

**ASSESSMENT KNOWLEDGE, PERCEPTION AND PREVENTION OF
ANEMIA IN PREGNANCY AMONG PREGNANT WOMEN IN NIGERIA.**

(A case study of Ondo State)

BY

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CERTIFICATION

This is to certify that this dissertation was carried out by **Olubunmi Omowumi AYOTUNDE** Matric No. **City UD168** of the department of public Health City University Cambodia, under my guidance and supervision and the work is submitted with my approval.

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DEDICATION

This dissertation is dedicated to Almighty God.

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ABSTRACT

World Health Organization (WHO) defined Anemia as a hematological condition and a sign of an underlying disorder characterized by a reduction in the number of red blood cells or a reduction below normal in the number of red corpuscles per cubic millimeter, the quantity of hemoglobin and the volume of packed red cells per 100ml of blood as a result of impaired erythrocyte loss which leads to impaired tissues perfusion. Anemia in pregnancy otherwise known as gestational anemia is common in developing countries of the world where it affects more than 57% of pregnancies and adversely impacts the course of gestation and its outcomes. Therefore, this study examined Knowledge, perception and prevention strategies of anemia in pregnancy among pregnant women in Ondo State. The study adopted a descriptive research design survey type for the investigation. The sample consisted of three hundred and sixty nine (369) pregnant women selected across the three senatorial districts in Ondo state through multi stage sampling procedure. Data were collected through a structured questionnaire tagged (KPPAIP) and the results were analyzed using descriptive statistics (frequency table, percentage, mean, standard deviation, pie chart and bar chart) and inferential statistic(pearson product moment correlation) at 0.05 level of significance. Findings of the study revealed that pregnant women in Ondo state have good knowledge, good perception and low prevention strategies of anemia in pregnancy. This is evident from the fact that majority 300 representing (81%) of the respondents agreed that lack of or inadequate iron in the body is the cause of Anemia Also, a good number of them 290 representing (78.5%) equally affirmed that lack of vitamin B can result in Anemia in pregnancy. Majority of the respondents were equally of the perspective that Anemia cause miscarriage in pregnancy (84%). Similarly, they also affirmed that Anemia can bring about low birth weight on the part of unborn baby 290 (78.5%). (78.5%) of the respondents also agreed that Anemia can make pregnant woman eye to pale or white. However, this level of good knowledge and perception of Anemia in pregnancy among respondents did not translate to good knowledge of the preventive strategies of the disease condition as the majority of them 290 (78.5%) were of the opinion that prevention of malaria in pregnancy does not help in preventing Anemia in pregnancy. Similarly, 81% of them did not agree that iron supplementation do help in preventing Anemia in pregnancy and eating of

fruits and vegetable ditto regular consumption of organ meat . The tested hypothesis using pearson product moment correlation revealed a significant relationship between knowledge and perception of Anemia in pregnancy among the respondents which implies their level of knowledge on Anemia in pregnancy and significantly influenced their perception of the disease condition (Knowledge and perception r -cal (0.725) > r -tab(0.162), at 0.05 level of significant . Based on the findings, it was concluded that pregnant women in Ondo State have good knowledge, good perception and low level of preventive strategies of pregnancy induced anemia. Therefore, it was recommended among others that improvement on anemia screening for pregnant women should be intensified upon at the first antenatal care both at government and private health facilities in the state.

Keywords: Knowledge, perception, prevention strategies, Anemia, antenatal care.

CHAPTER ONE

INTRODUCTION

1.1. Background to the Study

World Health Organization (WHO) defined Anemia as a hematological condition and a sign of an underlying disorder characterized by a reduction in the number of red blood cells or a reduction below normal in the number of red corpuscles per cubic millimeter, the quantity of hemoglobin and the volume of packed red cells per 100ml of blood as a result of impaired erythrocyte loss which leads to impaired tissues perfusion.

Anemia in pregnancy otherwise known as gestational anemia is common in developing countries of the world where it affects more than 57% of pregnancies and adversely impacts the course of gestation and its outcomes. According to World Health Organization 2017 estimates, Anemia prevalence in Nigeria stands at 35%-75% among pregnant women. This statistics is further substantiated by previous studies that showed that over 60% of women experience anemia during gestation (Monrokolaet, al 2019, Ayokunleet' al 2020). The causes of Anemia according to the same body includes the following pregnancy and child birth, repeated infections (malaria, hookworm), poor feeding due to socio-economic factors (poverty and low educational status) and hematological conditions such as impaired erythrocyte production or increased erythrocyte loss. Malaria in pregnancy is one of the predominant causes of anemia in pregnancy. According to WHO estimates of 2019; malaria accounted for more 56% anemia cases in pregnancy in Nigeria, forty percent of all maternal prenatal deaths are linked to anemia. Therefore, Anemia poses danger to both health workers and government due to its attendant consequences on health and socioeconomic indices. These indices reflect the quality of life of citizens of a nation. Anemia in pregnancy poses a danger to both mother and child. WHO reports estimates of 2019 have it that 35% to 80% of pregnant women in developing countries are anemic: notably in Nigeria (60% pregnant women are anaemic) , Tanzania (80% pregnant women have iron deficiency anaemia and 1/3 of the anaemia women has malaria? Coasts Kenya (75.5% are anaemic while 9.8% are severely anaemic). Also, a WHO study in Guinea during 2000-2006 revealed the 56% of pregnant women who died during child birth were

anaemic while a small percentage (18%) of the pregnant women from industrialized countries is anaemia.

In Nigeria, studies carried out by various groups have shown varying results on this topic but much work have not been done in this area in Ondo State, this assertion therefore gave birth to this research work. For instance, study done by Esikeet'al the University Teaching Hospital AbakalikiEbonyi State, revealed that anaemia in pregnancy has a prevalence date of 75% out of a population of 3,400 women who attended antenatal clinic at the hospital that year. The study also revealed that but of the 1,904 (56%) cases of severe anaemia having haemoglobin level less than 10.5g/df 1,550 women responded to treatment with what and pamentheralhaematinus while the remaining 54% women required blood transfusion.

1.2. Statement of problem

Causes of Anaemia in pregnancy remain an intractable Public Health Problem in developing countries, Nigeria inclusive. According to WHO estimates of 2019; Anaemia affects over half of the pregnant women in developing countries including Nigeria with a prevalence at 60% in pregnancy and about 7.0% of the women said to be severely anaemic. Therefore, Anaemic poses danger to both health workers and government due to its attendant consequences on health and socio-economic indices which reflect the quality of life of citizens. Studies have shown that Anemia increases prenatal risks for mothers and neonates and increases overall infant mortality.

Also, it affects adversely cognitive performed behaviour and physical growth of infants. Anemia depresses the immense states and increases the morbidity from infections in all age groups. Moronkoola et al 2019 identified poor utilization of ante- natal services, distance to health facility, and increasing age of pregnant women, teenage pregnancy, and low educational attainment as risk. Factors associated with causes of anemia in pregnancy.

The researcher had also observed of late, the increase in the number of reported cases of gestational anemia among pregnant women in most of the health facilities across the local governments in Ondo state which has assumed a worrisome dimension among the stake holders, hence the urgent need to assess the level of knowledge, perception and prevention strategies of Anemia in pregnancy among pregnant women

in the state with a view to identify the causes and make appropriate recommendations in this regard.

1.3. Purpose of the Study

The main purpose of the study was to assess knowledge, perception and prevention of anemia in Pregnancy among pregnant Women in Ondo State.

Specifically, it will;

1. Determine the level of knowledge on anemia in pregnancy among pregnant women in Ondo State.
2. Assess the level of perception of anemia in pregnancy among pregnant women in Ondo State.
3. Assess anemia prevention strategies among pregnant women in Ondo State?
4. Assess the influence of factors such as educational level, access to health care and cultural beliefs on Anemia in pregnancy among pregnant women in Owo-State.
5. Assess influence of socio-economic factors on Anemia in pregnancy among pregnant women in Ondo-state.
6. Assess the difference in level of knowledge of anemia preventive strategies in pregnancy between urban and rural area pregnant women in Ondo- state.

1.4 Research Questions

The following research questions were raised for the purpose of the study.

1. What is the level of knowledge on anemia in pregnancy among pregnant women in Ondo State?
2. What is the level of perception of anemia in pregnancy among pregnant women in Ondo State?
3. What are the prevention strategies of anemia in pregnancy among pregnant women in Ondo State?
4. What is the influence of factors such as educational level Assessto healthcare and cultural beliefs on Anemia in pregnancy in Ondo-State?

5. Do Socio-economic factors have influence on anemia in pregnancy among pregnant women in Ondo-state?
6. Is there difference in knowledge of anemia in pregnancy preventive strategies between urban and rural pregnant women in Ondo-state?

1.5. Research Hypotheses

The following hypotheses are generated for the study

- H₀₁:** There is no significant relationship between respondent's knowledge and perception towards anemia in pregnancy among pregnant women in Ondo State.
- H_{a1}:** There is significant relationship between respondent's knowledge and perception towards anemia in pregnancy among pregnant women in Ondo State.
- H₀₃:** Factors such as educational level, Access to healthcare and cultural beliefs will not significantly influence anemia prevention and treatment among pregnant women in Ondo-state.
- H_{a3}:** Factors such as educational level, Access to healthcare and cultural beliefs will significantly influence anemia prevent and treatment among pregnant women in Ondo-state.
- H₀₄:** There is no significant relationship between socio-economic factors and anemia in pregnancy among women in Ondo-state.
- H_{a4}:** There is significant relationship between socio-economic factors and anemia in pregnancy among pregnant women in Ondo-state.
- H₀₅:** There is no significant different in the level of awareness of preventive of anemia in pregnancy between urban and rural pregnant women in Ondo-state.
- H_{a5}:** There is significant difference in the knowledge of preventive strategies of anemia in pregnancy between urban and rural pregnant women in Ondo-state.

1.6. Significance of the Study.

This study would be of immense benefit to pregnant women, health workers, medical and nursing students, future researchers and society at large as it has identified the geographical, socio-economic and cultural factors that are responsible for the increased cases of gestational anemia and provide appropriate preventive measures and recommendations towards reducing the incidence of the disease condition which will be of immense benefit to pregnant women in Ondo state and the society in general.

In addition, government and non-governmental organizations working on maternal health can use the results of this study as an input in their planning for improving utilization of maternal health services among women at large due to its indepth analysis

Not only that, it would also add to the existing body of research literature which may be harnessed by future researchers in this area and other related field of human endeavors in view of the volume of information it has provided.

1.7 Scope of the Study

The scope of the study is delimited to pregnant women residing in all 18 eighteen Local Government Areas of Ondo State. Geographically, it is delimited to 18 local government areas in Ondo State. The content is delimited to knowledge, perception and prevention of anemia in pregnancy among pregnant women in Ondo State. Four research assistants.

1.8 Operational Definition of Terms

Anemia – condition in which the number of red blood cells or the hemoglobin concentration within them is lower than normal. Hemoglobin level of less than 11.0g/dl during first or second trimester,.

Pregnancy – condition or period of being pregnant

Moderate anemia - Hemoglobin level 7 to 9.9g/dl

Severe anemia - Hemoglobin level 10 to 10.9g/dl.

Mild anemia - Hemoglobin level 1

Iron deficiency Anemia- A condition in which blood lacks adequate healthy red blood cells.

Pernicious Anemia: is a type of anemia caused by severe deficiency of vitamin B.12 in the body.

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

The study examined knowledge, perception and preventive strategies of anemia in pregnancy among pregnant women in Ondo State.

Descriptive research design of the survey type was adopted in the study. The population of this study consisted of all pregnant women in Ondo State. The sampled for this study consisted of three sixty nine (369) pregnant women selected across the three senatorial districts of ondo state using multi-stage and stratified random sampling procedures. The data for this study was collected through the use of self-designed instrument titled “knowledge, perception and prevention strategies of anemia in pregnancy among pregnant women (KPPAIP) which was validated by the researcher’s supervisor and other specialists in the department of public health City University in order to ascertain the face and content validity while the reliability was ascertained using the Cronbach Alpha reliability test method and reliability co-efficient of 0.77 was obtained. Data obtained for this study were analyzed using descriptive and inferential statistics. The research questions were analyzed using both descriptive statistics (frequency table, percentages, mean, pie-chart, and bar-chart) and inferential statistics. The only Hypothesis was tested using pearson product moment correlation .The hypothesis was tested on 0.05 level of significance. Findings from the study are summarized thus:

- Pregnant women have good knowledge of anemia in pregnancy in Ondo state.
- Pregnant women have good perception of anemia in pregnancy in Ondo State.
- There is low awareness of anemia in pregnancy preventive strategies among pregnant women in Ondo State.
- There was a significant relationship between knowledge and perception of anemia in pregnancy among pregnant women in Ondo
- The good knowledge and perception anemia in pregnancy among pregnant women in Ondo state did not translate to high level awaness of the preventive strategies of the disease condition

5.2 Conclusion

Findings from the study revealed that pregnant women in Ondo State have good knowledge, good perception and low prevention strategies of pregnancy induced anemia. However, there is the need to further create awareness among pregnant women in the Local Government, particularly among the pregnant women residing in the villages who still hold on to their cultural practices.

5.3 Recommendations

- Strengthening health education on Anemia prevention during antenatal care at both government and private hospitals across the Local Government.
- Nutrition/Diet counseling should be promoted in all antenatal clinics towards improvement in prenatal iron folate supplementation.
- Government should do more on socio economic status of women
- Awareness should also be created on prompt treatment of episode of malaria in pregnancy as the study revealed malaria has negative effect on red blood cell formation.
- Improvement on screening for anemia at the first prenatal care visit at government and private hospital

5.4 Limitation of the study

A good number of the respondents can hardly read and write which posed a serious threat to adequate comprehension of the content of the questionnaire. However, this limitation was addressed by the use of research assistants that were fluent in the local dialect and were able to explain the content of the instrument explicitly to the respondents.

5.5 Suggestion for further Studies

Further study should be carried out on how cultural and traditional factors affect pregnant women disposition to pregnancy induced anemia in various communities in Ondo State.

5.5 Contribution to knowledge

(1) This study would be of immense benefit to pregnant women, health workers, medical and nursing students, future researchers and society at large as it has identified the geographical, socio-economic and cultural factors that are responsible for the increased cases of gestational anemia and provide appropriate preventive measures and recommendations towards reducing the incidence of the disease condition which will be of immense benefit to pregnant women in Ondo state and the society in general.

(2) In addition, government and non-governmental organizations working on maternal health can use the results of this study as an input in their planning for improving utilization of maternal health services among women at large.

(3) Not only that, it would also add to the existing body of research literature which may be harnessed by future researchers in this area and other related fields of human endeavour.

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QUESTIONNAIRE ON:

Assessment of Knowledge, perception and prevention strategies of Anemia in pregnancy among pregnant women in Ondo State .

Dear respondent,

This questionnaire is carefully designed to obtain relevant information on the topic under research. It is divided two sections (A-B). The first section deals with information about you while the other sections address the topic. Therefore, you are kindly implored to respond honestly to each question. We promise that your response will be treated with utmost confidentiality. Please tick where necessary.

SECTION A

INSTRUCTION: Please kindly tick () appropriate option.

Socio-demographic profile of respondents

1. Age: _____ years ()
2. Gender : _____ Female ()
3. Type of family: Nuclear family (), Polygamous family (), Extended family ()
Single parent ()
4. Type of religion: Christianity (), Islam (), Traditional worshippers ()
5. Home location: Rural (), Urban ()
6. Occupation: Civil servant (), Farming () Trading (), Artisan (), Teaching ()
7. Parity: Zero, One-four, >four
8. Level of Education, No formal education, Primary Education, Secondary School Education, Tertiary Education.

SECTION B

Kindly respond by marking the response as it occurs to you using the format below:
Yes, No, I don't know

Level of knowledge of Anemia in pregnancy care among respondents.

S/N	Variable	Yes	No	I don't know
9.	Where do you hear about Anemia in pregnancy Television <input type="checkbox"/> Radio Jingle <input type="checkbox"/> Newspaper <input type="checkbox"/> Antenatal clinic			
10.	Do you believe lack of iron in the body is the cause of Anemia?			
11	Do you believe lack of vitamin B can cause Anemia in pregnancy			

12	Loss of blood during after delivery can cause Anaemia in pregnancy			
13	Having had two pr-poignancies close together can cause anemia in pregnancy			
14	Do you believe that not taking food that are rich in iron can cause anemia			
15	Having multiple gestation can use anemia			
16	Can eating foreign food cause Anaemia in pregnancy			
17	Is Anemia caused by exposure to evil forces			

18	Anemia is a typical sign of pregnancy and therefore cannot be prevented			
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Section B; Perception of anemia in pregnancy among respondents

S/N	Variable	Yes	No	I don't know
19	Does anemia cause miscarriage			
20	Can anemia make baby to have low weight			
21	Does Anaemia cause headache			
22	Can anemia make pregnant women dizzy			
23	Can anemia make pregnant women eyes pale or white			
24	Can anemia make pregnant women lose sleep			

25	Eyes to pale or white can cause death of pregnant women and baby			
26	Does anemia result in inability of the baby to develop in the womb			
27	Can anemia cause stillbirth of unborn baby?			
28	Can anemia cause depression in a women after birth			
29	Does anemia cause weakness and tiredness in pregnant women			

SectionC; Prevention strategies of Anemia in pregnancy among respondents

S/N	Variable	Yes	No	I don't know
30	Does regular intake of folic acid prevent anemia in pregnancy			
31	Does regular eating of balanced diet prevent anemia in pregnancy			
32	Can malaria prevention in pregnancy help prevent anemia in pregnancy			
33	Pregnancy optimal birth spacing of least 2 years help?			
34	Does eating of organ meats prevents Anemia in pregnancy			
35	Does eating of snail during pregnancy help preventing anemia in pregnancy?			

36	Does eating okro help in the prevention of Anemia in pregnancy			
37	Does regular eating of fruits and vegetables prevent anemia in pregnancy			
38	Iron supplementation prevent anemia in pregnancy among pregnant women			