



# **Nutritional Practices Among Pregnant Women In Abua/Odual Local Government Area In Rivers State**

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## **ABSTRACT**

Pregnant women are expected to observe some health practices for the good health of both the mother and the unborn child. Nutritional practice is one of the healthy practices expected of the pregnant women. This study examined the nutritional practices among pregnant women in Abua/Odual Local Government Area of Rivers State. The descriptive survey design was used with a population comprising of fourteen thousand, one hundred and forty-nine (14,149) pregnant women in Abua/Odual Local Government Area. A multi-stage sampling procedure was used to select a sample size of 433 for the study. Data was collected using a structured questionnaire and analyzed with the statistical package for social sciences version 23.0 using statistical tools such as percentage, mean, standard deviation, chi-square and regression. The findings of the study showed that the nutritional practices commonly observed by the respondents was drinking of more glass of fluid in a day ( $\bar{X} = 3.75 \pm 0.535$ ) followed by intake of fat and oil food substances e.g coconut, groundnut and pea ( $\bar{X} = 3.38 \pm 0.577$ ). Based on the findings of the study, it was concluded that pregnant women in Abua/Odual Local Government Area had a fair nutritional practice. The study recommends that Community stake holders should also be incorporated to promote good nutrition among pregnant women as they can influence it by discouraging or pregnant women from eating certain food due to some cultural reasons.

**Keywords:** Pregnant women, Nutritional Practices, Age, Parity, Malnutrition, Rivers State

## **INTRODUCTION**

Poor nutrition during pregnancy is a major public health problem in the United States and other countries. There is compelling evidence from epidemiologic studies that poor nutrition during pregnancy, in the form of insufficient intake of nutrient, low protein or deficiencies in micro nutrients, is associated with poor developmental outcomes in children including lower cognitive functioning, deficits in attention and disruptive behavior problems (Riley, 2006).

Age is specified as the whole duration of a being, in this case the whole duration of the expectant mothers, being alive which counts from birth. Age of the pregnant woman is a very important variable to consider in alliance to health promotion of the pregnant woman, it has been observed that there is a discrepancy level of healthy lifestyle among expectant mothers with regards to age differences, this may also be applicable to the pregnant women in Abua Local Government Area of Rivers State Nigeria; this is because the expectant mothers in the area under study are perceived to have the same characteristics with others, and therefore the need to consider age as an important variable among the pregnant women.

Vincent (2012) defined nutrition as combination of dynamic process by which the consumed food is utilized for nourishment and structural and functional efficiency of every cell of the body. Nutrition also

deals with the science of food and its role in body growth and development and in maintenance of normal health.

Nutrition is the science that explores the relationship between the essential elements of the food we eat and physiological functions (Donatelles & Davis, 2009). Nutrition during pregnancy is very important to guarantee that the baby is healthy and strong when it is born. This according to Karger and Basel (2010) can be achieved when pregnant women follow scientifically proven nutritional practices and that nutrition is important to pregnant women because it can spell the difference between a healthy new born and a sickly child. Women who are malnourished during pregnancy are more likely to experience adverse pregnancy outcomes.

According to Amanuel and Tona (2018), nutritional practice is defined as observable actions or behavior of nutritional habit and can be classified as having good nutritional practice and poor nutritional practices and poor dieting practices.

In the developing countries, many pregnant women restrict their food intake for different reasons such as; to have smaller infants because smaller infant will carry a lower risk of delivery complications, cultural reasons and big babies make delivery difficult. (Kuche, Singh & Moges, 2015).

Nutritional knowledge without practice is not meaningful. Nutritional practice is outward demonstration of nutritional knowledge in our homes, outside our homes and even in social gatherings. Knowledge about nutrition prepares one for meaningful nutritional practices and it is acquired through formal and non – formal education and it is old as culture it is since the knowledge is passed on from generation to generation and from parent to their offspring.

Malnutrition is closely related with survival, poverty and development and it prevents individuals and the society from achieving full potential. Commonly speaking, an individual who is not well fed may not have the ability to think rationally and make meaningful contribution to life issues. This makes nutrition very vital in the life of any person and particularly pregnant women to achieve success during and after the gestational period. Shekar cited in Tenaw, Arega and Tachbele (2018) specified that, malnutrition is an umbrella term for poor nutrition, whether that is excess consumption of nutrients (over-nutrition) or inadequate consumption or absorption of one or more nutrients (under-nutrition) while under-nutrition includes being underweight for one's age, too short for one's age (stunted), dangerously thin (wasted) and deficient in vitamins and minerals (micronutrient malnutrition). Though widespread poor nutrition and micronutrient deficiencies persist, obesity is also fast emerging as a problem. However, the health risk of obesity cannot be overemphasized.

In respect of the foregoing, Schroeder (2013) argued that, malnutrition is caused by a deficiency in the intake of nutrients by the cells of the body and can lead to deficiency disease attacks like children growing slowly or not at all they (children) may develop bowed bone and enlarge joints, dry/flaky and rough skin, may have decayed teeth, inflamed eyes and dry hair. The Health Sector Development Programme (2010) noted that, the major nutritional problems among pregnant women are protein-energy malnutrition and micronutrient deficiencies such as vitamin A, iron, and iodine.

Good nutrition is an essential part of a healthy lifestyle and a healthy baby. Pregnancy is one time in life when weight gain is not only desirable, but also encouraged. Recommended weight gain may depend on a number of factors, including the weight a woman had before the pregnancy. A very important time of fetal development is during the first several weeks of pregnancy The nutritional changes that should occur prior to pregnancy must be individualized based on the medical status, weight and eating habits of the woman. The good nutrition during pregnancy is of great benefit not only to the mother but also to the baby. The benefits of good nutrition during pregnancy as given by Victor (2012) include the following: reduces pregnancy complications, reduces incidence of birth defects, ensures a healthy weight for the baby and healthy development of the baby after birth.

### **Aim and Objectives of the Study**

The aim of this study is to investigate the practices among pregnant women in Abua/Odual Local Government Area of Rivers State. Specifically, the study intends to achieve the following objectives. To:

1. determine the level of nutritional practices, of pregnant women in Abua/Odual L.G.A of Rivers State.

2. enumerate the nutritional practice of the pregnant women based on level of education, age and parity in Abua/Odual L.G.A of Rivers State.

### **Research Questions**

The following research questions are formed to guide the study.

- 1) What are the nutritional practices of pregnant women in Abua/Odual L.G.A of Rivers State?
- 2) What is the level of nutritional practice of pregnant women based on level of education, age and parity?

### **Hypotheses**

The following hypothesis was postulated to guide the study and will be tested at 0.05 alpha level:

1. There is no significant relationship between the level of nutritional practices of the pregnant women based on their levels of education, age and parity.

## **MATERIALS AND METHODS**

### **Research Design**

The research design adopted of the study was a descriptive survey design which according to Oputa (2019), help in explaining and event or situation using gathered facts which are obtained through questioning usually graded in frequency or percentage on identified variables. It described the nutritional knowledge and practices among expectant mothers in Abua/Odual Local Government Area of Rivers State.

### **Population of the Study**

The study population comprised of fourteen thousand, one hundred and forty-nine (14,149) pregnant women in Abua/Odual Local Government Area of Rivers State. The population of Abua/Odual Local Government Area is 282, 988 and according to the World Health Organization, 5% of the entire population is the population of pregnant women which is 14,149 (National Population Commission 2006).

### **Sample and Sampling Techniques**

The sample size of 426 was determined using the Taro Yamane Formula:

A multistage sampling procedure was used. The first stage is a simple random sampling technique to select six government owned Health facilities which includes General hospital Abua, Emelego, Anyu, Ogboma, Okobho and Otapha Primary Health Centres in Abua/Odual Local Government Area, at the second stage accidental sampling was used to selected 71 expectant mothers from each of the health facilities, and the third stage involved the selection of the respondents using the purposive sampling techniques.

### **Instrument for Data Collection:**

The instrument for data collection was a structured questionnaire. The questionnaire consisted of 3 sections; Section A – dealing with demographic characteristics of respondents and Section B view about nutritional knowledge and C view about the practices of nutrition. The instrument has Yes or No responses as well as modified Likert type scale for the different sections.

### **Validity of the Instrument**

The questionnaire was validated in steps. First, the draft of the questionnaire alongside the research questions and hypotheses were given to three lecturers in the department of Human Kinetics Health and Safety Education, Ignatius Ajuru University of Education. They examined the items for clarity and comprehensiveness. Their suggestions and correction were used to produce the final copy which was used for data collection.

### **Reliability of the Instrument**

To ascertain reliability of the instrument, test-retest was used. The instrument was given to twenty participants in Ahoada General Hospital after two weeks, the instrument was given to the set of antenatal mothers. The two results after 2 weeks were correlated using Pearson Product Moment Correlation Coefficient and a reliability coefficient of 0.72 was obtained.

**Method of Data Collection**

A letter of introduction was collected from the HOD to the Health Centers, the instrument was administered by the researcher with the help of three trained research assistant, the filled copies were collected at a sport to enhance good return rate.

**Method of Data Analysis**

The data generated for the study were analyzed using the Statistical Package for Social Science (SPSS) version 23.0. Simple percentage, frequencies and mean were used to answer the research questions, while linear regression and chi-square was used to test the hypotheses at 0.05 Alpha-level.

**RESULTS**

**Research Question 1:** *What are the nutritional practices of expectant mothers in Abua/Odual L.G.A of Rivers State?*

**Table 1: Nutritional practices of expectant mothers in Abua/Odual**

SN	Nutritional practices	$\bar{X}$	SD
1	Ate calcium rich food substances like milk, and biscuit bone.	2.24	.498
2	Consumes iron rich food such as dried beans, egg, vegetable and fruits.	2.28	.617
3	I take vitamins rich foods such as carrot, potato and pumpkin.	3.30	.679
4	I take protective foods, especially those rich in vitamin B6 and such as liver, chicken, soya beans, shell fish, pork.	3.25	.663
5	I eat food rich in vitamin B12 such as liver, chicken, soya beans, shell fish and pork.	3.18	.784
6	I take Vitamin C through oranges, tomatoes and pawpaw.	2.39	.593
7	I take Vitamin D through fortified milk, fortified margarine, egg, and liver.	2.28	.653
8	I eat foods that supply folic acid such as leafy green vegetable, peanut, fresh pears.	3.30	.657
9	I do take food yam, rice, maize and garri.	3.27	.672
10	I eat food like fiber / roughages such as skins of fruits, wheat and grain	2.22	.685
11	I take fattening foods that contain animal fats such as fried chicken, fried pork.	3.13	.816
12	My food intake is balance.	3.22	.752
13	I drink more glass of fluid in a day	3.75	.535
14	I eat fat and oil food substances e.g coconut, groundnut and pea.	3.38	.577
<b>Grand mean</b>		<b>2.94</b>	<b>0.66</b>

Table 1 shows the nutritional practices of expectant mothers in Abua/Odual LGA. The nutritional practices always observed by the respondents was drinking of more glass of fluid in a day ( $\bar{X} = 3.75 \pm 0.535$ ) followed by intake of fat and oil food substances e.g coconut, groundnut and pea ( $\bar{X} = 3.38 \pm 0.577$ ), intake of foods that supply folic acid such as leafy green vegetable, peanut, fresh pears and vitamin rich foods ( $\bar{X} = 3.30 \pm 0.657$ ) each with the least practice one being intake of food like fiber / roughages such as skins of fruits, wheat and grain ( $\bar{X} = 2.22 \pm 0.685$ ).

**Research Question 2:** *What is the level of nutritional practice of the expectant mothers based on levels of education, age and parity?*

**Table 2: Nutritional practice of expectant mothers based on levels of education, age and parity**

Variables	Nutritional Practice		Total F(%)
	Good F(%)	Poor F(%)	
<b>Education</b>			
Informal	39(60.9)	25(39.1)	64(100)
Primary	54(58.1)	39(41.9)	93(100)
Secondary	40(52.6)	36(47.4)	76(100)
Tertiary	124(70.5)	52(29.5)	176(100)
<b>Total</b>	<b>257(62.8)</b>	<b>152(37.2)</b>	<b>409(100)</b>
<b>Age</b>			
18-23 years	74(67.3)	36(32.7)	110(100)
24-28 years	121(65.1)	65(34.9)	186(100)
29-33 years	32(72.7)	12(27.3)	44(100)
34-38 years	30(43.5)	39(56.5)	69(100)
<b>Total</b>	<b>257(62.8)</b>	<b>152(37.2)</b>	<b>409(100)</b>
<b>Parity</b>			
1-3 children	121(64.4)	122(35.6)	343(100)
4-6 children	36(54.5)	30(45.5)	66(100)
<b>Total</b>	<b>257(62.8)</b>	<b>152(37.2)</b>	<b>409(100)</b>

Table 2 shows the nutritional practice of expectant mothers based on levels of education, age and parity. The result shows that based on educational status more of those who had tertiary education 124(62.8%) had good nutritional practice, based on age more of those who were aged 29-33 years 72.7% had good nutritional practice while on parity, 64.4% of those who had 4-6 children had good nutritional practice.

**Hypothesis testing**

**Hypothesis 1:** There is no significant relationship between nutritional practice of expectant mothers based on the level of education, age and parity.

**Table 3: Nutritional practice of expectant mothers based on levels of education, age and parity**

Variables	Nutritional Practice		Total F(%)	df	X <sup>2</sup> -value	p-value	Decision
	Good F(%)	Poor F(%)					
<b>Education</b>				<b>3</b>	<b>8.769</b>	<b>.033</b>	<b>Significant</b>
Informal	39(60.9)	25(39.1)	64(100)				
Primary	54(58.1)	39(41.9)	93(100)				
Secondary	40(52.6)	36(47.4)	76(100)				
Tertiary	124(70.5)	52(29.5)	176(100)				
Total	257(62.8)	152(37.2)	409(100)				
<b>Age</b>				<b>3</b>	<b>14.234</b>	<b>.003</b>	<b>Significant</b>
18-23 yrs	74(67.3)	36(32.7)	110(100)				
24-28 yrs	121(65.1)	65(34.9)	186(100)				
29-33 yrs	32(72.7)	12(27.3)	44(100)				
34-38 years	30(43.5)	39(56.5)	69(100)				
Total	257(62.8)	152(37.2)	409(100)				
<b>Parity</b>				<b>1</b>	<b>2.316</b>	<b>.128</b>	<b>Not sig.</b>
1-3 children	121(64.4)	122(35.6)	343(100)				
4-6 children	36(54.5)	30(45.5)	66(100)				
Total	257(62.8)	152(37.2)	409(100)				

Table 3 shows the chi-square test of significant relationship between nutritional practice of expectant mothers based on levels of education, age and parity. The result shows that there was a significant relationship between nutritional practice and variables such as education ( $X^2$ -value = 8.769, df = 3, p = 0.033) and age ( $X^2$ -value = 14.234, df = 3, p = 0.003) whereas there was no significant relationship found between parity ( $X^2$ -value = 2.316, df = 1, p = 0.128). Therefore, the null hypothesis which states that there is no significant relation between nutritional practice and education, age and parity was not accepted.

**DISCUSSION**

The analysis of research question one reveals a good nutritional practice among expectant mother in Abua/Odual Local Government Area of Rivers State, Nigeria. They drink more glasses of fluid in a day followed by intake of balanced diet in a meal. Similarly, Zelalem, Endeshaw, Ayenew, Shiferaw and Yirgu (2017), reported that the overall pregnancy specific dietary practice of pregnant women increased from 46.8% (95% CI: 41.8, 51.7) to 83.7% (95% CI: 79.8, 87.2), which indicated a significant increase in nutritional practice among the expectant mothers. The study is in accord with Alemayehu and Tesema (2016) as they recorded that a good number 40.1% of pregnant mothers were found to have good dietary practice during their pregnancy. The findings of Kever, Martins, Lola, Dathini, Habu, Fatima and Sambo (2015) is alike to the result of this present study as they recorded that majority of the respondents (63.27%), increase their dietary intake during pregnancy. Masuku and Lan (2014) is in agreement with the findings of this study as they recorded that more than half, 51.2% of the respondents on the average practice good nutrition during pregnancy.

The findings of this study differ from the study of Amanuel and Tona (2018), who reported that, majority (60.7%) of the study participants had poor dietary practices. Also conflicting to the findings of this study Tenaw, Arega and Tachbele (2018), found that less than half 34.5% of the respondents had good practices of nutrition.

The analysis on research question two disclosed nutritional practice based on levels of education, age and parity. The results revealed that the respondents based on age, education and parity had a good nutrition practice. This similar to the findings of Kever, Martins, Lola, Dathini, Habu, Fatima and Sambo (2015), Nguyen, Sanghvi, Kim, Tran, Afsana, Mahmud, Aktar and Menon (2017) posits a parallel response to the findings of this study. Akin to this study is NchangMugyia, Tanya, Njotang and Ndombo (2016), propounded a good nutritional practice based on age, education and parity.

## CONCLUSION

Based on the findings of the study, it was concluded that pregnant women in Abua/Odual Local Government Area had a fair nutritional practice.

## RECOMMENDATIONS

Based on the findings of the study, the following recommendations were made:

1. The community healthcare workers should always emphasize good nutrition for pregnant women when giving health talk during the antenatal visit of women.
2. Community stake holders should also be incorporated to promote good nutrition among pregnant women as they can influence it by discouraging or pregnant women from eating certain food due to some cultural reasons.
3. Religious leaders should not be left out by the health professionals in their effort to promote good nutrition during pregnancy.

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