

# Evaluation of Factors that Affect Food Craving and Aversion among Primigravid Women in Enugu Metropolis

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## ABSTRACT

A study aimed at evaluating factors that affect food craving and food aversion practices among primigravid mothers in Enugu Metropolis was conducted using survey research design. Convenient sampling technique was used to select hospital and pregnant mothers attending antenatal clinics in the selected hospitals. Questionnaire was used for data collection. The findings show that the primigravid mothers do not have knowledge of the effect of food craving and aversion on the mother and the fetus (42.6%) and as such (52.7%) do nothing to supplement the nutrient in the foods having aversion or crave for. There is no significant association ( $p>0.05$ ) between level of education and food craving while there is a significant association ( $p<0.05$ ) between level of education and food aversion. It was then recommended that Public health nurses/Midwives should be encouraged to educate pregnant women especially the primigravid women on nutritional needs during pregnancy and the implication of food craving and aversion in pregnancy.

**Keywords:** Factors Affecting Food Craving, Food Aversion, Primigravid Women

## I. INTRODUCTION

Good nutrition before and during pregnancy builds a healthy fetus and a healthy mother. In early weeks of pregnancy significant developmental changes occur that depend on a woman's nutrient intake and storage. The food a pregnant mother eats on a daily basis has much to do with how healthy she is. It also determines the state of health of the baby at birth. In other words incorporating nutritious food into the eating plan during pregnancy gives the woman a chance to give birth to healthy baby. (Dickason, Silverman & Schultz, 2010, Handisco, 2014 and Demissie, Muroki, Wambui & Makau, 2012).

Pregnant women are vulnerable to number of complications during pregnancy including high blood pressure and gestational diabetes. Eating an adequate diet can keep the pregnant woman's blood pressure, blood sugar levels and weight at healthy levels to reduce

the incidence of such complications. Eating healthy foods can also help prevent or treat common pregnancy disorders such as morning sickness, or leg cramps. Ensuring that her diet is full of lean protein, healthy fats and complex carbohydrates can help lessen or prevent these symptoms (Dana 2012).

Pregnancy is often accompanied by a variety of nutritionally linked problems that the pregnant mothers have to cope with and such problems include food craving and food aversion. Food craving is intense desire to eat certain foods which are very appetizing to the individual. This food may be of low nutrient that may not be of help to the mother. On the other hand, food aversion is strong dislike of a particular food during pregnancy. The food may be of high nutrient quality needed by the woman. Food craving and aversion if not properly managed may interfere with the dietary intake of the pregnant women and sometimes causing serious nutritional problem such as low birth

weight baby and deficiency in iron, calcium, protein, vitamins A,D B6 and folic acid in the mother (Olusanya & Ogundipe, 2012). Ojofemitimi and Tanimowo (2014), attributed anaemia to in primigravida, poor nutrition that may be due to food craving and aversion and lack of health education on how to substitute for food craving and aversion in other to meet up with the required nutritional value for pregnant mothers. According to Nyaruhucha (2012) some women crave for non-food substance like soil, clay, chalk, charcoal and some believe that ingestion of non-food substance relieves nausea and vomiting. The food averted to by pregnant women include Beans, egg, snail, pear, bush animal meat, three leafed yam, mushroom, bitter kola, green vegetable, pumpkin leaf, ice fish and palm wine.

Safaii (2013) however stated that some researchers believe that food craving is a mechanism to protect the fetus and the mother from nutrient deficiencies and suggest that craving is triggered when a deficiency in one or more nutrients arises. This opinion appears to be supported by a study done by Demissie, Muroki and Wambui, (2012) which revealed that 43% of pregnant women crave for nutritious foods that are lacking in their diet. Nyaruhucha (2012) also suggest that the ingestion of non-food substances suggest deficiency of essential nutrients such as calcium or iron. Glans (2013) further noted that aversions are physiological mechanism that protects the fetus either from nutrient deficiencies by prompting mothers away from quality and monotonous foods or from excess foeto-toxic substance present in the food, thus food aversion could be beneficial.

Pregnant mothers may crave for food that they did not even enjoy prior to pregnancy. It starts during pregnancy usually in the first trimester, peaking in the second trimester and generally disappears between delivery. Craving seems unpredictable and may even differ from first pregnancy to the next. Women in different cultures clearly crave foods based on what regionally and culturally available. Craving tends to resolve by the time the woman delivers.

Food craving may not necessarily be a problem or cause imbalance in a pregnant woman diet if she seems to be craving healthier food like fruits or milk but giving in to craving every time especially if they are frequent and

cravings is of high –calorie foods, is a good way to pack on more pounds than intended.

According to Tessmer (2013) pregnant mothers should try their best to crave nutritionally balanced diet. As long as they are eating a balanced diet and getting the essential nutrients they need for development of the fetus and themselves. Food craving get less intense as the pregnancy progress and giving in to craving once in while is probably good.

According to Brody (2014) when a pregnant mother crave nonfood items such as paint chips, laundry starch, soil, clay a condition known as pica, she is lacking one of the minerals, she should not indulge in pica because nonfood substances can counteract the absorption of iron and also potentially toxic for the baby and mother. The pregnant mothers have to report in the hospital as this can lead to nutritional deficiencies. Some pregnant mothers crave food that are harmless in small quantities but can lead to gastrointestinal pain or other problems if eaten in large quantities. The food crave by pregnant women includes fruits like oranges, water melon, mangoes, snacks, soft drinks, vegetables, meat, plantain and egg. In developed countries the foods commonly craved for include yoghurt, ice cream, chocolate, candies among others. (Olusanya and Ogundipe, 2012). In developed countries foods commonly avoided are: coffee, alcoholic beverages, cigarette.

Food craving and aversion in first time pregnancy is observed to be of concern to health care providers. Due to the physiological and hormonal changes in pregnancy, first time pregnant women have increase nausea and vomiting as a result of high Oestrogen, progesterone and human chorionic gonadotropin (HCG) (Knox, 2013), This interferes with the dietary intake of the pregnant women and sometimes cause serious problems like anaemia (Thomas, 2013).

Various maternal and child health program were geared towards improving the nutritional status of pregnant mothers like focused antenatal clinic and nutritional education in other to prevent complications in pregnancy and child birth. One of the ways that can help prevent malnutrition in pregnancy is to study these factors that influence food aversion and food craving in pregnancy.

This study is aimed at examining the factors that affect the food craving and aversion among primigravid women in selected health facilities in Enugu metropolis

## II. METHODS AND MATERIAL

A cross sectional descriptive research design was used for the study. This study was carried out in the health facilities in Enugu metropolis that were selected using convenient sampling technique. They are Uwani Cottage Hospital, Ikirike Health Centre, Eastern Nigeria Medical Centre, Balm of Gilead hospital, Amaechi Cottage Hospital, Obeagu Amachi Health Centre, St. Getrude Hospital and Maternity and St. Merkin Hospital and Maternity. A total of 267 pregnant mothers were selected also using covenant sampling technique. Instrument for data collection was questionnaire developed by the researchers. Reliability of the research instrument was determined using test-retest reliability, with a correlation co-efficient of 0.87. Permissions were sought from the Heads of selected health facilities used as they have no ethical committee and informed oral consent was obtained from each of the respondents. Participants were assured of confidentiality of any information given.

Descriptive statistics which includes frequency, percentage, means and standard deviation were used to analyze and answer the research questions. Hypothesis was tested using chi-square and level of significance was set at P less than 0.05. Results were presented in tables and charts.

## III. RESULTS AND DISCUSSION

### A. Results

**Table 1 :** Effect of Awareness on food craving and aversion among primigravid women

S/N item Response	Frequency	Percent
<i>What is the Effect of food Craving and aversion on health of the mother?</i>		
Anaemia	103	28.9
Malnutrition	133	37.3

Obesity	71	19.9
Pregnancy induce Hypertension	20	5.6
Premature labour	24	6.7
<i>What is the Effect of food Craving and aversion on health of the fetus? Do not know</i>	152	42.6
Birth defect	32	9.0
Low birth weight	155	43.4
Increase risk of diabetes in childhood	39	10.9
Increase risk of obesity	48	13.4
Possible lowering of intelligent quotient	14	3.9
Prematurity	68	19.0
Do not know	167	46.8
<i>Source of information</i>		
Nutritionist	22	6.2
Health workers	71	19.9
Mass media	20	5.6
Relatives/friends	95	26.6
No information	149	41.7

Data in Table 1 show that majority of the respondents [152 (42.6%)] do not know the effect of food craving and aversion on the mother, 133 (37.3%) stated that malnutrition is an implication of food craving and aversion others include 103 (28.9%) anaemia, 71 (19.9%) obesity and 24 (6.7%) premature labour

Concerning effect of food craving and aversion on the fetus, majority of the respondents 167 (46.8) do not know the effect of food carving and aversion on the fetus, 155 (43.4%) of the respondents stated that low birth weight is the effect of food carving and aversion on the fetus, followed by prematurity 68 (19.0%), increase risks of obesity 48 (13.4%), increase risk of diabetes in childhood, 39 (10.9%) birth defect 32 (9.0%) and possible lowering of intelligent quotient 14 (3.9%).

On sources of information on effect of food carving and aversion on fetus and the mother, majority of the respondents 149 (41.7%) have no information on effect of food carving and aversion on pregnant women, 95 (26.6%) of the respondent stated that they heard of the

effects of food craving and aversion from the relatives/friends, 71 (19.9%) from the health workers, 22 (6.2%) from the nutritionist and 20 (5.6%) received information from mass media.

**Table 2.** Effect of knowledge of nutrient supplement when food craving or aversion is present

n = 259

Items	Frequency	Percent
When aversion to nutritious food, eat other foods that contain the same nutrient	68	19.0
Avoid skipping meals which increases food craving	83	23.2
Keep food diary to make sure that you are eating an adequate diet	41	11.5
Active exercise to curb hunger	44	12.3
Eating food that has longer digestion process such as yam, cassava, potato	24	6.7
Does nothing to meet up with food nutrients needed in pregnancy	188	52.7
When craving for soft drinks take fresh juice such as orange juice	45	12.6
Make sure that you have stable emotional status	54	15.1
Inform the health personnel when craving for non- food item	26	7.3

The result on Table 2 revealed that 188 (52.7%) of the respondents do nothing to supplement the nutrient in the food have aversion or crave for. 83 (23.2%) avoid skipping meals which increases food craving , 64(17.9%) when have aversion of nutritious food, eat other foods that contain the same nutrient. 54(15.3%) make sure that they have stable emotional status and

when craving for soft drinks 45(3.6%) take fresh juice such as orange juice. 44(12.3%) engage on active exercise to curb hunger, 41(11.5%) keep food dairy to make sure they eat adequate diet , 26(7.3%)] inform the health personnel when crave for non- food items and 24(6.7%) eating food that has longer digestion process such as yam , cassava and potatoes

**Table 3.** Effect of level of education on food craving among primigravid women.

	Food craving			$\chi^2$	P value
	No food craving experience n (%)	At least one food is being craved for n (%)	More than one food is being craved for n (%)		
No formal	2 (2.2)	0 (0.0)	1 (0.6)	9.724	0.137
Primary	2 (2.2)	11 (10.1)	14 (8.9)		
Secondary	42 (46.7)	55 (50.5)	68 (43.0)		
Tertiary	44 (48.9)	43 (39.4)	75 (47.5)		

Since the P value (P = 0.137) of the chi square statistics is greater than 0.05 level of significance, the null hypothesis is hereby accepted. Therefore, there is no significant association between level of education and food craving.

Since the P value (P = 0.005) of the chi square statistic is less than 0.05 level of significance, the null hypothesis is hereby rejected and the alternative accepted. Therefore there is a significant association between level of education and food aversion. Hence primigravid women with higher level of education experience food aversion more.

Since the P value (P = 0.063) of the chi square statistic is greater than 0.05 level of significance, the null hypothesis is hereby accepted. Therefore, there is no

significant association between awareness of implication of food craving and food craving in pregnancy.

**Table 4.** Effect of level of education on food aversion among primigravid women .

	Food aversion			$\chi^2$	P value
	No food aversion n (%)	At least one food is being averse n (%)	More than one food is being averse n (%)		
No formal	1 (1.1)	0 (0.0)	2 (2.9)	18.674	0.005
Primary	1 (1.1)	22 (11.3)	4 (5.9)		
Secondary	41 (43.6)	96 (49.2)	28 (41.2)		
Tertiary	51 (54.3)	77 (39.5)	34 (50.0)		

**Table 5.** Effect of awareness on food craving among primigravid women

	Food craving			$\chi^2$	P value
	No food craving experience n (%)	At least one food is being craved for n (%)	More than one food is being craved for n (%)		
Awareness of the implication of food craving in pregnancy	Yes 51(53.1)	71 (61.7)	111 (67.3)	5.543	0.063
	No 45 (46.9)	44 (38.3)	54 (32.7)		

**Table 6.** Effect of awareness on aversion among primigravid women.

	Food aversion			$\chi^2$	P value
	No food aversion n (%)	At least aversion for one food n (%)	Aversion for more than one food n (%)		
Awareness of the implication of food aversion in pregnancy	Yes 60(60.0)	125 (62.2)	48 (64.0)	0.524	0.770
	No 40 (40.0)	76 (37.8)	27 (36.0)		

aversion as this revealed lack of information on how to supplement in order to meet up with their required nutritional value.

Since the significant value ( $P = 0.770$ ) of the chi square statistic is greater than 0.05 level of significance, the null hypothesis is hereby accepted. Therefore, there is no significant association between awareness of implication of food aversion and food aversion in pregnancy.

## B. Discussion

These women were ignorant of the consequences of poor food craving and aversion such as anaemia in pregnancy, prematurity, increase risk of obesity for the mother and effects on the fetus such as birth defect, increased risk of obesity and possible lowering of intelligent quotient.

Concerning the sources of information on the effect of food craving and aversion on fetus and mother, 41.9% of the first time pregnant women have no information on the effect of food craving and aversion and 26.6% of the respondent stated that they heard the information from friends/relatives. The finding in this study is in line with the report by Ademuyiwa and Sanni (2013) which stated that some pregnant women avoid nutritious food because of lack of information on nutritional benefit of such commodities. This finding also supports the study by Olusanya and Ogundipe (2012) which revealed lack of adequate and nutritional knowledge among pregnant women. This finding is contrary from a study by Ejei-Okeke and Analuba (2014) which pointed out that majority of the pregnant women believe that poor food craving and aversion are implicated in maternal fetal health and can lead to negative pregnancy outcomes.

The result shows that more than half of the first time pregnant women do nothing to meet up with their required nutritional value (needs). This finding agrees with the report by Hook (2014) which stated that majority of the pregnant women (50.6%) do not know how to manage food aversion and 56.9% do not know how to manage food craving. This finding is an indication that majority of first time pregnant women yield to their food craving and aversion without considering whether the foods have the required nutrient for the fetus and mother. This could be attributed to lack of knowledge of the consequences of food craving and

## IV. CONCLUSION AND RECOMMENDATION

It was concluded that the primigravida mothers do not have knowledge of the effect of food craving and aversion on the mother and the fetus and as such do nothing to supplement the nutrient in the food have aversion or crave for. There is no significant association between level of education and food craving while there is a significant association between level of education and food aversion. This is due to the fact that primigravida mothers do not see food craving as a problem when compared with food aversion irrespective of their level of education. It was recommended that public health nurses and midwives should step up their effort in teaching pregnant mothers about food aversion and craving and methods of food supplements where they occur.

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