

# Factors influencing dietary practices among pregnant women in Adeoyo Maternity Hospital, Yemetu, Ibadan, Oyo State

Olajide Tayo Emmanuel\*, Awoniyi Adeola Mary\*\*, Aina Folasade\*\*\*, Ojo Eunice Abimbola\*\*\*\*, Ope-Babadele Oluwatosin Oyindamola\*\*\*\*\*

\*Department of Adult Health/ Medical-Surgical Nursing, Babcock University School of Nursing, Ilishan Remo, Ogun State, Nigeria.

\*\*University College Hospital, Ibadan, Oyo State, Nigeria.

\*\*\*Department of Maternal and Child Health Nursing, Babcock University School of Nursing, Ilishan Remo, Ogun State, Nigeria.

\*\*\*\*Department of Psychiatry and Mental Health Nursing, Babcock University School of Nursing, Ilishan Remo, Ogun State, Nigeria.

\*\*\*\*\*Department of Adult Health, Babcock University School of Nursing, Ilishan Remo, Ogun State, Nigeria.

DOI: 10.29322/IJSRP.8.10.2018.p8249

<http://dx.doi.org/10.29322/IJSRP.8.10.2018.p8249>

## Abstract

The menace of maternal morbidity and mortality has remained a major maternal and child health problem in developing countries and prominent among the risk factors is inadequate dietary practice in pregnancy. The study assessed factors influencing dietary practices among pregnant women in Adeoyo Maternity Hospital Yemetu, Ibadan, Oyo State.

The study adopted a descriptive research survey. The populations were 626 pregnant women attending Adeoyo Maternity Hospital, Ibadan Oyo State. Sample size was determined using solvin's formula and simple random technique through was used to select 244 pregnant women. A researcher-designed questionnaire was used to obtain data on factors influencing dietary practice among pregnant women. Data was processed using statistical package for social science version 21. Three research questions were answered using descriptive statistics of percentage while three hypotheses were tested using chi square at 0.05 level of significance.

Majority 75% of the pregnant women had moderate knowledge level concerning dietary practice during pregnancy, 58.2% agreed that cultural belief influence dietary practice while 50.8% agreed that religious belief influence dietary practice. There is no significant relationship between participants knowledge regarding dietary intake and dietary practice ( $p= 0.200$ ). There is no significant relationship between participants level of education and dietary practice ( $p= 0.077$ ). There is significant relationship between monthly income and dietary practice ( $p= 0.001$ ).

Pregnant women have moderate knowledge level about dietary practice and monthly income significantly influence dietary practice. Nurses should educate pregnant women about cost effective dietary practice

**Keywords:** Dietary knowledge, Dietary practice, Factors, Nutrition, Pregnant women.

## I. INTRODUCTION

Pregnancy is a period of great physiological changes that demand healthy dietary lifestyle among pregnant women because the growing fetus draws a lot of energy and nutrients from the mother to improve physical, physiological and psychological progression. The increased metabolic, physiologic and nutritional demand during pregnancy has given maternal dietary practice much attention over the years. The extra demand of pregnant women's body system has resulted in the need for an improved dietary practice to meet the nutritional needs of the pregnant woman and the developing fetus [1],[2].

According to [3] the menace of maternal morbidity and mortality has remained a major health problem in developing countries. Prominent among the risk factors for maternal morbidity and mortality inadequate nutrition and dietary practice in pregnancy.

Inadequate dietary practice among pregnant women has been identified as one of the causes of maternal death during pregnancy. Inadequate dietary practice among pregnant women has been attributed to factors such as educational level, income level, knowledge regarding dietary practice during pregnancy, cultural belief and ethnicity as well as religious belief [4].

According to [5] inadequate dietary practice among pregnant women has been associated with negative maternal outcomes low birth weight and poor mental development of the fetus. Globally, the estimated prevalence of anemia in pregnancy has been 50% with higher prevalence of 75% in the developing countries and 15% in developed countries. This has been attributed to inadequate dietary practice among pregnant women. Several studies have associated inadequate dietary practice among pregnant women with maternal complication such as anemia and immunosuppression as well as fetal complications such as low birth weight, decreased physical, physiological and cognitive ability in children [6].

Anemia in pregnancy, low birth weight, decreased physical, physiological and cognitive ability in children has been persistent as a result of inadequate dietary practice among pregnant women. This may be attributed to factors influencing dietary practice such as level of education, cultural belief, religious belief, level of income and knowledge regarding dietary practice [7]. Researcher through clinical experience has observed more cases of anemia among pregnant women attending Adeoyo Maternity Hospital. This may be attributed to factors influencing dietary practice among pregnant women. Hence, the need for a study to assess factors influencing dietary practice among pregnant women attending Adeoyo Maternity Hospital Yemetu, Ibadan, Oyo State, Nigeria.

## **II. MATERIALS AND METHODS**

### **2.1 Study Design**

The study adopted a descriptive research design to assess factors influencing dietary practice among pregnant women attending Adeoyo Maternity Hospital, Yemetu, Ibadan, Oyo State, Nigeria between January and March, 2018.

### **2.2 Study setting**

The study was carried out at Adeoyo Maternity Hospital, Yemetu, Ibadan, Oyo State, Nigeria. Adeoyo Maternity Hospital is located in Ibadan North Local Government of Oyo State and was founded in 1928. There are 189 nurses working in the hospital and it provides maternal and child healthcare services to people in Ibadan and its surrounding. It is made up of antenatal clinic, labor ward, antenatal ward, gynecological ward, lying in ward, children's ward, immunization clinic, post-caesarian section ward, gynecological clinic and family planning clinic.

### **2.3 Sample size and Sampling Technique**

The study population was 626 pregnant women attending antenatal clinic per month obtained from the register in Adeoyo Maternity Hospital, Yemetu, Ibadan. Sample size was determined using solvin's formula  $n = N/1+N(e)^2$  where n is required sample size, N is the total population and e is the error of tolerance (5%). The formula indicated a minimum sample of 244. Simple random sampling technique was adopted to select 244 pregnant women for the study using the ballot method and the pregnant women were selected on

daily basis as they attend ante natal clinic for four weeks. Adeoyo Maternity Hospital runs her antenatal clinic for three days in a week. The clinic register and list of names of participants were compared to ensure that no participants was selected twice.

## 2.4 Instrumentation

A researcher-designed questionnaire consisting of 47 items structured around factors influencing dietary practices among pregnant women was utilized for the collection of data for the study. It consisted of five sections which include Socio-demographic characteristics made up of 8 questions, Obstetric characteristics made up of 12 questions, knowledge of pregnant women regarding dietary practice made up of 11 questions and factors influencing dietary practices among pregnant women made up of 6 questions. Knowledge score of participants below 50% was categorized as inadequate knowledge level, knowledge score of participants between 50%-70% was categorized as moderate knowledge level and knowledge score of participants above 70% was categorized as adequate knowledge level.

## 2.5 Procedure for data collection

A letter of introduction and permission for data collection was obtained from Babcock University Health Research and Ethical Committee (BUHREC) and submitted to Oyo State Hospital Management Board. Participants were recruited and informed about the purpose, course and potential benefits of the study. Consent was obtained from the participants after which they were asked to complete the researcher-designed questionnaire. The questionnaire was translated to Yoruba because majority of the participants were Yoruba who could not read and understand English language. Data was collected for four weeks on clinic days. The collection of data was done in three days per week with 27- 30 participants captured per day. 244 questionnaires were distributed to participants in total and same retrieved adequately completed.

## 2.6 Method of data analysis

Data was analyzed using Statistical Package for Social Sciences version 21. Three research questions were answered using descriptive statistics of percentage and three hypothesis were tested using Chi-square at 0.05 level of significance.

## 2.7 Ethical consideration

Ethical clearance was obtained from Babcock University Health Research Ethics Committee and permission was obtained from Oyo State Hospital Management Board. Written informed consent was obtained from the participants and the purpose of the study was explained to the participants. Information obtained from participants was kept confidential. Participant's freedom to withdraw from the study at any point in time in spite of the consent was also respected.

# III. RESULTS AND DISCUSSION

## 3.1 Result Presentation

**Table 1: Demographic characteristics of participants (n=244)**

Variables	Variable Levels	N	Percentage %
Age(years)	≤20	6	2.50
	21-30	117	48.0

	31-40	118	48.3
	41-50	3	1.2
Total		244	100
<b>Marital Status</b>	Married	241	98.8
	Cohabiting	3	1.2
Total		244	100
<b>Religion</b>	Christianity	140	57.4
	Islam	104	42.6
Total		244	100
<b>Ethnicity</b>	Yoruba	233	95.4
	Hausa	2	0.8
	Igbo	7	3.0
	Others	2	0.8
Total		244	100
<b>Monthly Income</b>	Less than N5,000	2	0.8
	N5,000 to N9,000	20	8.2
	N10,000 to N14,000	52	21
	N15,000 to N19,000	43	18
	N20,000 and Above	119	52
Total		244	100
<b>Level of Education</b>	No formal education	5	2.0
	Primary education	22	9.0
	Secondary education	122	50.0
	Tertiary education	95	39
Total		244	100
<b>Occupation</b>	Unemployed	16	6.6
	Student	8	3.3
	Trader	121	49.6
	Artisans	99	40.5
Total		100	100
<b>Spouse Occupation</b>	Unemployed	3	1.2
	Self employed	149	61.1
	Salary earner	92	37.7
Total		244	100

Table 1 shows majority of the participants were aged 31-40years (48.3%). Majority of the participants were married (98.8%). Majority of the participants were Christians (57.4%). Majority of the participants were Yoruba (95.4%). Majority of the participants earned monthly income of N20,000 and above (52%). Majority of the participants had secondary school certificate (50%). Majority of the participants were traders (49.6%). Majority of the participants spouse were self-employed (61.1%)

**Table 2: Obstetric variables of participants (n=244)**

Variables	Variable Levels	Frequency	Percentage %
<b>Number of Live births</b>	1-4	215	87.7
	5-8	30	12.3
<b>Number of still births</b>	None	218	89.3
	One	22	9.1
	Two	4	1.6

<b>Numbers of induced abortion</b>	None	189	77.5
	1-2	49	20.0
	3-5	6	2.5
<b>Complication experienced in previous pregnancies</b>	Yes	63	28.4
	No	181	71.6

Table 2 shows majority of the participants have had between 1-4 live births (87.7%). Majority of the participants have had no still birth previously (89.3%). Majority of the participants have had no induced abortion previously (77.5%). Majority of the participants have not experienced pregnancy complications previously (71.6%).

**Table 3: Knowledge category regarding diet in pregnancy n= 244**

Category	Inadequate (below 50%) Frequency (%)	Moderate (50% - 70%) Frequency (%)	Adequate (Above 70%) Frequency (%)
Participants	37(15%)	183(75%)	24(10%)

Table 3 reveals that majority of participants 183(75%) had moderate knowledge about dietary practice in pregnancy.

**Table 4: Factors influencing dietary practices among the participants n = 244**

Variables	Variable levels	Frequency	Percentage%
<b>Cultural beliefs</b>	Yes	142	58.2
	No	102	41.8
<b>Ignorance</b>	Yes	84	34.4
	No	160	65.6
<b>Religious belief</b>	Yes	124	50.8
	No	120	49.2
<b>literacy</b>	Yes	184	75.4
	No	60	24.6
<b>Socio-economic status</b>	Yes	224	91.8
	No	20	8.2

Table 4 shows that majority 142(58.2%) of the participants agreed that cultural beliefs influence dietary practice. Majority 160(65.6%) of the participants agreed that ignorance influence dietary practice. Majority 124(50.8%) of the participants agreed that religious belief influence dietary practice. Majority 184(75.4%) of the participants agreed that literacy influence dietary practice. Majority 224(91.8%) of the participants agreed that socio-economic status influence dietary practice.

**Table 5: Inferential statistics regarding knowledge and dietary practices among participants**

Participants knowledge regarding	Practice of Dietary Intake		Total	Df	$\chi^2$	p-value
	Inadequate practice	Adequate practice				

<b>dietary Intake</b>	<b>F(%)</b>	<b>F(%)</b>				
Inadequate knowledge	9(3.7)	19(7.8)	28(11.5)	1	1.644	.200
Adequate knowledge	97(39.7)	119(48.8)	216(88.5)			
Total	106(43.4)	138(56.6)	244(100.0)			

Table 5 shows that there is no significant relationship between participants knowledge regarding dietary intake and dietary practice (p=0.200).

**Table 6: Inferential statistics regarding level of education and dietary practice among participants**

<b>Participants level of education</b>	<b>Dietary practice</b>		<b>Total</b>	<b>Df</b>	<b><math>\chi^2</math></b>	<b>p-value</b>
	<b>Inadequate practice N(%)</b>	<b>Adequate practice N(%)</b>				
No Formal Education	5(2.0)	0	5(2.1)	3	7.032	.077
Primary Education	10(4.1)	12(4.9)	22(9.0)			
Secondary Education	53(21.7)	69(28.3)	122(50.0)			
Tertiary Education	38(15.6)	57(23.4)	95(38.9)			
Total	106(43.4)	138(56.6)	244(100.)			

Table 6 shows that there is no significant relationship between participants level of education and dietary practice (p=0.077).

**Table 7: Inferential statistics regarding monthly income and dietary practice among participants**

<b>Participants monthly income (naira)</b>	<b>Practice of Dietary Intake</b>		<b>Total</b>	<b>Df</b>	<b><math>\chi^2</math></b>	<b>p-value</b>
	<b>Inadequate practice N(%)</b>	<b>Adequate practice N(%)</b>				
Less than N5,000	2(.8)	0	2(.8)	3	26.485	.000
N5,000 to N9,000	15(6.4)	5(2.1)	20(8.5)			
N10,000 to N14,000	21(8.9)	31(13.1)	52(22.0)			
N15,000 to N19,000	28(11.9)	15(6.4)	43(18.2)			
N20,000 and Above	37(15.7)	82(34.7)	119(50.4)			
Total	103(43.6)	133(56.4)	236(100.0)			

Table 7 shows that there is significant relationship between participants monthly income and dietary practice (p=0.000).

### **3.2. Discussion of findings**

More pregnant women between 31-40years visit Adeoyo Maternity Hospital for antenatal care because of dominance of pregnant women with this age group. This disagrees with the previous descriptive study conducted by [8] in which majority of participants were between 21-30years. More married pregnant women visit Adeoyo Maternity Hospital for antenatal care because of the support of the spouse. This agrees with previous descriptive study finding by [9] in which majority of the participants were married. More Christians visit Adeoyo Maternity Hospital for antenatal care which is due to Christian dominance in the area. This agrees with previous descriptive study finding by [9] in which majority of participants were Christian.

More Yoruba pregnant women visit Adeoyo Maternity Hospital for antenatal care which is due to Yoruba tribe dominance in the area. This agrees with previous descriptive study finding by [10] which had more Yoruba participants. More moderate and high income earners visit Adeoyo Maternity Hospital for antenatal care because of the economic status in the area which agrees with previous study finding by [10] which had more participants earning more than #20,000. More pregnant women with secondary school certificate visit Adeoyo Maternity Hospital for antenatal care which is due to availability of time for people with secondary school certificate to attend antenatal. This disagrees with a descriptive study finding by [10] which had more participants with tertiary school certificate. More traders visit Adeoyo Maternity Hospital for antenatal care because of the availability of time for trader to attend antenatal clinic. This disagree with previous descriptive study by [10] in which majority of participants were artisans.

Majority of the pregnant woman visiting Adeoyo Maternity Hospital have had between 1-4 previous live births, nil previous still birth, nil previous induced abortion or pregnancy complications. This is due to their accessibility to health education on pregnancy and healthy dietary practices during pregnancy which is delivered by Nurses during antenatal clinic visits.

Pregnant women possess moderate knowledge regarding dietary practice because of their access to antenatal clinic health educations and information on healthy lifestyle and practices including dietary practice during pregnancy. This finding disagrees with previous descriptive study by [11] in which majority of participants had adequate knowledge. The cultural beliefs and religious belief of pregnant women influence their dietary practice because some culture and religion consider some certain nutritious and beneficial diet for pregnant women a taboo which make them abstain from it. This agrees with previous descriptive study finding by [12] in which majority of participants agreed that cultural and religious belief influence dietary practice during pregnancy

A descriptive study by [13] among 401 pregnant women to describe the relationship between participants knowledge regarding dietary intake and dietary practice support the findings of this study which pointed out that dietary intake knowledge is unable to result in adequate dietary practice among pregnant women. It may be due to lack of interest in making a change in one's diet, perceived or encountered barriers that may prevent people from eating healthier diets such as the lack of money (cost), lack of time or poor appetite.

Participant's educational level did not influence their dietary practice because education does not automatically translate into good practice due to perceived or encountered barriers that may prevent participants from adequate dietary practice. This finding support previous descriptive study by [14] in which high literacy level of participants did not translate to good dietary practice. Participants' monthly income influenced their dietary practice because of the availability of resources to purchase nutritious diets by pregnant women will determine its intake. This finding agrees with a previous cross sectional study by [9] which reported a significant relationship between participants' monthly income and dietary practices.

#### IV. CONCLUSION

Based on the findings of the study, knowledge regarding dietary intake during pregnancy among participants is moderate, cultural and religious belief influence dietary practice during pregnancy. Knowledge regarding dietary intake and level of education is not significantly related with dietary practice during pregnancy while monthly income is significantly related with dietary practice during pregnancy.

#### ACKNOWLEDGEMENT

Researchers appreciate all the participants in this study for their cooperation during the data collection periods.

#### REFERENCES

- [1] D.K.Eshar, and I.K. Ali, "Effect of Nursing Intervention on the Beliefs and Practices of Pregnant Women Regarding Vitamins and Minerals Intake," *Int. J. of Nov. Res. in Hea. and Nurs.*, vol.3, no. 1, pp. 66-80, 2016.
- [2] O.O. Sholeye, C.A. Badejo, and O.A. Jeminusi, "Dietary Habits of pregnant women in Ogun-East Senatorial Zone, Ogun State, Nigeria: A comparative study," *Int. J. of Nut. and Metab.*, vol. 6, no. 4, pp. 42-49, 2014.
- [3] A. Titilayo, M.E. Palamuleni, and O. Omisakin, "Sociodemographic factors influencing adherence to antenatal iron supplementation recommendations among pregnant women in Malawi: Analysis of data from the 2010 Malawi Demographic and Health Survey," *Mal. Med. J.*, vol. 28, no. 1, pp. 1-5, 2016.
- [4] P.O. Ogunjuyigbe, E.O. Ojofeitimi, R.A. Sanusi, A. Akinlo, S.A. Liasu, and O.O. Owolabi, "Food aversion during pregnancy: a major cause of poor pregnancy outcome in Nigeria," *J. of Chi. Clin. Med.* vol. 3, no. 2, pp. 389-397, 2008.
- [5] A. Hareyan, "Psychological factors on diet during pregnancy," *Hop. Blo. Sch. of Pub. Hea.* vol. 20, no 8, pp. 200-210, 2005.
- [6] A. Oomen, M. Vatsa, V.K. Paul, and R. Aggarwal, "Breastfeeding practices in urban and rural areas," *Ind. J. of paed.* vol. 40, no. 10, pp. 891-894, 2009.
- [7] R. Shrimpton, "Life cycle and gender perspectives on the double burden of malnutrition and prevention of diet-related chronic diseases," *Sci. Ne. J.* vol. 33 no. 10, pp. 11-14, 2008.
- [8] C.K.A. Nti, and R. Adanu, "Dietary practice and nutritional intakes of pregnant women in Accra, Ghana," *J. of Bio. Sci.* vol. 4, no. 4, pp. 358-365, 2012.
- [9] B. Alemayelu, and T. Tessema, "Effect of phosphorus application and varieties on grain yield and yield components of common beans (*Phaseolus vulgaris*)," *Amer. J. of Pla. Nut. and Fert. Tech.* vol. 5, no. 3, pp. 79-84, 2015.
- [10] C.O. Anyasor, and H.O. Olowu, "Factors influencing the nutritional practice of pregnant women living in a semi-urban region of Ogun State, Nigeria," *Sau. J. of Med.* vol. 2, no. 5, pp. 114-120, 2017.
- [11] G.A. Okunaiya, G.T. Fadupin, and D. Oladeji, "Knowledge, attitude and practice of maternal and child food-based dietary guidelines among pregnant women in urban slum of Lagos State," *Clin. in Moth. and Chi. Hea.*, vol. 13 no. 8, pp. 240-245, 2016.
- [12] P. Ankita, K. Hardika, and K. Girija, "A study on taboos and misconceptions associated with pregnancy among rural women of Surendranagar district," *Nat. J. of Ind. Assoc. of Prev. and Soc. Med.*, vol. 4, no. 2, pp. 20-25, 2013.
- [13] M. Mirsanjari, W. WanMuda, A. Ahad, M.S. Othman, and P. Mosavat, "Inadequate dietary intake in women with antenatal psychology Distress: A population based study in Pakistan," *Sci. and Edu. J.*, vol. 39, no. 15, pp. 153-158, 2012.
- [14] A. Suh, A.N. Tanya, P. Njotang, and P. Ndombo, "Knowledge and attitude of pregnant mothers towards maternal dietary practice during pregnancy at the Etoug-Ebe Baptist Hospital," *Yaou. Sci. and Dis. J.* vol. 17, no. 2, pp. 15-20, 2016.

#### AUTHORS



**First Author-** Olajide Tayo Emmanuel, MSc Nursing, Department of Adult Health/ Medical-Surgical Nursing, Babcock University School of Nursing, Ilishan Remo, Ogun State, Nigeria., tayoolajide33@gmail.com

**Second Author-** Awoniyi Adeola Mary, MSc Nursing, University College Hospital, Ibadan, Oyo State, Nigeria., adeolaawoniyi03@yahoo.com

**Third Author-** Aina Folasade, MSc Nursing, Department of Maternal and Child Health Nursing, Babcock University School of Nursing, Ilishan Remo, Ogun State, Nigeria., ainatayo2002@yahoo.com

**Fourth Author-** Ojo Eunice Abimbola, MSc Nursing, Department of Psychiatry and Mental Health Nursing, Babcock University School of Nursing, Ilishan Remo, Ogun State, Nigeria., favouredbim@gmail.com

**Fifth Author-** Ope-Babadele Oluwatosin Oyindamola, MSc Nursing, Department of Adult Health, Babcock University School of Nursing, Ilishan Remo, Ogun State, Nigeria., oluwatomisinope2016@gmail.com

**Correspondence Author-** Olajide Tayo Emmanuel, tayoolajide33@gmail.com, olajidetayo33@yahoo.com, +2348035342335