% of respondents disagreed with legislation against female genital cutting and 25% said they will subject their female child to genital cutting [36].

## **Aim of the Study**

The study assessed the level of information and knowledge about

pregnancy and its care that primigravid women possess at the time of attending booking clinic.

### Justification

Considering the various challenges experienced in obstetrics care like late booking, late presentation in labor, late or non-presentation when having pregnancy complications, mother difficulty with adjusting to post delivery. Baby caring status and other challenges, it is desirable to have standardized information package for pregnant women in our antenatal clinics.

### Objectives of the Study

This study intends to find out the proportions of primigravid pregnant women that have specific information about pregnancy and antenatal care on their first day at antenatal clinic.

### Materials and Methods

#### Site

The study was carried out at the antenatal clinic in the Obstetrics and Gynecology Department, University of Medical Sciences Teaching Hospital Complex, Akure Unit, Nigeria.

#### Design

The study is a descriptive cross sectional study.

#### Study population

About 308 primigravid pregnant women coming for their first antenatal clinic (booking clinic) attendance were recruited into the study after giving their consent. This number includes the allowance for attrition.

#### Inclusion criteria

Only pregnant women that are carrying their first pregnancy and that are coming for their first antenatal visit (booking) at the antenatal clinic of the hospital will be eligible for the study.

#### Sampling method

Patients were serially recruited as they presented until sample size was completed.

#### Sampling instrument

A simple structured questionnaire was used as instrument for collecting data. It was written in plain English language and provision for interpretation made for those that could not understand or read English.

#### Sample size calculation

The Study is a descriptive study. The following formula was used to calculate the sample size.

$$N = \frac{4(Z_{crit})^2 p(-p)}{D^2}$$

Where  $Z_{crit}$  is standard normal deviate corresponding to chosen Confidence Interval (CI). For Confidence interval of 95%, it is 1.96

P is pre-study estimation of proportion to be measured

D is the width of confidence interval.

$$\text{Therefore } N = \frac{4 \times (1.96)^2 \times 0.95(1 - 0.95)}{0.05^2}$$

$$N = 291.96$$

$$N = 292$$

Adding the allowance for attrition of 16 to above gives 308.

### Data management

Data was processed by feeding the information into the Statistical Package for Social Statistics (SPSS) and then analyzed using the SPSS version 20. Proportions were calculated using percentages and cross tabulation of variables done to find out relationship and statistical significance by chi-square.

**Table 1:** Socio-demographic Biodata.

Age	Frequency	Percentage (%)
<20	4	1.3
20-29	141	44.5
30-39	156	49.2
40-49	16	5.0
<b>Total</b>	<b>317</b>	<b>100.0</b>
<b>Marital Status</b>		
Single	26	8.2
Married	291	91.8
<b>Total</b>	<b>317</b>	<b>100.0</b>
<b>Ethnicity</b>		
Yoruba	245	77.3
Igbo	59	18.6
Hausa	10	3.2
Others	3	0.9
<b>Total</b>	<b>317</b>	<b>100.0</b>
<b>Religion</b>		
Islam	10	3.2
Christianity	301	95.0
Traditional	3	0.9
Others	3	0.9
<b>Total</b>	<b>317</b>	<b>100.0</b>
<b>Education</b>		
Primary	3	0.9
Secondary	78	24.6
Post Secondary	31	9.8
Graduate	205	64.7
<b>Total</b>	<b>317</b>	<b>100</b>
<b>Occupation</b>		
Full Housewife	16	5.0
Artisan	52	16.4
Business	201	63.4
Civil Servants	48	15.1
<b>Total</b>	<b>317</b>	<b>100.0</b>
<b>Social Class</b>		
Social Class 1	93	29.3
Social Class 2	120	37.9
Social Class 3	94	29.7
Social Class 4	7	2.2
Social Class 5	3	0.9
<b>Total</b>	<b>317</b>	<b>100.0</b>

Values given in the table are absolute number of respondents and the corresponding percentage of total.

## Results

About half (49.2%) of the respondents were aged 30 to 39 years while only 4% were teenagers. Over 90% of the respondents were married. Majority of the respondents (245) 77.3% were of the Yoruba ethnicity with only about 22% from other Nigerian ethnic groups. Ninety five percent (95%) of the respondents were Christians and 3.2% were Muslims, about 2% were neither Christians nor Muslims. Majority of the respondents 205 (64.7%) were graduates only 3 (0.9%) were primary school dropout.

Only 48 (15.1%) of the respondents were civil servants, majority 201 (63.4%) were business women and 16 (5.0%) were full housewives. Using Olusanya et al. social class classification, 93 (29.3%) of the respondents were in social class 1, 120 (37.9%) were in social class

**Table 2:** Respondents knowledge of pre-pregnancy issues.

Gestational Age of Respondents using LMP	Frequency	Percentage (%)
<8 weeks	73	23.0
8-16 weeks	110	34.7
17-24 weeks	63	19.9
25-32 weeks	50	15.8
33-40 weeks	21	6.6
<b>Total</b>	<b>317</b>	<b>100.0</b>
<b>Normal Pregnancy duration</b>		
7 months	7	2.2
8 months	3	0.9
9 months	307	96.8
<b>Total</b>	<b>317</b>	<b>100</b>
<b>Best time to book Pregnancy for ANC</b>		
2 months	82	25.9
3 months	78	24.6
4 months	130	41.0
5 months	13	4.1
6 months	14	4.4
<b>Total</b>	<b>317</b>	<b>100</b>
<b>Do you need to stop alcohol for pregnancy</b>		
<b>Yes</b>	<b>264</b>	<b>83.3</b>
<b>No</b>	<b>47</b>	<b>14.8</b>
<b>Don't know</b>	<b>6</b>	<b>1.9</b>
<b>Total</b>	<b>317</b>	<b>100</b>
<b>How pregnancy was discovered</b>		
Missed period	70	22.1
Missed period & Pregnancy test	237	74.8
Others	10	3.2
<b>Total</b>	<b>317</b>	<b>100</b>
<b>Number of children wanted in all</b>		
2	50	15.8
3	140	44.2
4	111	35.0
5	16	5.0
<b>Total</b>	<b>317</b>	<b>100.0</b>

Values given in the table are absolute number of respondents and the corresponding percentage of total.

**Table 3:** Knowledge of basic investigations in antenatal clinic.

Knowledge of the need for PCV Check in Pregnancy	Frequency	Percentage (%)
Yes	311	98.1
No	6	1.9
<b>Total</b>	<b>317</b>	<b>100</b>
<b>Knowledge of blood sugar screening in pregnancy</b>		
Yes	275	86.8
No	42	13.2
<b>Total</b>	<b>317</b>	<b>100</b>
<b>Knowledge of HIV screening in Pregnancy</b>		
Yes	299	94.3
No	18	5.7
<b>Total</b>	<b>317</b>	<b>100</b>
<b>Knowledge of Hepatitis B screening in Pregnancy</b>		
Yes	272	85.8
No	45	14.2
<b>Total</b>	<b>317</b>	<b>100</b>
<b>Knowledge of Hepatitis C screening in Pregnancy</b>		
Yes	251	79.2
No	66	20.8
<b>Total</b>	<b>317</b>	<b>100</b>
<b>Syphilis screening</b>		
Yes	201	63.4
No	116	36.6
<b>Total</b>	<b>317</b>	<b>100</b>

Values given in the table are absolute number of respondents and the corresponding percentage of total.

2 while 94 (29.7%) were in social class 3. Only 3 respondents were in social class 5. Majority 110 (34.7%) of the respondents booked at 8 to 16 weeks gestation, 73 (23.0%) booked at less than 8 weeks while only 21 (6.6%) booked at 33 to 40 weeks. Majority 307 (96.8%) of the respondents said normal pregnancy duration was 9 months, only few 10 (3.1%) said 7 or 8 months is normal duration for pregnancy. One hundred and thirty respondents (130) (41.0%) indicated that the best time to book for ANC was 4 months (20 weeks), 78 (24.6%) believe 3 months is best time for booking while 82 (26.9%) believe 2 months is best to book for ANC.

Majority of respondents 264 (83.3%) said they need to stop alcohol intake when pregnant while 47 (14.8%) believe they don't need to stop alcohol intake because of pregnancy.

In 237 (74.8%) respondents, pregnancy was discovered by missed period and confirmed with pregnancy test while 70 (22.1%) respondents only had missed period and never did pregnancy test, 10 (3.2%) confirmed their pregnancy with ultrasound scan after missed period. When asked about number of children respondents desire to have, 140 (44.2%) said they desire 3 children in all, 111 (35.0%) want to have 4 children in all (Tables 1-7).

Most of the respondents 311 (98.1%) know that they will do Packed Cell Volume (PCV) test in pregnancy, only 6 (1.9%) don't know that they will do PCV in pregnancy. Majority of the respondents 275 (86.8%) are aware of doing blood sugar test in pregnancy, 42 (13.2%) are not aware.

**Table 4:** Basic knowledge of common antenatal clinic activities.

Knowledge of Malaria Prevention in Pregnancy	Frequency	Percentage (%)
Yes	282	89.0
No	35	11.0
<b>Total</b>	<b>317</b>	<b>100</b>
<b>Awareness about pregnant women immunization</b>		
Yes	239	75.4
No	78	24.6
<b>Total</b>	<b>317</b>	<b>100</b>
<b>Have you started financial preparation for delivery</b>		
Yes	297	93.7
No	20	6.3
<b>Total</b>	<b>317</b>	<b>100.0</b>
<b>Causes of abnormality for babies in-utero</b>		
Walking at night	75	23.7
Walking outside midnoon	25	7.9
Drinking bournvita in pregnancy	24	7.6
Eating snail in pregnancy	17	5.4
None of these	176	55.5
<b>Total</b>	<b>317</b>	<b>100.0</b>
<b>Have you bought baby materials already</b>		
Yes	244	77.0
No	73	2.03
<b>Total</b>	<b>317</b>	<b>100.0</b>
<b>When does the mother start feeling baby's movement</b>		
4 months	157	49.5
5 months	120	37.9
6 months	33	10.4
7 months	7	2.2
<b>Total</b>	<b>317</b>	<b>100.0</b>
<b>Can you take drugs in pregnancy like you take before pregnancy</b>		
Yes	47	14.8
No	270	85.2
<b>Total</b>	<b>317</b>	<b>100.0</b>
<b>Some mothers Medical condition can cause baby abnormality</b>		
Yes	234	73.8
No	83	26.2
<b>Total</b>	<b>317</b>	<b>100.0</b>
<b>Eating adequate good food in pregnancy is necessary</b>		
Yes	294	92.7
No	23	7.3
<b>Total</b>	<b>317</b>	<b>100.0</b>

Values given in the table are absolute number of respondents and the corresponding percentage of total.

Nearly all the respondents 299 (94.3%) were aware of doing Human Immunodeficiency Virus (HIV) test in pregnancy, only 18 (5.7%) were not aware. Majority of the respondents 272 (85.8%) were aware of doing hepatitis B screening in pregnancy, 45 (14.2%) were not aware. Similarly, 251 (79.2%) were aware of doing hepatitis C in pregnancy while 66 (20.8%) were not aware. Two hundred and

**Table 5:** Knowledge of common danger signs in pregnancy.

Is bleeding in Pregnancy a danger sign	Frequency	Percentage (%)
Yes	286	90.2
No	31	9.8
<b>Total</b>	<b>317</b>	<b>100.0</b>
<b>Is liquor drainage before labour a danger sign in pregnancy</b>		
Yes	210	66.2
No	107	33.8
<b>Total</b>	<b>317</b>	<b>100.0</b>
<b>Can mothers high blood pressure affect the baby</b>		
Yes	250	78.9
No	67	21.1
<b>Total</b>	<b>317</b>	<b>100.0</b>
<b>Can mothers high blood pressure in pregnancy cause convulsion</b>		
Yes	234	73.8
No	83	26.2
<b>Total</b>	<b>317</b>	<b>100.0</b>

Values given in the table are absolute number of respondents and the corresponding percentage of total.

**Table 6:** Basic knowledge of common labor ward activities.

Need for relatives company at delivery	Frequency	Percentage (%)
Yes	301	95.0
No	16	5.0
<b>Total</b>	<b>317</b>	<b>100.0</b>
<b>Is delivery by caesarean section safe</b>		
Yes	211	66.6
No	106	33.4
<b>Total</b>	<b>317</b>	<b>100.0</b>
<b>Does previous caesarean section have any effect on subsequent deliveries</b>		
Yes	139	43.8
No	178	56.2
<b>Total</b>	<b>317</b>	<b>100.0</b>
<b>Are babies delivered by caesarean section normal babies</b>		
Yes	264	83.3
No	53	16.7
<b>Total</b>	<b>317</b>	<b>100.0</b>

Values given in the table are absolute number of respondents and the corresponding percentage of total.

one respondents (63.4%) were aware of doing syphilis screening in pregnancy, 116 (36.6%) were not aware. Majority of respondents 282 (89.0%) indicated that they know about malaria prevention in pregnancy, 35 (11.0%) were not aware. Majority 239 (75.4%) were aware of mother immunization in pregnancy while 78 (24.6%) were not aware. One hundred and seventy-six respondents (55.5%) believe none of walking at night, walking outside at mid-noon, drinking Bournvita and eating snail in pregnancy causes abnormality for the fetus though about 24% still believe that walking at night causes fetal abnormality. When asked about gestational age at which mother starts feeling fetal kicks, 157 (49.5%) said 4 months, 120 (37.9%) said 5 months, 33 (10.4%) said 6 months while only 7 (2.2%) said its 7 months. Majority of the respondents 270 (85.2%) know that they cannot take drugs in pregnancy like they do before pregnancy,

**Table 7:** Basic knowledge about HIV in pregnancy.

Respondents knowledge of in-utero HIV transmission possibility	Frequency	Percentage (%)
Yes	227	71.6
No	90	28.4
<b>Total</b>	<b>317</b>	<b>100.0</b>
<b>Can HIV be transmitted during delivery</b>		
Yes	217	68.5
No	100	31.5
<b>Total</b>	<b>317</b>	<b>100.0</b>
<b>Do you know HIV can be transmitted at breastfeeding</b>		
Yes	265	83.6
No	52	16.4
<b>Total</b>	<b>317</b>	<b>100.0</b>
<b>Can HIV transmission to baby be prevented</b>		
Yes	240	75.7
No	77	24.3
<b>Total</b>	<b>317</b>	<b>100.0</b>
<b>Can HIV be treated for transmission to baby be prevented</b>		
Yes	276	87.1
No	41	12.9
<b>Total</b>	<b>317</b>	<b>100.0</b>

Values given in the table are absolute number of respondents and the corresponding percentage of total.

while 47 (14.8%) were not aware. Majority of the respondents 234 (73.8%) know that some mothers medical conditions can cause baby abnormality, 83 (26.2%) don't know. At the point of booking 297 (93.7%) of the respondents have started financial preparation for their delivery and only 20 (6.3%) have not. Seventy-seven percent (77%) of respondents have started buying their baby's materials at the time of booking.

Two hundred and ninety four respondents (92.7%) believe that eating adequate good food in pregnancy is necessary. Majority of the respondents 286 (90.2%) know that bleeding in pregnancy is a danger sign while 31 (9.8%) didn't know it's dangerous.

Two hundred and ten respondents (66.2%) know that drainage of liquor long before a labor is a danger sign in pregnancy while 107 (33.8%) did not know.

Majority of the respondents 259 (78.9%) know that high blood pressure of pregnant mother can affect the baby while 67 (21.1%) did not know. Only 83 (26.2%) of the respondents did not know that mothers high blood pressure in pregnancy can cause convulsion but 234 (73.8%) were aware. Majority of the respondents 211 (66.6%) said delivery by caesarean section is safe though a significant percentage (33.4%) said it's not safe. While 264 (83.3%) of the respondents believe that babies delivered by caesarean section are normal babies, 53 (16.7%) believe that they are not normal. One hundred and seventy eight respondents (56.2%) said they don't know that previous caesarean section has effect on subsequent deliveries while 139 (43.8%) indicated that they knew that caesarean section has effect on subsequent deliveries. Almost all the respondents (95.0%) believe that there is need for a relative to accompany pregnant women when going for delivery.

Majority of the respondents 227 (71.6%) knew that HIV can

**Table 8:** Basic knowledge of post delivery issues.

Respondents view about female circumcision	Frequency	Percentage (%)
Acceptable	86	27.1
Not acceptable	231	72.9
<b>Total</b>	<b>317</b>	<b>100.0</b>
<b>When to start immunization for baby</b>		
At birth	278	87.7
4 months	16	5.0
6 months	10	3.2
Don't know	13	4.1
<b>Total</b>	<b>317</b>	<b>100.0</b>
<b>Knowledge of family planning methods</b>		
Yes	272	85.8
No	45	14.2
<b>Total</b>	<b>317</b>	<b>100.0</b>
<b>How will you space your children</b>		
Avoid sexual intercourse	57	18.0
Use contraceptives	260	82.0
<b>Total</b>	<b>317</b>	<b>100.0</b>
<b>Do you know anything about preterm baby admission</b>		
Yes	259	81.7
No	58	18.3
<b>Total</b>	<b>317</b>	<b>100.0</b>
<b>Do you stop intercourse with husband because of pregnancy</b>		
Yes	26	8.2
No	291	91.8
<b>Total</b>	<b>317</b>	<b>100.0</b>

Values given in the table are absolute number of respondents and the corresponding percentage of total.

be transmitted to the baby in-utero from a positive mother while 90 (28.4%) did not know that HIV can be transmitted in-utero. Similarly, 68.5% of respondents knew that HIV can be transmitted during delivery and (83.6%) knew that HIV can be transmitted to the baby during breastfeeding. Majority of the respondents (75.7%) knew that HIV transmission to the baby from positive mother can be prevented and 87.1% said it could be prevented by treatment of the mother. When asked about their view about female circumcision, 86 (27.1%) of the respondents indicated that it is acceptable to them that their female baby be circumcised while 231 (72.9%) said it not acceptable. Majority of the respondents 278 (87.7%) knew that they will start immunization for their baby at birth. Majority of the respondents 85.8% were aware of family planning methods and 82.0% of respondents indicated their desire to use family planning methods to space their children.

Two hundred and fifty nine (81.7%) of the respondents were aware of need to admit preterm babies to the hospital while 58 (18.3%) were not aware (Table 8).

Almost all the respondents 291 (91.8%) believe that there is no need to stop intercourse with their husbands because of pregnancy (Table 8).

## Discussion

Less than 10% of respondents were unmarried contrary to

41% of births in the US that were reported to be from unmarried women in 2011 and 39% in the European Union [37]. Majority of the respondents were of Yoruba ethnicity because the study was conducted in a Yoruba speaking area of Nigeria. About 38% of the respondents were in social class 2 and another 30% in social class 3. This may be because the study area was a state capital with lots of civil servants. Booking was in the first 16 weeks (in line with WHO recommendation [38] for 57.7% of the respondents, this is far more than the findings in another Nigerian study that reported 19.1% booking before 17 weeks and an Ethiopian study that reported 34.5% of mothers starting antenatal care in first trimester [39]. Most, 90% of the pregnant women knew that normal pregnancy lasts for 9 months. Majority of the respondents 83.3% believe that they need to stop alcohol intake in pregnancy, this is similar to an earlier report by a Canadian study where 62% agreed to stopping alcohol in pregnancy [40]. In about 75% respondents, pregnancy was discovered by missed period and confirmed with pregnancy test this is higher than the value from a South African study that reported 50% respondents doing pregnancy test following missed period [41]. Majority of the respondents, 44.2% said they desire to have 3 children while 35.0% want to have 4 children. Demographic health survey had earlier reported average number of children desired by women to be 4.5 [42]. Seventy-seven percent 77% of respondents have started buying their baby's materials at the time of booking. This is contrary to the outcome of a south east Nigerian study that reported that majority of respondents do not buy baby materials until delivery [18]. This difference may be because of the study settings.

About 94% were aware of doing Human Immunodeficiency Virus (HIV) test in pregnancy. A Ghanaian study early reported awareness of HIV of 98% among women and that 13.2% of pregnant women have done HIV test before pregnancy mainly for church blessing of their marriage [43]. Majority of the respondents 85.8% were aware of doing hepatitis B screening in pregnancy, a lesser percentage 70.3% of participants in an American study reported having received information about HBV during their pregnancy [44]. Majority of the respondents 89% indicated that they know about malaria prevention in pregnancy higher than the value from a south east Nigerian study where 52.2% of their respondent pregnant women were aware of Intermittent Preventive Therapy (IPT) though only 27.3% have received it before [45]. About 75.4% were aware of mother immunization in pregnancy while 24.6% were not aware. A north west Nigeria study had earlier reported 87% awareness of Tetanus Toxoid vaccination among pregnant women [46]. Studies have not established any harmful effect of chocolate containing food in pregnancy [47]. Eighty five percent (85.2%) know that they cannot take drugs in pregnancy like they do before pregnancy; Tanzanian study found 66.5% of respondents reported that they hesitated to take medications without consulting their physicians [48]. About 24% still believe that walking at night causes fetal abnormality. A greater percentage was coated in another Ghanaian study 48.1% believed that birth defects were of supernatural origin [49]. Gestational age at which mother starts feeling fetal kicks was 4 months in majority, 49.5% of respondents. First perception of fetal kicks by mother is usually at 16 to 20 weeks, and can be perceived externally during examination by 20 weeks [50]. About 90.2% know that bleeding in pregnancy is a danger sign. This is similar to the outcome of a survey in Tanzania where 81% of respondents identified vaginal bleeding as most commonly known danger sign in pregnancy [51]. Majority of the respondents 211 (66.6%) said delivery by caesarean section is safe. A Ghanaian study had reported that 90.5% respondents would agree

to caesarean operation when indicated and 98.1% wanted caesarean section to be part of antenatal clinic education topics [52]. About 86 (27.1%) of the respondents indicated that it is acceptable to them that their female baby be circumcised this is similar to the findings of a Nigerian study that revealed 25.8% of respondents indicating willingness to allow their daughters to be circumcised [36]. Majority of the respondents 85.8% were aware of family planning methods. A similar Nigerian study quoted 89% awareness of family planning among pregnant women [33].

## Conclusion

There is fair knowledge of pregnancy and antenatal care among pregnant women. Notable areas of inadequate knowledge is the impact of caesarean section on subsequent pregnancies. The contribution of adequate and effective information for pregnant women at the Antenatal clinic to favourable pregnancy outcome cannot be overemphasized. If this is further elaborated and intensified with improved antenatal clinic personnel motivation and encouragement, the achievement of ensuring healthy lives and promote well being and target 1 of the SDG to reduce global maternal mortality to less than 70 per 100,000 live births by the year 2030, will not continue to be a mirage.

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