Nigerian Journal of Health Promotion
ISSN: 0995-3895
Vol 15, 2022

HEPRAN

# Knowledge of Anemia in Pregnancy and Nutritional Practices among Pregnant Women in Ebonyi State

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## Abstract

*The objective of the study was to assess the knowledge of anaemia and nutritional practices among pregnant women in Ebonyi State. This was a descriptive cross-sectional survey done among pregnant women that were attending ANC in rural Ebonyi state. A questionnaire was used to collect data among 540 respondents. Data obtained was subjected to descriptive statistical analysis, and presented in a frequency and percentage table. Chi-square ($\chi 2$) was used to test the hypotheses with a p-value of ≤0.05 considered statistically significant. Findings showed that 524(97.0%) of pregnant women had a good knowledge of anemia and that only 36.3% and 34.8% of the respondents indicated always adding meat/poultry/fish and green leafy vegetables respectively in their diets. Knowledge of anaemia was significantly associated with age, location, occupation, gestational age, and number of children ($p<0.05$), while nutritional practices was significantly associated with age, marital status, monthly income, and number of children ($p<0.05$). In conclusion, pregnant women in Ebonyi state had a good knowledge of anaemia but some of them did not exhibit good nutritional practices that would help them prevent anaemia More health education and sensitization programs are, therefore, needed to increase the awareness of anaemia prevention among pregnant women.*

**Key words:** Anaemia knowledge, Nutritional practices, Pregnant women

## Introduction

Anaemia in pregnancy has harmful effects on maternal and child health and the prevalence of anemia during pregnancy is alarmingly high, notwithstanding the implementation of the national nutritional anemia prophylaxis programme which provides iron and folic acid which are the indispensable nutrients lacking in their diet (Nivedita & Shanthini, 2016; Serbesa, Iffa, & Geleto, 2019). Anaemia during pregnancy is the primary cause of illness and death and poor birth outcomes globally. Even with control programmes, anaemia is far beyond the target of the fifth Millennium Development Goal (Margwe, & Lupindu, 2018*).* The commonest source of anaemia is nutritional deficiency of iron with proof suggesting that up to 90% of maternal anaemia may be due to inadequate consumption of dietary iron; however, there are other causes

which include HIV infection, worm infestation, and genetic disorders (Appiah, Nkuah, & Bonchel 2020). Globally 56 million (41.8%) of pregnant women had anemia and low maternal risk perception, poor dietary practice, and low adherence to iron tablets among pregnant women are the main contributors for a high burden of anaemia (Oumer & Hussein, 2018).

Anaemia is defined as a shortened amount of haemoglobin (red blood cells (RBCs) in the blood (Abdelhafez & El-Soadaa, 2012; Abbaspour, Hurrell, & Kelishadi, 2014; Abdelhafez, & El-Soadaa, 2012; WHO, 2011). One of the main component of a safe motherhood initiative is to reduce maternal death by half through the prevention of anaemia during pregnancy (Aboud, Sayed, & Ibrahim, 2019; Pasricha, Drakesmith, Black, & Hipgrave, 2013). Grand multiparity, too early pregnancies, too many and too frequent pregnancies, spacing of less than one year, low socioeconomic status, illiteracy, and late booking of pregnant women at antenatal care units are among the known risk factor for the development of anaemia during pregnancy.

Anaemia during pregnancy may result in pre-term delivery, prenatal mortality, low birth weight, and low mental capacity of children (Hailu Jufa, 2013; Abriha, Yesuf, & Wassie, 2014; Olatunbosun, Olujimi, Abasiattai, Bassey, James, & Anyiekere, 2014; Buseri, Jeremiah, & Usanga, 2012; Alem, Enawgaw, Gelaw, Kena, & Seid, 2013). During pregnancy, the fetus requires iron for blood formation so does the mother, this increases the iron requirements which is higher than that of non-pregnant women. It is, therefore, important that pregnant women have good knowledge of anaemia and have good nutritional practices that would improve and maintain normal haemoglobin throughout the period of pregnancy. Reports from several authors showed different levels of knowledge and practice of anemia prevention among pregnant women. For instance, Dwumfour-Asare and Kwapong (2013) results showed high anaemia consciousness with few respondents in Brosankro community Ghana claiming no knowledge of the causes and effects. Yadav, Swamy, and Banjade (2014) findings revealed that knowledge regarding cause of anemia, sign and symptoms of anemia, proper diet to prevent anemia was poor while knowledge regarding prevention and treatment of anemia, knowledge regarding preventive practice of anemia was good. Abdu and Hussein (2019) revealed that that the knowledge, and practice of pregnant women on preventions of anemia are poor, and Akinwaare, Ogueze, and Aluko (2019) results showed that majority of the pregnant women in Ibadan have adequate knowledge of anemia and its prevention practice in pregnancy. Ademuyiwa, Ayamolowo, Oginni, and Akinbode (2020) stated that the awareness and prevention practices among pregnant women attending the antenatal clinic at LUTH in Lagos, were good.

Furthermore, M'Cormack and Drolet (2012) in their study in Sierra Leone regarding anemia showed that respondents recorded low knowledge. Margwe and Lupindu (2018) revealed that pregnant Women in Tanzania has a low knowledge and negative practice. Nivedita, Fatima, and Shanthini (2016) results of knowledge among pregnant women in India revealed that only 39.87% of the participants were aware of and understood the term anemia, and the prevention practice was poor. Appiah, Nkuah, and Bonchel (2020) findings showed that about 13.5% of the pregnant women had high knowledge of anemia, while 58.4% and 28.1% had moderate and low knowledge; and adherence to anaemia prevention strategies were poor in Ghana. In a cr**oss-**sectional study in tertiary hospital Dhaka Sultana, Ara, Akbar, and Sultana (2018) revealed that knowledge of anemia among pregnant women was poor and a reduced amount of iron intake is the main cause for anemia during pregnancy. Olujimi, Olatunbosun, Aniekan, Abasiattai, Emem, Bassey, James, Ibanga, and Anyiekere (2014) revealed poor practice of anemia prevention strategies including nutrition among pregnant women in Uyo. Serbesa and Iffa (2019) revealed

that in Eastern Ethiopia, most of the pregnant women had a positive practice of the consumption of folic acid, family planning, feeding on fiber rich food during pregnancy. D'Souza, (2015) also showed that the majority of participants had inadequate knowledge and unfavorable practices with regard to iron deficiency anemia and its prevention. Likewise, Aboud, Sayed, and Ibrahim (2019) revealed that in Tabuk region 66.7% of pregnant women had poor knowledge and 40.0 % of them obtained poor practices score regarding prevention of iron deficiency anemia. Sociodemographic characteristics of age, marital status, monthly income, and no of children was significantly associated with practice in studies of Swamy and Banjade (2014), Ademuyiwa, Ayamolowo, Oginni, Akinbode, (2020) and Sultana, Ara, Akbar and Sultana, (2018). The aim of this current study was to assess knowledge of anaemia in pregnancy and nutritional practices among pregnant women in Ebonyi State.

**Purpose of the study**

The aim of the study was to assess Knowledge, Attitude and Practice Levels Regarding Anemia Among Pregnant Women in Rural Ebonyi State. Other specific objectives were:

1. To determine the level of knowledge of anemia among Pregnant Women in Ebonyi State.
2. To determine the level of practice towards anemia prevention among Pregnant Women in Ebonyi State.

**Research Questions**

The following research questions were formulated to guide the study.

1. What is the level of knowledge of anemia among Pregnant Women in Ebonyi State?
2. What is the level of practice towards anemia prevention among Pregnant Women in Ebonyi State?

**Hypotheses**

The following null hypotheses were tested at $p<0.05$ level of significance.

1. There is no significant difference in the level of knowledge and socio-demographic variables of pregnant women in Ebonyi State
2. There is no significant difference in the level of practice and socio-demographic variables of pregnant women in Ebonyi State.

## Methods

A cross-sectional research design was used to carry out a hospital-based study to assess mothers' knowledge, and practice regarding anemia among pregnant women in Ebonyi state Southeastern Nigeria, from July to November, 2020. This study design was used by Ademuyiwa, Ayamolowo, Oginni, andAkinbode, (2020) to determine the awareness and prevention of Anemia among Pregnant Woman attending ANC in Calabar Nigeria. Ebonyi state is part of the southeast geopolitical zone and bounded in the north by Benue state, in the west by Enugu state, in the east by Cross River State and in the south by Abia state. It occupies a land area of 5,954 square kilometers and situated between longitude $7^0$and $8^0$ $30^1$ E and latitude $5^0$ $40^1$ and $6^0$ $54^1$ north of the equator. The population of the study is made up of 164,325 pregnant women, in Ebonyi state projected from 2006 census with a projected growth rate of 2.8% (Ebonyi state ministry of Health, 2020). A multistage sampling procedure was used for the study. First-dividing the state into three senatorial zones namely: Ebonyi North, Central and South senatorial zones; secondly-purposive selection of three LGAs of ohaukwu, izzi and Ikwo, thirdly- random selection of two

wards from the LGAs; and lastly- 6 health facilities were selected from the LGAs using simple random technique of balloting without replacement, where the study respondents (96 each from the health facility) were chosen. The sample size of the study consisted of 540 women of child bearing age. A self-administered questionnaire titled "Questionnaire on Knowledge of Anemia in Pregnancy and Nutritional Practices Among Pregnant Women in Ebonyi State" was used for data collection. The instrument has three sections A-C. Section A elicited information on the Sociodemographic characteristics, B on Knowledge of Anemia and C on the Nutritional Practices**.** Yes and No responses were used in assessing knowledge while practice was assessed using a five-point Likert scale of A=Always, O=Often, R=Rarely, S=Sometimes, N= neutral. Before data collection, the mothers were informed about the objective and nature of the study in their local language and verbal informed consent was obtained before interviewing each participant. 540 Questionnaires were administered to the study participants during antenatal visit. Data obtained was subjected to descriptive statistical analysis, and presented in a frequency and percentage table. Regarding Knowledge, Practice score, correct responses were scored 1 while wrong responses were scored 0. Scores <50% was regarded as poor while that > 50 were good. Similar scoring system was used by Ademuyiwa, Ayamolowo, Oginni, Akinbode (2020). Chi-square ($\chi 2$) was used to test the null hypotheses at 0.05 level of significance.

## Results

Out of 540 questionnaires that were distributed, all (100%) were properly filled and retrieved.

**Table 1: Socio-demographic characteristics of pregnant women in Ebonyi State (*n*=540)**

| Variable | Frequency (*N*) | Percentage (%) |
|---|---|---|
| Age in years | | |
| 21-25 years | 144 | 26.7 |
| 26-30 years | 244 | 45.2 |
| 31-35 years | 64 | 11.9 |
| 36 years and above | 88 | 16.3 |
| Location | | |
| Urban | 400 | 74.1 |
| Rural | 140 | 25.9 |
| Level of education | | |
| no formal | 16 | 3.0 |
| Primary | 56 | 10.4 |
| Secondary | 228 | 42.2 |
| Tertiary | 236 | 43.7 |
| Marital status | | |
| Single | 100 | 18.5 |
| Married | 316 | 58.5 |
| Divorced | 112 | 20.7 |
| Widowed | 12 | 2.2 |
| Family type | | |
| Monogamy | 380 | 70.4 |
| Polygamy | 160 | 29.6 |
| Occupation | | |
| no job | 83 | 15.4 |

| | | |
|---|---|---|
| Farmers | 108 | 20.0 |
| Trader | 97 | 18.0 |
| Artisan | 92 | 17.0 |
| civil servant | 84 | 15.6 |
| Student | 76 | 14.1 |
| Monthly Income | | |
| <10 000 | 244 | 45.2 |
| 11 000-20 000 | 112 | 20.7 |
| 21 000-30 000 | 88 | 16.3 |
| 31 000-40 000 | 48 | 8.9 |
| 41 000- 50 000 | 16 | 3.0 |
| >50 000 | 32 | 5.9 |
| Gestational age | | |
| first trimester | 144 | 26.7 |
| second trimester | 240 | 44.4 |
| third trimester | 155 | 28.8 |
| No of children | | |
| 0 | 112 | 20.7 |
| 1-2 | 176 | 32.6 |
| 3-4 | 180 | 33.3 |
| 5 and above | 72 | 13.3 |
| Total | 540 | 100.0 |

The result of Table 1 above shows the frequency and percentage distribution of pregnant women attending ANC in Ebonyi State. Out of 540 pregnant women that participated in the study, most of them were 26-30years 244(45.2%), lived in the urban residence 400(74.1%), had tertiary education 236(43.7%), married 316(58.5%), monogamous 380(70.4%), farmers 108(20.0), earned monthly income of <₦10, 000 244(45.2%), were in second trimester 240(44.4%) and had 3-4 children 180(33.3%).

**Table 2: Knowledge of Anemia among Pregnant Women in Ebonyi State (*n*=540)**

| S/N | Statements | Responses | |
|---|---|---|---|
| | | Yes (%) | No (%) |
| 1. | Anemia is a condition that occurs when there is a shortage of red blood cells | 95.6 | 4.4 |
| 2. | Hemoglobin (Hb) in the blood less than 11gdL$^{-1}$ is known as anemia | 80.7 | 19.3 |
| 3. | Iron requirement for pregnant women is higher than women who are not pregnant | 88.1 | 11.9 |
| 4. | Worm infection is a risk factor of anemia | 71.9 | 28.1 |
| 5. | Inadequate intake of iron in the diet during pregnancy can cause anemia | 87.4 | 12.6 |
| 6. | Gap duration between pregnancies less than 2 years is one of the causes of anemia during pregnancy | 68.9 | 31.1 |
| 7. | Pale face or tongue is a sign of anemia | 86.7 | 13.3 |
| 8. | Tiredness and weakness are the symptoms of anemia | 92.6 | 7.4 |
| 9. | Anemia pregnant women is at risk of losing their lives during or after | 91.1 | 8.9 |

| | | | |
|---|---|---|---|
| | pregnancy | | |
| 10. | Anemia during pregnancy will cause low birth weight babies (less than 2.5kg) | 87.4 | 12.6 |
| 11. | Intake of diet rich in iron during pregnancy can prevent anemia | 94.1 | 5.9 |
| 12. | Liver is a food that high in iron | 88.1 | 11.9 |
| 13. | Meat is from animal sources that are rich in iron | 88.9 | 11.1 |
| 14. | Green leafy vegetables such as spinach are vegetables sources which rich in iron | 88.9 | 11.1 |
| 15. | Intake of citrus fruits such as lemons during the main meal can help the absorption of iron | 83.7 | 16.3 |
| 16. | Drinking coffee or tea will decrease iron absorption if taken during the main meal | 60.0 | 40.0 |
| 17. | Anemia pregnant women should take iron pill every day to prevent anemia | 80.0 | 20.0 |
| 18. | Pregnant women are given iron pills for free by the health clinic during pregnancy | 59.3 | 40.7 |
| 19. | Regular medical check-ups during pregnancy are important | 97.0 | 3.0 |
| | Level of Knowledge | | |
| | Good | 97.0 | |

The result of table 2 above showed that overall, 524(97.0%) of pregnant women had a good knowledge of anemia in pregnancy while a few 16(3.0%) had poor knowledge. Regarding anemia prevention, most of the respondents knew that pregnant women should take iron pill every day to prevent anemia 432(80.0%), and that regular medical check-ups during pregnancy are important 524(97.0%).

**Table 3: Nutritional practices of Pregnant Women in Ebonyi State (*N*=540)**

| S/N | Statements | A | O | S | R | N |
|---|---|---|---|---|---|---|
| 1. | Do you change your normal dietary patterns during pregnancy? | 22.2 | 22.2 | 42.2 | 14.8 | 10.4 |
| 2. | Are you a vegetarian during pregnancy? | 26.7 | 9.6 | 31.1 | 22.2 | 22.2 |
| 3. | Do you vomit in early pregnancy? | 19.3 | 6.7 | 34.1 | 24.4 | 15.6 |
| 4. | Do you have pica (such as ice, mud or charcoal) during pregnancy? | 5.9 | 10.4 | 35.6 | 11.9 | 36.3 |
| 5. | Do you food taboos during pregnancy? | 9.6 | 6.7 | 23.7 | 7.4 | 52.6 |
| 6. | Do you add meat/poultry/fish in your diet every day during pregnancy? | 36.3 | 11.1 | 34.1 | 10.4 | 8.1 |
| 7. | Are you taking citrus fruits or fruit juice during the main meal every day during pregnancy? | 31.1 | 17.0 | 37.8 | 5.9 | 8.1 |
| 8. | Do you include green leafy vegetables in your daily diet during pregnancy? | 34.8 | 17.0 | 34.1 | 9.6 | 4.4 |
| 9. | Do you drink coffee or tea during the | 14.1 | 11.9 | 43.0 | 13.3 | 17.8 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | main meal during pregnancy? | | | | | |
| 10. | Do you skip meals during pregnancy? | 11.9 | 3.7 | 40.0 | 11.9 | 32.6 |
| 11. | Do you use cooking utensils made of iron during cooking? | 19.3 | 7.4 | 42.2 | 4.4 | 26.7 |
| 12. | Are you taking iron tablets daily | 32.6 | 9.6 | 37.0 | 13.3 | 7.4 |
| 13. | Do you take any supplements or traditional medicine during pregnancy? | 21.5 | 7.4 | 35.6 | 5.2 | 30.4 |
| | Level of practice | | | | | |

**A=Always, O=Often, R=Rarely, S=Sometimes, N= neutral,

The result of table 3 shows that only 36.3% and 34.8% of the respondents indicated always adding meat/poultry/fish and green leafy vegetables respectively in their diets. The table also shows that 11.9% skip meals when pregnant. Interestingly, slightly more than half of the participants do not have food taboos during pregnancy.

**Table 4: Association between level of knowledge and Socio-demographic Variables**

| Variable | Knowledge level | | ÷² | Df | p-value |
|---|---|---|---|---|---|
| | Good | Poor | | | |
| Age in years | | | | | |
| 21-25 years | 27.5 | 0.0 | 10.361[a] | 3 | 0.016* |
| 26-30 years | 44.3 | 75.0 | | | |
| 31-35 years | 12.2 | 0.0) | | | |
| 36 years and above | 16.0 | 25.0 | | | |
| Location | | | | | |
| Urban | 73.3 | 100.0 | 5.771[a] | 1 | 0.016* |
| Rural | 26.7 | 0.0 | | | |
| Level of education | | | | | |
| no formal | 3.8 | 0.0 | 5.321[a] | 3 | 0.150 |
| Primary | 9.9 | 25.0 | | | |
| Secondary | 42.7 | 25.0 | | | |
| Tertiary | 43.5 | 50.0 | | | |
| Marital status | | | | | |
| Single | 19.1 | 0(0.0 | 4.329[a] | 3 | 0.228 |
| Married | 58.0 | 75.0 | | | |
| Divorced | 20.6 | 25.0 | | | |
| Widowed | 2.3) | 0.0 | | | |
| Family type | | | | | |
| Monogamy | 70.2 | 75.0 | 0.169[a] | 1 | 0.681 |
| Polygamy | 29.8 | 25.0 | | | |
| Occupation | | | | | |
| no job | 14.3 | 50.0 | 21.532[a] | 5 | 0.001* |
| Farmers | 19.8 | 25.0 | | | |
| Trader | 18.5 | 0.0 | | | |
| Artisan | 16.8 | 25.0 | | | |

| | | | | | |
|---|---|---|---|---|---|
| civil servant | 16.0 | 0.0 | | | |
| Student | 14.5 | 0.0 | | | |
| Monthly Income | | | | | |
| <10 000 | 45.0 | 50.0 | 10.551[a] | 5 | 0.061 |
| 11 000-20 000 | 21.4 | 0.0 | | | |
| 21 000-30 000 | 16.0 | 25.0 | | | |
| 31 000-40 000 | 8.4 | 25.0 | | | |
| 41 000- 50 000 | 3.1 | 0.0 | | | |
| >50 000 | 6.1 | 0.0 | | | |
| Gestational age | | | | | |
| first trimester | 26.7 | 25.0 | 19.481[a] | 2 | 0.000* |
| second trimester | 45.8 | 0.0 | | | |
| third trimester | 27.5 | 75.0 | | | |
| No of children | | | | | |
| 0 | 21.4 | 0.0 | 15.060[a] | 3 | 0.002* |
| 1-2 | 31.3 | 75.0 | | | |
| 3-4 | 33.6 | 25.0 | | | |
| 5 and above | 13.7 | 0.0 | | | |

*Significant, df-degree of freedom, p-value-probability value

Table 4 above showed that knowledge of anaemia possessed by pregnant women was significantly associated with age, location, occupation and gestational age. Thus, the null hypotheses of no significant difference in level of knowledge of pregnant women was accepted on level of education, marital status, family type and monthly income ($p>0.05$), but rejected on age, location, occupation, gestational age, and number of children which were significant ($p<0.05$) in the study.

**Table 5: Association between Nutritional practices and socio-demographic variables**

| **Variables** | **N** | **Df** | **$\chi 2$** | **p-value** |
|---|---|---|---|---|
| Age | | | | |
| 21-25 years | 144 | 3 | - | 0.000* |
| 26-30 years | 244 | | | |
| 31-35 years | 64 | | | |
| 36 years and above | 88 | | | |
| Location | | | | |
| Urban | 400 | 537 | 1.593 | 0.112 |
| Rural | 140 | | | |
| Level of education | | | | |
| no formal | 16 | 3 | - | 0.089 |
| Primary | 56 | | | |
| Secondary | 228 | | | |
| Tertiary | 236 | | | |
| Marital status | | | | |
| Single | 100 | 3 | - | 0.000* |
| Married | 316 | | | |
| Divorced | 112 | | | |

| | | | | |
|---|---|---|---|---|
| Widowed | 12 | | | |
| Family type | | | | |
| Monogamy | 380 | 537 | 0.591 | 0.555 |
| Polygamy | 160 | | | |
| Occupation | | | | |
| no job | 83 | 5 | - | 0.078 |
| Farmers | 108 | | | |
| Trader | 97 | | | |
| Artisan | 92 | | | |
| civil servant | 84 | | | |
| Student | 76 | | | |
| Monthly Income | | | | |
| <10 000 | 244 | 5 | | 0.000* |
| 11 000-20 000 | 112 | | | |
| 21 000-30 000 | 88 | | | |
| 31 000-40 000 | 48 | | | |
| 41 000- 50 000 | 16 | | | |
| >50 000 | 32 | | | |
| Gestational age | | | | |
| first trimester | 144 | 2 | | 0.339 |
| second trimester | 240 | | | |
| third trimester | 155 | | | |
| No of children | | | | |
| 0 | 112 | 3 | | 0.000* |
| 1-2 | 176 | | | |
| 3-4 | 180 | | | |
| 5 and above | 72 | | | |
| Total | 540 | | | |

*Significant, df-degree of freedom, p-value-probability value

Table 5 above shows that age, marital status, monthly income, and no of children was significantly associated with nutritional practices(p=0.000) while urban resident, family type, gestational age were not significantly associated with nutritional practices. However, the null hypotheses of no significant difference in the nutritional practice of pregnant women was accepted for location of residence, level of education, family type, occupation, and gestational age ($p>0.05$), but rejected for age, marital status, monthly income, and number of children which were found to be significant with practice in the study ($p<0.05$).

## Discussion

In this present study, majority of the respondents were within the ages of 26 and 30 years, in their second trimester, had tertiary education, married and from monogamous families but with the lowest income level. Most of the sociodemographic variables influence persons' knowledge and practices (age, marital status, monthly income, no of children). The findings of the study showed that majority of the respondent had a good knowledge of anemia in pregnancy. Age, location, occupation, and gestational age were significantly associated with the respondents' knowledge of anaemia. Although, level of education was not significantly associated with the

respondents' knowledge, part of the findings could be because majority of the respondents had tertiary education that may have exposed them to information about anaemia. It may also be because they receive health education (health talk) on certain conditions in pregnancy during antenatal visits. The finding is in line with, Dwumfour-Asare, and Kwapong, (2013); Yadav, Swamy, and Banjade (2014); Abdu and Hussein (2019); Akinwaare, Ogueze, and Aluko, (2019); and Ademuyiwa, Ayamolowo, Oginni, and Akinbode (2020) which stated that pregnant women had good knowledge and practice in their studies, but in contrast with the findings of M'Cormack, and Drolet (2012); Margwe and Lupindu-Anaemia (2018); Nivedita, Fatima, and Shanthini (2016); Appiah, Nkuah, and Bonchel (2020); Sultana, Ara, Akbar, and Sultana (2018); Nivedita, Fatima, and Shanthini (2016); Olujimi, Olatunbosun, Aniekan. Abasiattai, Emem, Bassey, James, Ibanga, and Anyiekere (2014); Appiah, Nkuah, and Bonchel (2020); Serbesa and Iffa (2019); Serbesa and Iffa (2019); D'Souza (2015); and Aboud, Sayed, and Ibrahim (2019) that reported poor knowledge of anemia in pregnancy among pregnant women in their studies.

The result further showed that majority of the respondents did not exhibit good nutritional practices. Less than half of the respondents added meat/poultry/fish and leafy green vegetables in their diets during pregnancy, which could help improve and maintain the normal haemoglobin level and prevent anaemia in pregnancy. Age, marital status, monthly income, and no of children was significantly associated with nutritional practice. The finding is in line with Yadav, Swamy, and Banjade (2014); Ademuyiwa, Ayamolowo, Oginni, and Akinbode (2020); and Sultana, Ara, Akbar, and Sultana (2018).

## Conclusion

Pregnant women in Ebonyi State had a good knowledge of anaemia but majority of them did not exhibit good nutritional practices that would help them prevent anaemia in pregnancy.

## Recommendation

There should be continuous awareness creation, education, and sensitization programmes including good nutritional practices in the diet of pregnant women to increase adherence to anaemia prevention strategies among pregnant women in Ebonyi State.

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