

Knowledge and Adherence to Anaemia Prevention in Pregnancy Among Pregnant in Ladoke Akinola University Teaching Hospital Ogbomosho, Oyo State

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ABSTRACT- *This study adopted descriptive cross-sectional study to assess knowledge and adherence to Anaemia prevention in pregnancy among pregnant in Ladoke Akinola University Teaching Hospital Ogbomosho, Oyo State. This study was conducted among pregnant women attending antenatal clinic the Teaching Hospital. The sample size of 174 respondents were selected using purposive sampling techniques and each were presented with a validated questionnaire used for data collection and returned for data analysis. Data were collated, sorted and processed into excel spread sheet. The processed data were analysed using SPSS edition 27. Specifically data was analysed using descriptive statistics (frequencies, percentages and mean). Positive Items were considered significant at mean equal or greater than 3, while negative items were considered significant at mean less than 3. Findings from this study shows that, most of the respondents were 37 years and below, educated and that, majority have had at least one child previously. More findings revealed that, significant number of the respondents had poor knowledge (Mean<3.0) and poor level of adherence to prevention of Anaemia in pregnancy (Mean<3.0). The study concluded that, poor knowledge explains low adherence to prevention of Anaemia in pregnancy among respondents. It is recommended that, pregnant women need to be enlightened that anaemia could be a serious complication resulting from poor nutrition, malaria among others, so they should embrace prevention.*

I. INTRODUCTION

Anaemia in pregnancy is one of the most prevalent global health challenges across the globe, with specific emphasis on developing and under-developed counties (Asmamaw & Getnet, 2022). Its occurrence has been attributed to various factors, which transcend socio-economic and health factors, with recent facts questioning adherence to existing preventive strategies. For instance, economic challenges such as increasing food inflation, food insecurity among others, continue to define the Anaemia occurrence across most African countries such as Nigeria. On the other hand, inconsistent health policies such as ineffective Campaign

strategies, which stem from political change in administration, affecting ideology and change in strategies have been one of the major factor contributing to Anaemia occurrence in pregnancy (Duneeh et al., 2025). However, report has shown that, Anaemia in pregnancy is preventable, if appropriate information were disseminated to pregnant women and they adhere to regulations (Umoke et al., 2022). This is due to the fact that, pregnancy and delivery outcome depend so much on the effort of the women to adhere to preventive measures. Consequently, Al-Sattam et al., (2022) held that, every woman need access to quality antenatal care during pregnancy, with skilled birth attendance.

Anaemia is a health challenge that becomes severe during pregnancy. It is commonly defined as a health condition where there is a deficiency in oxygen carrying capacity of the blood, due to poor functionality of red blood cells (Akinwaare et al., 2019). Masukume et al. (2019) specify that, Anemia refers to decrease in Hb levels to below the normal range of 13.5 gm/dl (men), 11.5 gm/dl (women), and 11.0 gm/dl (children and pregnant women). It is associated with an increased risk of morbidity and mortality, especially in pregnant women. Anaemia affects pregnant women in any trimesters of pregnancy and its occurrence has been attributed to lifestyle, nutritional factors, pregnancy status, age and hereditary (Akinwaare et al., 2019). In sub-Saharan Africa causes of anaemia include, Iron deficiency, malaria, micronutrient deficiency and infection (Listowel et al., 2023). Notable among the causes of anaemia in pregnancy, iron deficiency and malaria are predominant in Nigeria. The most important cause of anaemia is deficiency of iron, folate and vitamin B 12, however iron deficiency anemia is the most common one (Appiah et al., 2020). Therefore World Health Organization recommends that about 30-60mg of elemental iron and 400mcg of folic acid should be taken during the

second and third trimester of pregnancy. Yet, evidence continue to show a consistent rise in the prevalence of anaemia, especially across developing countries.

The prevalence of anaemia in pregnancy has remained high in Nigeria despite improved antenatal care (Ndukwu et al., 2018). Anaemia in pregnancy increases the risk of pre-term delivery and low birth weight babies. Globally, anaemia affects 38% of pregnant women in developed countries and 46% of pregnant women in developing and under-developed nation (Ajepe et al., 2020; Nnamdi et al., 2024). Over 40% of pregnant women worldwide are anaemic; low- and middle-income countries (especially those in sub-Saharan Africa) make a disproportionately higher contribution to the global burden (WHO, 2023). Specifically the prevalence of anaemia is high in Africa compare to other continents. Munyogwa et al. (2021) reported that, 57% of pregnant women experience anaemia in Africa, while 48% women experience anaemia during pregnancy in Asia. In Nigeria, the prevalence is 61.1%, and varies across States (Adeyemi *et al.*, 2023). More so, Anaemia among pregnant women in Nigeria range from 47% to 70% across States in the country (Babah et al., 2024). This condition continue to be a major direct and indirect contributors to maternal mortality and could as well become epidemic, if proper precautionary measures are not taken. Although previous effort had seen the World Health Organization recommended daily intake of iron-based nutrients, Folic acid among other supplements, yet the level of adherence to these regulations had been question across all level and various factors have been provided to be a major barrier for poor adherence. For instance, Anand et al., (2014) reported side effects like gastro-intestinal as barrier for pregnant women from complying with the routine intake of iron-based nutrients and other anaemia preventive options. Yet knowledge coupled with right adherence would aid prevention of anaemia,

thereby reducing the prevalence. based on this backdrop, the study assess Knowledge and Adherence to Anaemia prevention in pregnancy among pregnant in Ladoke Akinola University Teaching Hospital Ogbomoso, Oyo State.

II. OBJECTIVE OF THE STUDY

1. Assess knowledge on Anaemia among pregnant women in Ladoke Akinola University Teaching Hospital Ogbomoso, Oyo State.
2. Determine adherence to prevention of Anaemia in pregnancy among pregnant women in Ladoke Akinola University Teaching Hospital Ogbomoso, Oyo State.
3. Awareness of risk factors of Anaemia in pregnancy among pregnant women in Ladoke Akinola University Teaching Hospital Ogbomoso, Oyo State.

III. METHODOLOGY

This study adopted descriptive cross-sectional design and was conducted among 174 pregnant women attending antenatal clinic of Ladoke Akinola University Teaching Hospital Ogbomoso, Oyo State. The respondents who were 18years and above were selected using purposive sampling techniques. The study instrument was a structured and validated questionnaire, which was presented to individual respondents for completion and was retrieved, thereafter. Data were collated, sorted and processed into excel spread sheet. The processed data were analysed using SPSS edition 27. Specifically data was analysed using descriptive statistics (frequencies, percentages and mean). Positive Items were considered significant at mean equal or greater than 3, while negative items were considered significant at mean less than 3.

IV. RESULT

Table 1: Demographic Characteristics

Items	Frequency (174)	Percentage (%)
Age		
18-27 years	74	42.5
28-37 years	83	47.7
38 years or above	17	9.8
Educational Qualification		
No Formal Education	49	28.2
Primary	40	23.0

Secondary	55	31.6
Tertiary	30	17.2
Marital Status		
Single	76	43.7
Married	91	52.3
Others	7	4.0
Religion		
Christianity	99	56.9
Islam	75	43.1
Previous number of children		
0	53	30.5
1-3	121	69.5

Table 1 above presents frequency distribution of respondents on demographic characteristics. Results revealed that, 42.5% were age 18-27 years, 47.7% were age 28-37 years and 9.8% were age 38 years and above. Also, 28.2% had no-formal education, 23.0% had primary education, 31.6% had secondary education and only 17.2% had tertiary education. More so, 43.7% were still single (not yet legally

married, others cohabiting), 52.3% were legally married and 4.0% chose others like divorced, separation among others. More results revealed, 56.9% practiced Christianity, 43.1% practiced Islam and none chose others. Results also revealed that, 30.5% had no children yet, while 69.5% had between 1-3 children previously.

Table 2: Descriptive Statistics of the respondents showing knowledge on Anaemia in Pregnancy

Items	N	Min	Max	Mean	Std. Deviation
Anaemia is reduced functioning level of Haemoglobin	174	1	5	2.64	.401
Minimum Haemoglobin required during pregnancy is 11 gm/dl	174	1	5	1.89	.810
Anaemia can be prevented by iron rich foods and iron tablets	174	1	5	3.46	.903
Orange and Lemon increases iron absorption	174	1	5	3.37	1.021
Anaemia in pregnancy is nutritional disorder	174	1	5	3.11	1.476
Tiredness and weakness may be symptoms of anaemia	174	1	5	1.38	.858
Palpitation and breathing difficulty are sign of anaemia	174	1	5	2.60	.565
Valid N (listwise)	174				

Table 2 presents descriptive statistics of the respondents on knowledge of Anaemia in Pregnancy. Result shows that, significant number of the respondents had good knowledge about anaemia prevention, such as use of iron rich foods and iron tablets (3.46), Orange and Lemon increases iron absorption (3.37) and understanding anaemia in pregnancy is a nutritional disorder (3.11). However a

significant number of the respondents lack adequate knowledge about, what anaemia is, such as Anaemia is reduced functioning level of Haemoglobin (2.64), Minimum Haemoglobin required during pregnancy is 11 gm/dl (1.89), Tiredness and weakness may be symptoms of anaemia (1.38) and that, Palpitation and breathing difficulty are sign of anaemia (2.60).

Table 3: Descriptive Statistics of the respondents showing adherence to prevention of Anaemia

Items	N	Min	Max	Mean	Std. Deviation
I ensure to take well balanced diet	174	2	5	1.20	.301
I take green leafy vegetables, fruits and grains rich in iron	174	1	5	3.06	.966
I often take meat as a rich source of iron	174	1	5	2.85	1.156
I take liver as a rich source of iron	174	1	5	1.70	.283
I ensure to take daily iron and folic acid as taught in antenatal	174	1	5	2.46	.903
I ensure to test and treat hook worm infection	174	1	5	1.89	.810
I take citrus fruits always to promotes absorption of iron	174	1	5	3.37	1.021
I ensure to guide against practices that may cause malaria	174	1	5	2.13	.722
Valid N (listwise)	174				

Table 3 presents descriptive statistics of the respondents showing adherence to prevention of Anaemia. Result shows that, significant number of the respondents adhere to taking green leafy vegetables, fruits and grains rich in iron (3.06) as well as take citrus fruits always to promotes absorption of iron (3.37). However a significant part do not adhere

to, taking well balanced diet (1.20), taking meat as a rich source of iron (2.85), taking liver as a rich source of iron (1.70), taking daily iron and folic acid as taught in antenatal (2.46), to test and treat hook worm infection (1.89) and guide against practices that may cause malaria (2.13).

Table 4: Descriptive Statistics of the respondents showing awareness of risk factors of Anaemia in pregnancy

Items	N	Min	Max	Mean	Std. Deviation
Repeated pregnancy at a short interval less than 2 year could cause anaemia.	174	1	5	2.10	.513
Pregnancy creates large demand of iron which is needed to develop the placenta	174	1	5	3.25	.945
Pregnant women that don't eat balance diet may have anaemia	174	1	5	3.05	.881
Pregnant woman that do not take green vegetables and fruits do have anaemia	174	1	5	3.92	.979
Pregnant woman with untreated or prolonged malaria is at risk of anaemia	174	3	5	2.59	.618
Pregnant women with family history of anaemia may develop anaemia	174	1	5	3.89	1.258
Valid N (listwise)	174				

Table 4 presents descriptive statistics of the respondents showing awareness of risk factors of Anaemia in pregnancy. Result shows that, significant number of the respondents had high awareness towards fact that, Pregnancy creates large demand of iron which is needed to develop the placenta (3.25), Pregnant women that don't eat balance diet may have anaemia (3.05), Pregnant woman that do not take green vegetables and fruits do have anaemia (3.92) and that Pregnant women with family history of anaemia may develop anaemia (3.89). However a

significant number of the respondents had low Awareness of risk factors of Anaemia in pregnancy with regard to, Repeated pregnancy at a short interval less than 2 year cause anaemia (2.10) and that, Pregnant woman with untreated or prolonged malaria is at risk of anaemia (2.59).

V. DISCUSSION

Findings from this study shows that, most of the respondents were 37 years and below, and that,

majority have had at least one child previously. This is an indication that, selected respondents were within childbearing age group. This implies that, the study focused on matured and experienced persons, which would attest to the credibility of the data collected. Findings also shows that, majority of the respondents were educated and over half were married and indication that, a significant part of the respondents would understand provided information at antenatal and may also enjoy the support of husband in prevention of anaemia. Similarly Asmamaw and Getnet, (2022) reported that Maternal education status was statistically associated with pregnant mothers knowledge on anaemia.

More findings revealed that, significant number of the respondents had poor knowledge on Anaemia in Pregnancy. This agrees with Listowel et al., (2023) who found that, below half (36%) of the participants have adequate knowledge of iron nutrition and supplementation. The plausible reason to this is that, the symptoms of anemia such as weakness of the body are common and could be misinterpreted for effect of stress or even malaria. Therefore it is important that, women are take cognizance of their health and seek help from health professional on each occasion. This probably would help them understand that, iron rich food is key to reducing risk of having anemia during pregnancy. However, significant number of respondents also lack some basic information as regards definition of Anaemia as it relates minimum Haemoglobin required during pregnancy to prevent Anaemia. This probably might be that, they found the terms “heamoglobin” technical. This findings disagrees with the study of Al-Sattam et al., (2022) who found overall knowledge about anaemia in pregnancy to be 60% with fair knowledge.

Another finding revealed that, significant number of the respondents had high Awareness of risk factors of Anaemia in pregnancy. This findings is evidence in the results presented in table 4 above, where significant number of respondents affirmed that, pregnancy creates large demand of iron, inability to eat balance diet, take green vegetables and fruits and family history of anaemia increase risk of anaemia in pregnancy. More findings revealed that, significant number of the respondents show poor level of adherence to prevention of Anaemia in pregnancy. This agrees with Umoke et al., (2022) who found that only 36.3% and 34.8% of the respondents indicated

always adding meat/poultry/fish and green leafy vegetables respectively in their diets.

This was evidence in the results presented in table 3 above, where respondents declined that, they ensure to take balance diet. Although a significant part takes vegetables, Fruits and grains and citrus fruits that enhance indirect and indirect provision of iron. However majority declined taking meat, liver, daily iron and folic acid as practices, which could also help prevent anaemia in pregnancy. This findings disagrees with the study of Kamau et al., (2019) who studied maternal knowledge on iron and folic acid supplementation and associated factors among pregnant women in a rural county in Kenya and found that multiparous women were more likely to score high knowledge of iron and folic acid supplementation knowledge than pregnant women with no or one child.

VI. CONCLUSION

Even though anaemia in pregnancy is preventable, using daily iron intake to improved iron stores in pregnant women including non-pregnant women, the condition still accounts for several maternal deaths. Anaemia in pregnancy increases the risk of premature delivery and low birth weight babies. Even though anaemia in pregnancy is preventable using daily iron intake to improved iron stores in pregnant women including non-pregnant women, the condition still accounts for several maternal deaths. However, in care for pregnant women, preventive measures through knowledge acquisition should be the strategy adopted for safe health. The study concluded that, a significant part of the respondents had poor knowledge on anaemia. Also this study concluded that, majority of the respondents don't adhere to prevention of anaemia. Based on the findings of this study, it is recommended that, pregnant women need to be enlightened that anaemia could be a serious complication resulting from poor nutrition, malaria among others, so they should embrace prevention. Also, pregnant women should be encourage to test for hook work infestation and treat any likely occurrence.

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