



Nutritional Practices of Pregnant Women in Ogba/Egbema/Ndoni Local Government Area of Rivers State

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ABSTRACT

This study investigated the nutritional practices of pregnant women in Ogba/Egbema/Ndoni Local Government Area of Rivers State. The descriptive survey research design was adopted for the study with a population which comprised of all pregnant women in ONELGA. A sample size of 440 was determined using the Taro Yamane formula and a multi-stage sampling procedure was used for the selection of the sample. Data was collected using a structured questionnaire with a reliability coefficient of 0.73 and analyzed using percentage, mean, standard deviation, Pearson correlation, chi-square and ANOVA. The findings of the study showed that majority of the respondents had good nutritional practices such as intake of calcium rich food ($\bar{X} = 3.51 \pm 0.67$), intake of iron rich foods ($\bar{X} = 3.47 \pm 0.658$), intake of food substances that are rich in Vitamin A ($\bar{X} = 3.42 \pm 0.671$), intake of proteinous foods ($\bar{X} = 3.68 \pm 0.516$), intake of food substances that contain carbohydrate like starchy foods ($\bar{X} = 3.62 \pm 0.581$), and drinking up to eight or more glasses of fluid daily ($\bar{X} = 3.38 \pm 0.795$). It was concluded that the pregnant women in Ogba/Egbema/Ndoni Local Government Area of Rivers State had good nutritional practices. However, it was recommended that, healthcare givers should focus on conveying nutrition based information in their lessons during antenatal visits of pregnant women in such a way that can improve the nutritional practices of pregnant women.

Keywords: nutritional practices, pregnant women, antenatal visits

INTRODUCTION

Proper nutrition during pregnancy is essential because pregnancy is a time women need increased energy and nutrients for adequate growth of the fetus and maternal tissues associated with pregnancy such as breast and uterus. According to Talented (2011), women who eat well and avoid known risks tend to have fewer complications during pregnancy labour and more likely to deliver live normal healthier babies. Good nutritional practice keeps expectant mothers healthy. Daba, Beyene, Fekadu and Garoma (2013) posited that, nutrition is a fundamental pillar of human life, health and development throughout the entire lifespan hence, during pregnancy, maternal nutrition requires considerable attention of which nutritional knowledge has been found to play an important role in adopting optimal nutrition practices. According to the World Health Organization (2014), nutrition is the intake of food considered in relation to the body's dietary needs. Good nutrition, well balanced diet combined with regular physical activity is a cornerstone of good health, whereas poor nutrition can lead to reduced immunity, increased susceptibility to disease, impaired physical and mental development, and reduced productivity. In the same vein, Karger and Basel (2010) noted that, the pregnant mother should follow scientifically-proven-practices to make sure that the baby is healthy and strong when it is born and this can be achieved by eating food rich in vitamins and nutrients.

The type of food a woman eats and drinks during pregnancy is her baby's main source of nourishment. So, Nierenberg (2018) specified that, a pregnant woman must eat food rich in vitamins and protein than a woman who is not pregnant which can be sourced from a variety of healthy foods such as leafy green vegetables, fruits, beverages, fish, beans and a mixed diet of other animal and plant foods.

Pregnancy depletes a mother's iron stores and other body nutrients. Therefore, it is important to have an appropriate nutrient intake to ensure positive pregnancy outcome. Though nutrition is the intake of food necessary for optimal health, studies have reported inadequate maternal nutrition which could lead to poor pregnancy outcomes such as fetal growth failure, low birth weight, anemia, preterm birth, prenatal and infant mortality and morbidity (Abu-Saad & Fraser, 2010). Nevertheless, Okafor (2010) specified that, a pregnant woman's choices of food are determined by some factors such as the availability of food in the locality, parity and religion.

Religious affiliation could influence nutritional choices among pregnant women. Some religion forbids certain foods which are vital source of nutrients for a pregnant woman, this if adhered to by the pregnant woman, can lead to malnutrition which can have adverse effect on the health of both the mother and child. The major religions in Nigeria been Islam and Christianity among others have been found to influence maternal nutrition. Rakiciolu, Samur, Topcu and Topcu (2006) revealed that mothers who fasted during Ramadam (no food or fluids between 5am and 7:30pm) severed nutrients such as zinc, magnesium and potassium and the nutritional status of the mother was affected leading to subsequent effect on the child. Even among the Christians some may be asked to fast due to one spiritual problem or the other which may lead to malnutrition since pregnancy requires proper eating habit to get energy. Religion been a major factor determining the health behaviour of an individual, must be given attention and consideration when handling several health issues, nutrition inclusive.

Age is another factor which must be considered when dealing with maternal nutrition. Age is the number of days, weeks, months or years an individual had lived. Considering age in nutritional practices during pregnancy, it is worthy of note that, though all pregnant women have an increased nutrient requirement for the growth and development of the fetus, there are some discrepancies with respect to age. For instance, the quantity of nutrients such as irons, and vitamins which a very young pregnant woman in her twenties needs may not be the same with her older counterpart. Carolan and Frankowska (2011) noted that, the increasing maternal age has become an issue of public health concern because women of advanced maternal age experience higher rates of pregnancy complications, obstetrical intervention, and severe maternal morbidity than younger mothers and this makes nutrition very important as it can affect the outcome of the pregnancy. Williams (2011) noted that nutritional hazards increased with age, which influence the nutritional needs of the mother and the outcome of pregnancy. To buttress this, young pregnant women who could not further their education because of the burden of giving birth and rearing children are at risk for poor nutritional knowledge and practice. This study therefore investigated the nutritional practices of pregnant women in Ogba/Egbema/Ndoni Local Government Area of Rivers State.

Research Questions

The study provided answers to the following research questions:

1. What are the nutritional practices of pregnant women in Ogba/Egbema/Ndoni Local Government Area of Rivers State?
2. What is the difference in nutritional practice of pregnant women in Ogba/Egbema/Ndoni Local Government Area of Rivers State based on religion?
3. What is the difference in nutritional practice of pregnant women in Ogba/Egbema/Ndoni Local Government Area of Rivers State based on education?
4. What is the difference in nutritional practice among pregnant women in Ogba/Egbema/Ndoni Local Government Area of Rivers State based on age?

Hypotheses

The following null hypotheses were postulated to guide the study and were tested at 0.05 alpha level:

1. There is no significant difference in nutritional practice of pregnant women in Ogba/Egbema/Ndoni Local Government Area of Rivers State based on religion.
2. There is no significant difference in nutritional practice of pregnant women in Ogba/Egbema/Ndoni Local Government Area of Rivers State based on education.
3. There is no significant difference in the nutritional practice during pregnancy among women in Ogba/Egbema/Ndoni Local Government Area of Rivers State based on age.

METHODOLOGY

The methods and procedures used in this study are described below:

Research Design: The research design adopted for this study is a descriptive survey design. According to Elendu (2010), the descriptive cross-sectional design is one that generates data from a selected population, studying and describing events as they occur in their natural setting at a particular time. In the present study, the researcher collected data on nutritional knowledge of pregnant women and subjected data to statistical analysis without manipulating any variable in the study. Hence, it was considered appropriate for use in this study.

Population of the Study: The study population comprised of all the pregnant women in Ogba/Ndoni/Egbema Local Government Area of Rivers State. Although a definite figure was not found for the number of pregnant women in ONELGA but a population of 55,096 was found for women of child bearing age in ONELGA (National Population Commission, 2010).

Sample Size and Sampling Technique: The sample size of 440 was determined using the Taro Yamane formula: $n = N/1+N(e)^2$. A multistage sampling procedure was used to select the sample. The first stage is a simple random sampling technique to select eight primary health centres in ONELGA, at the second stage a non-proportionate sampling technique was used to determine the number of pregnant women to be selected from each of the eight health centres, and the third stage involved the selection of the respondents using the purposive sampling technique.

Instrument for data collection: The instrument for data collection in this study was a structured questionnaire titled, "Nutritional Practice Questionnaire (NPQ)", consisting of two sections, A and B. Section A addressed the socio-demographic characteristics of the respondents while section C was designed to illicit responses on the nutritional practices during pregnancy on a modified four point Likart scale of "always, occasionally, rarely or Never".

Validity of the Instrument: Validity is the ability of an instrument to measure what it is intended to measure (Elendu, 2010). The validity of the instrument was established by three experts in the Department of Human Kinetics, Health and Safety Education, Ignatius Ajuru University of Education, Port Harcourt. Each of them were given a copy of the research questions, hypotheses, and a copy of the questionnaire. The experts assessed the face, and content validity of the instrument. The corrections by the experts and the supervisors were effected to produce the final copy of the instrument by the researcher.

Reliability of the instrument: Reliability refers to the consistency of an instrument to measure what it is intended to measure. A reliability coefficient of 0.73 was obtained for the instrument which certifies the instrument to be reliable for use in this study.

Methods of Data Collection: The researcher collected letter of introduction from the Head of the department for identification purpose. The researcher employed the help of three research assistants in the administration of the questionnaire to the respondents. Data collection was done by a face to face delivery of the questionnaire to the respondents. Introduction of self and purpose of the study was made by the researcher, questions asked were answered and willing respondents were administered the questionnaire for data collection. The researcher took time to explain the contents of the questionnaire to the respondents in course of the collection of the data. Data was systematically collected in a manner that provides answers to the research questions in a logical and coherent way. The collection of data was done in four weeks.

Method of Data Analyses: The data collected were analyzed using the statistical package for social sciences (SPSS) version 23.0 and statistical tools such as percentage and chi-square statistics at 0.05 level of significance were used.

RESULTS

The results are presented below in Table 1-4:

Table 1: Nutritional practices of pregnant women in ONELGA

SN	Items	\bar{X}	SD
1	Take calcium rich food substances like milk, milk products and biscuit bones	3.51	.676
2	Take iron rich foods, some of which are dries beans, eggs, vegetables like pumpkin, Carrot, and margarine	3.47	.658
3	Take food substances that are rich in Vitamin A like egg yolk, dark vegetables like pumpkin, carrot, and margarine	3.42	.671
4	Take protective foods, especially those rich in vitamin (B6 - B12)	3.43	.673
5	Take foods rich in vitamin C like orange, grape, tomatoes, pepper, lettuce, and mango	3.56	.644
6	Take foods rich in vitamin D like fortified milk, fortified margarine, eggs, liver and fish	3.46	.675
7	Take food substances that supply the body with folic acid	3.36	.766
8	Take food substances that contain carbohydrate like starchy foods	3.62	.581
9	Take food substances rich in fibre /roughages like skin of fruits, wheat and grain	3.49	.754
10	Take proteinous/bodybuilding foods	3.68	.516
11	Drink up to eight or more glasses of fluids daily	3.38	.795
12	Take fats and oil food substance from plant source	3.45	.713
Grand mean/SD		3.48	0.67

Table 1 shows the nutritional practices of pregnant women in ONELGA. The result showed that the grand mean = 3.48 ± 0.67 is greater than the criterion mean = 2.5 indicating that the respondents had good nutritional practices. The nutritional practices include intake of calcium rich food ($\bar{X} = 3.51 \pm 0.67$), intake of iron rich foods ($\bar{X} = 3.47 \pm 0.658$), intake of food substances that are rich in Vitamin A ($\bar{X} = 3.42 \pm 0.671$), intake of proteinous foods ($\bar{X} = 3.68 \pm 0.516$), intake of food substances that contain carbohydrate like starchy foods ($\bar{X} = 3.62 \pm 0.581$), and drinking of up to eight or more glasses of fluid daily ($\bar{X} = 3.38 \pm 0.795$).

Table 2: Analysis of Variance (ANOVA) showing significant difference in nutritional practice of pregnant women in ONELGA based on religion

Sources of variance	Sum of squares	df	Mean squares	F-value	p-value	Decision
Between group	2.401	2	1.201	2.647	.072	H ₀ Retained
Within group	187.776	414	.454			
Total	190.177	416				

*Not Significant. $p > 0.05$

Table 2 shows the One-Way ANOVA of significant difference in in nutritional practice of pregnant women in ONELGA based on religion. The findings of this study shows that there is no significant difference in the nutritional practice of pregnant women based on religion [$F(2, 414) = 2.647$; $p > 0.05$]. Therefore, the null hypothesis which states that there is no significant difference in nutritional practice of pregnant women in ONELGA based on religion was accepted.

Table 3: Analysis of Variance (ANOVA) showing significant difference in nutritional practice of pregnant women in ONELGA based on education

Sources of variance	Sum of squares	df	Mean squares	F-value	p-value	Decision
Between group	7.642	3	2.547	5.764	.001	H ₀ Rejected
Within group	182.535	413	.442			
Total	190.177	416				

*Significant. $p < 0.05$

Table 3 shows the One-Way ANOVA of significant difference in in nutritional practice of pregnant women in ONELGA based on education. The findings of this study shows that there was a significant difference in the nutritional practice of pregnant women based on education [F(3, 413) = 5.764; p<0.05]. Therefore, the null hypothesis which states that there is no significant difference in nutritional practice of pregnant women in ONELGA based on education was rejected.

Table 4: Analysis of Variance (ANOVA) showing significant difference in nutritional practice of pregnant women in ONELGA based on age

Sources of variance	Sum of squares	df	Mean squares	F-value	p-value	Decision
Between group	2.817	3	.939	2.070	.104	H ₀ Retained
Within group	187.360	413	.454			
Total	190.177	416				

*Not Significant. p>0.05

Table 4 shows the One-Way ANOVA of significant difference in in nutritional practice of pregnant women in ONELGA based on age. The findings of this study shows that there is no significant difference in the nutritional practice of pregnant women based on age [F(3, 413) = 2.070; p>0.05]. Therefore, the null hypothesis which states that there is no significant difference in nutritional practice of pregnant women in ONELGA based on age was accepted.

DISCUSSION OF FINDINGS

The findings of the study are discussed below:

The findings of the study showed that nutritional practices found include intake of calcium rich food ($\bar{X} = 3.51 \pm 0.67$), intake of iron rich foods ($\bar{X} = 3.47 \pm 0.658$), intake of food substances that are rich in Vitamin A ($\bar{X} = 3.42 \pm 0.671$), intake of proteinous foods ($\bar{X} = 3.68 \pm 0.516$), drinking of up to eight or more glasses of fluid daily ($\bar{X} = 3.38 \pm 0.795$) and intake of food substances that contain carbohydrate like starchy foods ($\bar{X} = 3.62 \pm 0.581$). This finding might be due to the fact that in this part of the country, the types of food that are readily available are mainly carbohydrate sources. This is similar to that of Amanuel and Tona (2018) which showed that the major type of food consumed by majority of the respondents was carbohydrate. 55.7% occasionally eat proteinous foods, 47.9% occasionally eat iron rich foods and 46.7% occasionally eat food substances rich in vitamins A. This is different from that of Ojiugo (2010) where a much lesser proportion, 2.79% of the respondents ate iron rich foods, 2.78% ate body building foods, and 2.6% each ate foods that were rich in Vitamin A. The variation in the study location might be implicated for the difference found between the two studies. The finding of this study showed that overall, majority of the respondents had good nutritional practice. This corroborates that of Nguyen et al (2017) where it was reported that majority of the respondents practiced good nutrition during the last pregnancy. This is different from that of Masuku and Lan (2014) where a lesser proportion (51.2%) of the respondents on the average practice good nutrition during pregnancy. The findings of this study are also different from Alemayehu and Tesema (2016) where a lesser proportion (40.1%) of pregnant mothers were found to have good dietary practice. This is at variance with that of Nchang et al (2016) where 22% of the respondents had a good practice of nutrition.

The finding of this study shows that there was no significant relationship between age and nutritional practices. This is in line with that of Alemayehu and Tesema (2016) who examined dietary practice and associated factors among pregnant women in Gondar Town North West, Ethiopia which showed that, there was no statistically significant association between dietary practices of mothers and age and as such government in collaboration and a strong integration with concerned bodies should be focused on providing nutritional education to increase the practices of pregnant mothers on maternal nutrition during pregnancy. The finding of this study differs from that of Ojiugo (2010) on nutritional knowledge and practices among pregnant women in Onitsha North and South Local Government Areas of Anambra State which showed a relationship between age and nutritional practices. The variation in the study population and location might be implicated for the difference found between the two studies.

The result showed that based on the grand mean good nutritional practices were found more among the respondents who were traditionalists ($\bar{X} = 3.91 \pm 0.00$), followed by Christians ($\bar{X} = 3.49 \pm 0.67$) and Muslims ($\bar{X} = 3.29 \pm 0.72$). Religious affiliation could influence nutritional choices among pregnant women. Some religion forbids certain foods which are vital source of nutrients for a pregnant woman, this if adhered to by the pregnant woman, can lead to malnutrition which can have adverse effect on the health of both the mother and child. The major religions in Nigeria been Islam and Christianity among others have been found to influence maternal nutrition. The finding of this study is in line with that of Rakiciolu, Samur, Topcu and Topcu (2006) which revealed how religion influenced nutrition and that mothers who fasted during Ramadan severed nutrients such as zinc, magnesium and potassium and the nutritional status of the mother was affected leading to subsequent effect on the child. Even among the Christians in Pentecostal churches may be asked to fast due to one spiritual problem or another which may lead to malnutrition since pregnancy requires proper eating habit to get energy. Religion been a major factor determining the health behaviour of an individual, must be given attention and consideration when handling several health issues, including nutrition.

CONCLUSION

Based on the findings of the study, it was concluded that the pregnant women in Ogba/Egbema/Ndoni Local Government Area of Rivers State had good nutritional practices such as intake of calcium rich food, intake of iron rich foods, intake of food substances that are rich in Vitamin A, intake of proteinous foods, intake of food substances that contain carbohydrate like starchy food and drinking of up to eight or more glasses of fluid daily.

RECOMMENDATIONS

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

1. Nurses should focus on healthy nutrition when conveying health talk to pregnant women during their antenatal visits with emphasis on the most needed nutrients during pregnancy.
2. Health professionals need to pay more attention to the educational status of women when designing health promotion interventions for pregnant women.
3. The pregnant women should make conscious effort to ensure they procure and eat balanced meal.
4. The pregnant women should also make conscious effort to take food supplement where certain types of food are not accessible or affordable.

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