



Nutritional Attitude of Pregnant Women: An Issue in Health Promotion

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Abstract

The purpose of the study was to determine the Nutritional Attitude of Pregnant Women: an issue in health promotion. The study adopted a descriptive research design. The population for the study consisted of 3,600 pregnant women attending antenatal clinic in Nsukka Health District, Enugu State Nigeria while the multi-stage procedure was used to draw a sample of 360 pregnant women for the study. A self-developed questionnaire was the instrument used for the data collection. The direct approach was used to administer the questionnaire with the help of two research assistants who were thoroughly briefed. The research questions were answered using means and percentages while the null hypotheses were tested using the ANOVA at 0.5 level of significance. The following results were obtained; pregnant women aged 15-20 ($\bar{x} = 2.74$), 21-50 ($\bar{x} = 2.61$) and 31-40 ($\bar{x} = 2.62$) years had positive nutritional attitude while those aged 41-49 years ($\bar{x} = 2.49$) had negative nutritional attitude. Pregnant women with primary ($\bar{x} = 2.66$), secondary ($\bar{x} = 2.63$) and tertiary ($\bar{x} = 2.51$), education possessed positive nutritional attitude while those with non-formal education ($\bar{x} = 2.44$) possessed a negative nutritional attitude. The mean nutritional attitude of pregnant women differed according to age (p -value=.000), level of education (p -value=.000). Based on the findings and conclusions, the researcher recommended that the State Government in conjunction with the Ministry of Education, Information and Women Affairs, Non-governmental Organizations (NGOs) and churches should embark on sensitization workshop and public enlightenment campaigns in the area of Nutrition education both in schools and the general public.

Keywords: Nutrition, Attitude, Pregnant Women, Antenatal Care

Introduction

Adequate nutrition is an important factor in the promotion of a healthy pregnancy and birth outcome. Nutritional attitude during pregnancy has a significant impact on the dietary behaviour of pregnant women and the pregnancy outcome. Healthy dietary behaviours in food selection and consumption can be deterred by poor nutritional attitude and consequently lead to deficiency diseases. The WHO (1997) estimates that 58 per cent of pregnant women in developing countries were anaemic. Deficiency of particular nutrients during pregnancy may contribute to sub-optimal embryonic and foetal nutrition, impaired intrauterine growth and development, congenital malformations, severe pregnancy complication, and preterm deliveries (Roudbari, Yaghmeri, & Soheili, 2007). According to Heshmat, Azemati, Keshtkar, Salehi, Abdollahi, Kolahdouz et al. (2009), it can lead to anaemia. Consequences of anaemia in pregnant women include reduced energy and capacity for work, poor pregnancy and birth outcomes including premature mortality and increased risk of death during delivery and post-partum.

In 2015, the United Nation mapped out 17 Sustainable Development Goals (SDGs) and Nigeria is one of the member countries that declared to implement it (Adejumo & Adejumo, 2014). The number 3 goal is “to ensure healthy lives and promote wellbeing for all at all ages.” One of the veritable tools in actualizing this goal is a positive nutritional attitude by all and particularly the pregnant women. When a pregnant woman develops an unfavourable attitude towards certain foods, it is going to affect her consumption of such foods hence compromising the optimum health for the mother, and the baby as well as the future generation. Pregnant women need to develop a positive attitude towards certain required food substances that will enhance adequate nutritional intake.

Adequate nutritional intake is very important for optimum health of the mother and the baby. According to Wardlaw and Smith (2011), nutrition includes the processes by which man ingest, digest, absorb, transports and excretes food substances. Nutrition is the sum total of the processes by which human organism take in and utilize food substances for growth, repair and maintenance of the body (Ugwu, Abbah, & Abugu, 2017). Food substances provide the body with essential nutrients that will enable the body to function properly and stay healthy. Nutrients are essential dietary factors or substances in the food that provide nourishment for the maintenance of life (Ozor, Kimisuoteii, & Ene, 2017). The essential nutrients in food include carbohydrates, proteins, fat and oils, vitamins,

minerals and water. The consumption of food that contains the above nutrients in the right proportion can be influenced by one's attitude.

Attitude is a way of thinking, feeling, and reacting to people, groups, objects, issues or event in one's environment. Attitude is concerned with one's feeling towards a person, object or thing (Okafor, 1991). According to Moghaddam (1998), an attitude refers to the evaluation of other people's events, issues and material things with some degree of favour or disfavour. According to Ademuwagun, Ajala, Oke, Moronkola, and Jegede (2002) attitude is a set of affective reactions towards an object that predisposes an individual to behave in a certain manner towards the object. Similarly, Park (2009) explained that attitude is a relatively enduring organization of beliefs around an object, subject or concepts which predisposes one to respond in some preferential manner. Attitude, as adopted from Park (2007) in this study, refers to a relatively enduring organization of belief around an object, subject or concepts which predisposes one to respond in some preferential manner. Attitude serves a primary function of bringing together the diverse experiences which an individual is exposed to and forming them into a cohesive organized whole (Effa-Heap, 1997). When attitude relates to nutrition, it is called nutritional attitude.

Nutritional attitude can be defined as a relatively enduring organization of belief around nutritional issues which predisposes one to respond in some preferential manner. In this study, nutritional attitude shall be regarded as the disposition of pregnant women towards nutritional issues and diet which may automatically influence their selection and eating of a particular food item. The attitude held by individuals especially pregnant women could be positive or negative. For instance, in most cultures of the world, the diets of pregnant women are receiving quite some attention. Most women including pregnant women in Nigeria nowadays have a virtual monopoly on green leafy vegetables because of their conviction that it will enhance their vitamin and iron intake. On the other hand, some pregnant women who have a negative attitude towards vegetables will not include it in their diet and consequently will not get sufficient vitamin and iron. Alade (2002) supported the above statement when he stated that the negative attitude that all birth defects are simply the act of God or the result of a genetic defect must give way to questioning and exploring the possibility that these may be preventable through adequate nutrition as one of the countermeasures, especially during the first trimester. The nutritional attitude of pregnant women may have a positive or negative influence on their health promotion. Optimum health promotion establishes a good foundation for supporting the needs of pregnant women.

Pregnant women require special attention especially concerning nutritional requirement because a baby is developing inside her. Pregnant according to Hornby (2001), means a woman or female animal having a baby or young animal developing inside her or her body. If a woman is pregnant, she has a baby or foetus developing inside her body. Pregnant woman in this study refers to a woman carrying developing foetus within her body. The pregnant woman's body is subject to greater demands to ensure foetal development as well as the growth, health and optimal functioning of the uterus, placenta and amniotic fluid. Okereke (2005) stated that there are numerous changes in the nutritional needs of a pregnant woman. The information concerning this nutritional need should be one among the packages made available to pregnant women attending antenatal clinic (ANC) to receive antenatal care. Antenatal care according to Akinsola (2006) refers to care given to pregnant women immediately after the pregnancy has been confirmed. Akinsola further stated that the main aim of antenatal care is to prevent complications which may occur to the mother or the baby such as bleeding, discomfort, pain, anaemia, accident or infection, especially malaria. According to Okereke (2010), antenatal care is the care given to a pregnant mother starting from the onset of pregnancy (or from the time her pregnancy was confirmed) until the onset of labour. Okereke further stated that most complications in pregnancy are best treated if they are identified early. In this study, antenatal care is the care given to a pregnant woman immediately after the pregnancy has been established until the onset of labour. Pregnant women are encouraged at this stage to attend antenatal clinic regularly to receive adequate care that will enable them to develop a positive nutritional attitude. It has been observed that many pregnant mothers in the study area suffer from anaemia in pregnancy (Nsukka Health District health records, 2015) which could be caused by the poor nutritional attitude in pregnancy. The area of the study (Nsukka Health District) has a wide variety of nutritious food which if properly consumed helps in boosting the nutritional status of pregnant women. However, nutritional attitude could be influenced by some variables. The variables of age and level of education were studied. Samuel (2006), and Azizi, Aghee, Ebrahim, and Ranjba (2011) indicated that a lifetime of experience and educational interference leads to an increase in nutrition knowledge and enhancement of peoples' attitude. It, therefore, becomes necessary to determine the nutritional attitude of pregnant women in Nsukka health district. The findings of this study will be useful to researchers, health caregivers, pregnant women and all those involved in the care of pregnant women. Consequently, the following research questions were posed to guide the study;

1. What is the nutritional attitude of pregnant women in Nsukka District in Enugu State according to age?

2. What is the nutritional attitude of pregnant women in Nsukka District in Enugu State according to levels of education?

Hypotheses

The following null hypotheses are postulated for the study and will be tested at .05 level of significance.

1. There is no significant difference in the mean nutritional attitude of pregnant women in Nsukka District in Enugu State according to age.
2. There is no significant difference in the nutritional attitude of pregnant women in Nsukka District in Enugu State according to levels of education.

Materials and Methods

The descriptive survey research design was employed to accomplish the purpose of this study. Descriptive survey research design describes the features or facts about a given population. It gathers data at a particular point in time to describe the existing conditions. According to Nworgu (2006) descriptive survey are those studies which aim at collecting data on, and describing systematically, the characteristics features or facts about a given population. Frankfort-Nachmias and Nachias (2006) stated that descriptive survey design is a research design used most predominantly as it facilitates the gathering of information about a large population by collecting information from a portion of that very population from where generalization can be inferred. The population for this study consisted of registered pregnant women attending antenatal clinic in different health facilities of Nsukka Health District between August 2014 and March 2015. The total population of these women is 3,600 (Nsukka Health District Board, 2015). Three Local Government Areas make up Nsukka Health District with five functional health facilities each making it a total of 15. The sample for the study consisted of 360 pregnant women statistically determined using Taro Yamane formula for a finite population. The multi-stage sampling procedure was employed to draw the sample for the study. The procedure involved three stages. In the first stage, stratified random sampling was used to stratify the health facilities located in the L.G.A. that makeup Nsukka Health District into predominantly urban and rural health facilities. The second stage involves the use of simple random sampling of balloting without replacement to select four health facilities out of the five functional ones in each of the three Local Government Areas. Two was selected from urban and rural health facilities respectively. This procedure provided a total of 12 health facilities out of 15 functional ones located in Nsukka health District. In another stage, the proportionate random sampling technique was employed to select 30 pregnant women from each of the 12 health facilities. This resulted in 360 pregnant women which constituted the sample.

The instrument for data collection was the researcher-designed questionnaire which was called Nutritional Attitude Questionnaire (NAQ). It comprised of 15 items using limits of numbers to elicit information on nutritional practices of pregnant women. They were required to respond to these items by rating as follows: "Always-AL (4), Sometimes-ST (3), Rarely-RL (2), and Not at all-NT (1). The respondents were required to choose and tick only one response option per item as it applied to them. Five experts in the Department of Human Kinetics and Health Education, University of Nigeria Nsukka validated the instrument. Test-retest method using Cronbach Alpha statistics was used to establish the internal consistency of NAQ.

Reliability coefficient index of .69 was obtained. This was considered high enough for the study. The distribution and collection of the questionnaire were facilitated by the assistance of two instructed research assistance after permission was obtained from the officer-in-charge of the respective health facilities. The completed copies of the instrument were collected from the respondents on the spot. This approach yielded a high return rate of 100%. Ten copies of the questionnaire were discarded due to the lack of completeness of the information. The remaining 350 copies were used for analysis. All analysis was carried out using the Statistical Package for Social Sciences (SPSS) batch 16. Mean and percentages were the statistics employed to analyze the two research questions. In determining the attitude, means score for each item and the grand mean of each dimension were used to determine whether the attitude was positive or negative. These were used to answer the research questions. The criterion means value was set as 2.50

Hence, a criterion mean value of 2.50 was utilized in decision making. Where the mean score was equal or greater than the criterion mean value of 2.50, it was concluded that nutritional attitude was positive. Where the mean score was less than the criterion mean value, it was concluded that the nutritional attitude of pregnant women was negative. Analysis of Variance (ANOVA) statistics was used for testing the two null hypotheses at .05 level of significance.



Results

Table 1: Nutritional Attitude of Pregnant Women (NAPW) According to Age (n=350)

S/N	Items	Age Group			
		15-20 Yrs (n=45) \bar{X}_1	21-30 yrs (n=192) \bar{X}_2	31-40 yrs (n=63) \bar{X}_3	41-49 yrs (n=55) \bar{X}_4
1.	Include all the classes of food nutrients in my meal to prevent birth defect	2.47	2.65	3.71	1.64
2.	Insisting on quality of food is more important than quantity	3.18	3.02	2.68	2.48
3.	The quality and quantity of food eaten is important	2.98	3.18	3.52	3.00
4.	I eat plantain to get energy	1.47	1.82	3.37	1.78
5.	Pregnant women take extra protein food like meat, milk and egg	2.33	2.53	3.02	2.48
6.	Oil is not important in the diet of pregnant women	3.33	2.53	2.16	1.78
7.	I eat whole grain cereals to get iron	3.42	1.95	2.70	2.18
8.	I don't need folic supplement	3.42	2.65	1.87	3.76
9.	Fruits and green leafy vegetable supply me with vitamins	2.42	3.31	3.17	2.94
10.	It does not matter whether the vegetable is washed before shredding	2.42	3.31	3.17	2.94
11.	I prefer steamed vegetable to boiled vegetable	2.13	2.28	1.95	1.24
12.	Pregnant women should eat meals twice a day than eating breakfast, lunch and dinner	2.65	2.27	1.51	3.58
13.	Fruit and vegetables are not important to pregnant women	2.13	2.28	1.41	3.38
Grand mean		2.74	2.61	2.49	2.62

Key: +ve = positive (criterion mean is 2.50 and above), -ve = negative (Criterion mean is below 2.50)

Data in Table 1 shows that the grand attitudinal mean score of women aged 15-20 years ($\bar{X}=2.74$) was slightly higher than those aged 21-30 years ($\bar{X}=2.61$) and those aged 41-49 years ($\bar{X}=2.62$). These scores were greater than the criterion mean of 2.50 indicating that the nutritional attitude of the pregnant women was positive.

The table further shows that pregnant women aged 31-40 years had a grand mean of 2.49 which falls below 2.50, indicating negative attitude.

Table 2: Nutritional Attitude of Pregnant Women (NAPW) According to Level of Education

S/N	Items	Level of Education			
		Non-formal Education (n=6) \bar{X}_1	Primary Education (n=94) \bar{X}_2	Secondary Education (n=160) \bar{X}_3	Tertiary Education (n=90) \bar{X}_4
1.	I include all the classes of food nutrients in my meal to prevent birth defect	2.47	2.19	2.39	3.68
2.	Insisting on quality of food is more important than quantity	2.83	2.56	3.07	2.96
3.	The quality and quantity of food eaten is important	2.83	2.96	3.17	3.48
4.	I eat plantain to get energy	1.67	1.20	1.88	3.26
5.	Pregnant women take extra protein food like meat, milk and egg	3.00	2.53	2.25	3.21
6.	Oil is not important in the diet of pregnant women	1.50	2.15	2.89	2.09
7.	I eat whole grain cereals to get iron	1.83	2.64	2.02	2.50



8.	I don't need folic supplement	2.50	3.72	2.84	1.66
9.	Fruits and green leafy vegetable supply me with vitamins	2.50	3.21	3.01	3.27
10.	It does not matter whether the vegetable is washed before shredding	3.17	3.90	3.26	1.27
11.	I prefer steamed vegetable to boiled vegetable	2.50	1.48	2.16	2.42
12.	Pregnant women should eat meals twice a day than eating breakfast, lunch and dinner	2.50	3.40	2.74	1.57
13.	Fruit and vegetables are not important to pregnant women	2.17	2.66	2.63	2.51
Grand mean		2.44	2.66	2.63	2.51

Table 2 shows that the grand attitudinal mean score of the pregnant woman with Primary Education (\bar{x} =2.66) was slightly higher than those with Secondary Education (\bar{x} =2.63) and those with Tertiary Education (\bar{x} =2.51). These means were greater than the criterion mean of 2.50. This implies that the nutritional attitude of pregnant women with these three levels of education was positive. The table also shows that the grand mean score of pregnant women with Non-formal Education (\bar{x} =2.44) was lower than the criterion mean of 2.50. This implies that the nutritional attitude of pregnant women in this age group was negative.

Table 3: Result of One-Way Analysis of Variance (ANOVA) Testing the Hypothesis of No Significant Difference in the Mean Nutritional Attitude of Pregnant Women According to Age

	Sum of squares	df	Mean square	F	P-value
Between Groups	273.296	3	91.099	11.448	.000
within Group	2753.359	349	7.958		

Table 3 shows that the calculated F-value and the corresponding *p*-value of Nutritional attitude of Pregnant Women (F – value = 11.448, P-value = .000 <.05) is less than .05 level of significance at 3 and 349 degrees of freedom. The null hypothesis of no significant difference is therefore rejected. This implies that there is a significant difference in the nutritional attitude of pregnant women according to age.

Table 4: Result of One-Way Analysis of Variance (ANOVA) Testing the Hypothesis of No significant Difference in the Nutritional Attitude of Pregnant Women According to Level of Education

	Sum of squares	df	Mean square	F	P-value
Between Groups	227.708	3	75.903	9.383	.000
Within Groups	2798.946	346	8.089		

Table 4 shows that the calculated F-value and the corresponding P-value of the nutritional attitude of pregnant women (F-value=9.383; P-value=.000 <.05) is less than .05 level of significance at 3 and 346 degree of freedom. The null hypothesis of no significant difference is therefore rejected. This implies that there is a significant difference in the nutritional attitude of pregnant women according to the level of education.

Discussion

The finding revealed the mean scores for pregnant women as follows. Those aged 15-20 years (\bar{X} = 2.74), 21-30 years (\bar{X} = 2.61) and 41-49 years (\bar{X} = 2.62) had positive nutritional attitude while those aged 31-40 year (\bar{X} = 2.49) which indicates a negative nutritional attitude. This finding is surprising and not expected. This is because under normal circumstances older pregnant women who have been attending antenatal clinic with a wealth of experiences are expected to possess more positive nutrition attitude than the other age groups while young pregnant women with little experiences probably due to low level of knowledge are expected to exhibit negative attitude. The finding disagrees with Muokwogwo (1992) who reported that young mothers tend to have a negative attitude than the older women. This might be as a result of juvenile tendencies. The younger women are full of life and are sometimes influenced by peer pressure.



Another finding revealed that there was a significant difference in the nutritional attitude of pregnant women according to age. This implies that pregnant women in the four age groups differ in their nutritional attitude. This finding is not surprising and therefore expected. This is because pregnant women at different age have different experience, exposure and level of knowledge. Therefore, their attitude is expected to differ. This finding is corroborated by the finding of Bukusuba, Kikafunda and Whitehead (2010) who reported that most of their participants understood that consumption of a balanced diet, fruits and vegetables and special diets is necessary for good health while others believed that increasing the frequency of meal is important too. Women aged 15-20 years are youths who are expected to exhibit a negative nutritional attitude because at this age, they have not acquired enough exposure. This finding is in line with that of Azizi, Aghee, Ebrahimi, and Ranjbar (2011) who reported that nutritional knowledge had a meaningful relationship with attitude and diet. On the other hand, older pregnant women are expected to possess' wealth of experience that should enhance their positive nutritional attitude.

The finding on the nutritional attitude of pregnant women according to levels of education revealed that pregnant women with primary education ($\bar{X}= 2.66$), secondary education ($\bar{X}= 2.63$) and Tertiary education ($\bar{X}= 2.51$) had positive nutritional attitude while those with non-formal education had a negative nutritional attitude. This is because experiences have shown that educated women have acquired a lot of knowledge and as such are more teachable and more nutrition-conscious in a bid to prevent pregnancy-related diseases. This conforms to the reports of Nurliyana, Norazmir, and Anuar (2011) who stated that educated people were more nutrition-conscious to get better food choice, and healthy eating. The finding, however, was in line with Preventive Maternal Mortality Network-PMMN (2005) who reported that only educated women with high-level knowledge can exhibit positive attitude than their uneducated counterparts.

Equally the finding on the related hypothesis revealed that there was a significant difference in the nutritional attitude of pregnant women according to levels of education. This finding is not surprising and therefore expected. This implies that pregnant women of different levels of education differed in the view of the fact that educated pregnant women with high knowledge as a result of their educational background are expected to exhibit positive nutritional attitude than their uneducated or not educated counterparts. Experience has shown that pregnant women who were well educated are more likely to translate knowledge into actions, have a positive attitude to nutritional issues and are less likely to suffer nutritionally related disease such as diabetes, obesity, anaemia, and hypertension in pregnancy. This finding is in agreement with that of Azizi, Aghee, Ebrahim and Ranjbar (2011) who reported in their finding that educational interference leads to an increase in nutrition knowledge and enhancement of peoples' attitude. However, this finding negates the finding of Sharma and Sharma in which pregnant women show no considerable difference between the knowledge of women who are illiterate, primary and secondary education. The fact states that attitude is influenced by knowledge. One can therefore deduce from the above Sharma and Sharma finding that since there was no considerable difference in the knowledge possessed by pregnant women, it is expected that there would not be a considerable difference in their attitude. From all indication, education is a powerful tool in a change of attitude as well as behaviour.

Conclusion

Pregnant women aged 15-20, 21-30 and 31-40 years had positive nutritional attitude while those aged 41-49 years had negative nutritional attitude. Pregnant women with primary, secondary and tertiary education possessed positive nutritional attitude while those women with non-formal education possessed negative nutritional attitude.

The implications of the Finding for Health Promotion

Education is a veritable tool in health promotion. Health promotion enables people to increase control over their own health (WHO, 2016). WHO further stated that Health Promotion covers a wide range of social and environmental interventions that are designed to benefit and protect individual people's health and quality of life by addressing and preventing the root causes of ill health, not just focusing on treatment and cure. The finding of possession of negative nutritional attitude by some pregnant women implies a need for health promotion.

This finding implies that when women acquire good education it will enhance their nutritional attitude which will be translated into adequate dietary behaviour and consequently lead to their health promotion because they are less likely to suffer from certain diseases like liver problem, obesity, hypertension and nutritional anaemia that are associated with nutritional intake during pregnancy. Enebechi (2015) affirmed that positive lifestyle could help reduce related diseases and ensure wellness.



Recommendations

Health education on the importance of adequate nutrition to pregnant women should be constantly delivered to mothers especially those with non-formal education and higher age range by health educators, nurses, midwives and other health professionals to improve their nutritional attitude which will translate to proper nutritional practices. The State Government in conjunction with the Ministry of Health, Education, Information and Women Affairs, School authorities, Non-governmental Organizations (NGOs) and churches should embark on sensitization and public enlightenment campaigns in the area of Nutrition education both in schools and the general public.

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