JHER Vol. 24, No. 1, September, 2017, pp. 1 - 9

Assessment of Food Intake of Rural Pregnant Women in Ifelodun Local Government Area, Kwara State

Adebisi, W.O., Opaleke, D.O. & Abdulkadir. S.O.
Department of Home Economics and Food Science.
Faculty of Agriculture,
University of Ilorin,

Abstract

The study assessed the food intake of pregnant women in Ifelodun Local Government Area of Kwara State. Multistage sampling procedure was used to select 130 respondents from 650 population. Data were collected using a structured questionnaire, and were analyzed using descriptive statistics. Results showed that majority (68.5%) of the respondents were between age 20-29, Muslims (69.2%), with primary school education (43.8%), marketers (76.2%) with income between 4000-6000 naira and have at least two (2) children. Majority of the respondents (92.3%) agreed to consume more cereals and (82.3%) meat and (39.2%) less of vegetables, (30.0%) fruits and (29.2%) milk products, which are necessary during pregnancy. The study revealed that the major source of information was health center (98.5%) but information gotten was not utilized appropriately. The major constraints faced where Inadequate income (mean = 1.59), cost of food (mean =1.31) and pregnancy condition (mean =1.12).

Keywords: Assessment, Food, Intake, Pregnancy, Women, Rural

Introduction

Women constitute a sizable proportion of human race, According to Ubi (2008) women are the backbone of the rural economy in Africa. About 80 percent of the economically active female labour force is employed in agriculture and women comprise about 47 percent of the total agricultural labour force, (Iheanyi and Nnenna, 2012). They perform crucial roles in the domestic and economic life of the society, as farmers, they plant, weed and harvest food crops and tend livestock. As caretakers, they look after children and relatives, prepare meals and manage the home. Many women earn extra income by working as wage laborers, producing and selling vegetables, or engaging in small scale trading and enterprises. In spite of their tremendous contribution to development, rural women continue to suffer invisibility, poor health, low levels of formal education and income and limited access to infrastructural development. Adepelumi, (2012) opined

that majority of the poor live in rural areas, 70% are women. Rural women have many roles, and they have responsibilities and their knowledge that differs from men.

Pregnancy is a period of dynamic change for the mother (Brown, 2005). During this period the foetus is nourished directly by the mother through placenta. Since the baby totally relies upon its mother for nourishment, the pregnant woman is to be provided with an adequate and well-balanced diet (Widen and Siega-Riz, 2010). Rural women are saddled with maternal responsibilities and they also have to secure a source of earnings for the homes which they achieve by their involvement in agricultural activities and they face enormous challenges and constraints in their roles as providers of household nutrition security (Agbo, 2013). Many rural women farmers have poor health status, this could be due to heavy farm work, childbearing and rearing and poor nutrition. The rural areas do not have good infrastructural facilities and basic social amenities (such as roads, potable water, health care services and electricity), they may have to walk long distance while performing their daily activities this results in drudgery that wear and tear the women down gradually. The involvement of the women in Ifelodun Local Government Area in marketing of the little agricultural farm produce available to them fetches them insufficient income thereby limiting the financial resources available to these women, preventing them from providing healthy nutritional diet during the period of pregnancy.

According to Bredbenner, Beshgetoor, Moe and Berning (2009), women's nutrient needs increases during pregnancy, some of this increased nutrient requirement protect maternal health while others affect birth outcome and infant health. During pregnancy all women needs more food, a varied diet, and micronutrients supplements. When energy and other nutrient intake does not increase, the body's own reserves are used leaving the pregnant woman weakened. Energy needs increase in the second and particularly the third trimester of pregnancy (Joshi, 2010). Inadequate weight gain during pregnancy often results in low weight, which increases an infant's risk of dying. Pregnant women also require more protein, iron, iodine, vitamin A, folate, and other nutrients. Barasi, (2003) asserted that deficiencies of certain nutrients are associated with maternal complications such as death of fetal and newborn, birth defects and decreased physical and mental potential of the child.

For a very long time, the food intake which is attributed to the nutritional status of pregnant women has attracted the attention of many national and local bodies as well as international bodies or organizations. Pregnant women have been widely recognized as a vulnerable group from the health point of view. It has been universally accepted that they need more food for the growing foetus. They constitute the important segments of the population with higher nutrient requirements. Considerable amount of

attention has to be paid to the dietary intake and nutritional status of pregnant women. Hence, the present study is undertaken to know the food intake of pregnant women in the rural area and the constraints faced by these women. Meanwhile the pregnant women (together with young children) represents the group most vulnerable to nutritional deprivation and the effect of malnutrition are severe and long lasting.

Purpose of the Study

The purpose of this study was to assess the food intake of rural pregnant women in Ifelodun Local Government Area, Kwara State. Specifically, the study determined:

1. socio-economic characteristics of the pregnant women in the study area.
2. 24-hours frequency of food consumption by the pregnant women.
3. 30 days reference period of food consumption of pregnant women.
4. sources of information of pregnant women on their nutritional needs.
5. constraints facing the pregnant women on their food intake.

Research Questions

1. What are the socio-economic characteristics of the pregnant women in the study area?
2. What is the 24-hours frequency of food consumption by the pregnant women?
3. What is the 30 days reference period of food consumption of pregnant women?
4. What is the sources of information on their nutritional needs?
5. What are the constraints facing pregnant women on their food intake?

Methodology

Design and Area of Study: Descriptive survey research was used .The study was carried out in Ifelodun Local Government Area of Kwara State. The people of Ifelodun are Yoruba's and mostly of Igbomina origin with their roots in Ife, Oyo and Ketu, their headquarters in Share. It has an area of 3,435km2 and a population of 206,042 at the 2006 census. Majority of the people in the local government practice subsistence farming and marketing of agricultural produce to earn their living. The government made available 11 basic health centers in some towns for the people to go for any medical issues and they have a general hospital at their headquarters in Share.

Population of Study: The target population of the study comprised of all pregnant women who registered for ante-natal clinic at the basic health centre between the periods of February, 2015 to June, 2015 at basic health centre Amoyo, Ganmo and Idofian. There are 650 pregnant women registered for ante-natal.

Sample and Sampling Technique: A multistage sampling procedure was used to select the respondents. Firstly, purposive sampling was used to select the 3 basic health care centres in towns of Ifelodun local government area based on distance from one another and level of patronage by the pregnant women in

the locality. Secondly, purposive sampling was also used to select pregnant women in their second and third trimester. Proportionate sampling technique was used to select twenty percent 20% of 150 registered pregnant women in Amoyo to give 30 respondents, 20% of 200registed pregnant women in Ganmo to give 40 respondents and 20% of 300 registered pregnant women in Idofian to give 60 respondents, the total sample size was one hundred and thirty (130) respondents.

Instrument of Data Collection: The instrument for data collection was a structured questionnaire. Variables measured include the socio-economic characteristics, sources of information, constraints of nutritional intake and nutritional intake of pregnant women. A 24 hours dietary recall was used to assess their nutritional intake, a list of food groups (9) was presented to respondents to select if consumed or not in 24 hours diet recall method, the highest obtainable score was 9 and the lowest was 0. Their frequency of food consumption within 30 days reference period which was measured using a 3 point scale, highest obtainable score was 27 and the lowest obtainable score was 0.

Data Collection and Analysis Technique: A total of 130 questionnaires were administered with the help of a research assistant. All the copies were completed and retrieved. This represents 100% recovery rate. Data were analyzed using descriptive and inferential statistics.

Findings of the Study

The socio economic characteristics presentation showed that majority 89(68.5%) of the respondents were between ages 20-29years while few 3(2.3%) were between the ages of 40-49, this implies that respondents are in their most reproductive stage of life cycle. Muslims were 90(69.2%) while Christian 40(30.8%), close to half of respondents 57(43.8%) have primary school education, 19(14.6%) having no formal education, 46(35.4%) having secondary and 8(6.2%) having tertiary education. Majority of the respondents 99(76.2%) are involved in marketing, as an occupation and earns income between the range of ₦1000-₦6000 monthly, larger percentage 86(66.2%) have at least 1-3 children with 13(10.0%) carrying their first pregnancy.

Table 1: Distribution of respondents based on 24 hours diet recall intake

S/N	Food group	Frequency (%)
1	**Cereals**	
	Millet *(Pennisetum glaucum)*, rice *(Oryza sativa)*, maize *(Zea mays)*, bread and others	120(92.3)
2	**Tubers**	
	Potatoes *(Solamum tuberosum)*, yam *(Thisconea spp)*, cassava *(Manihot esculenta)*, cocoyam *(colocasia spp)* and others	34(26.2)
3	**Dark green leafy vegetables**	
	Ugu *(Telifairia occidentalis)*, green leaf *(Amanrathus hybridus)*,	51(39.2)

	waterleaf *(Talinum Triangulare)*, bitter leaf *(Vermonia amygdalins)*and okro *(Ablemosdius esculentus)*	
4	**Fruits**	
	Mango *(Magnifera indica)*, orange *(Citrus aurantium)*, watermelon *(Citrullus ionatus)*, banana *(Musa spp)*, pawpaw *(Carica papaya)*, pineapple *(Ananias comosus)*, guava *(Psidium guajava)* and others	39(30.0)
5	**Meat**	
	Beef, pork, chicken and other birds, liver, kidney, heart	108(83.1)
6	**Egg**	16(12.3)
7	**Seafood**	
	Fresh or dried fish, crayfish, shellfish	53(40.8)
8	**Any food from;**	
	Beans *(Vigna unguiculata)*, nuts, e.g. beans cake, cowpea paste, moi moi	53(40.8)
9	**Any food from;**	
	Milk and other milk products	38(29.2)

Table 1 shows distribution of respondents based on 24 hours diet recall, majority of the respondents consume cereals (92.3%) and meat (83.1%) while it was observed that only few consume vegetables (39.2%), fruits (30.0%) and milk products (29.2%).

Table 2: Distribution of respondents by frequency of food consumption within 30-days.

S/N	Food groups	Not at all F (%)	1-3 days F (%)	4-14 days F (%)	In 15 days F (%)
1	**Cereals:** Millet *(Pennisetum glaucum)*, rice *(Oryza sativa)*, maize *(Zea mays)*, bread and others	0(0.0)	0(0.0)	52(40.0)	78(60.0)
2	**Tubers:** Potatoes *(Solamum tuberosum)*, yam *(Thisconea spp)*, cassava *(Manihot esculenta)*, cocoyam *(colocasia spp)* and others	7(5.4)	33(25.4)	75(57.7)	15(11.5)
3	**Dark green leafy vegetables** Ugu *(Telifairia occidentalis)*, green leaf *(Amanrathus hybridus)*, waterleaf *(Talinum Triangulare)*, bitter leaf *(Vermonia amygdalins)*and okro *(Ablemosdius esculentus)*	0(0.0)	20(15.4)	86(66.2)	24(18.5)
4	**Fruits:** Mango *(Magnifera indica)*, orange *(Citrus aurantium)*, watermelon *(Citrullus ionatus)*, banana *(Musa spp)*, pawpaw *(Carica papaya)*, pineapple *(Ananias comosus)*, guava *(Psidium guajava)* and others	0(0.0)	23(17.7)	94(72.3)	13(10.0)
5	**Meat:** Beef, pork, chicken and other				

	birds, liver, kidney, heart	0(0.0)	13(10.0)	79(60.8)	38(29.2)
6	**Egg**	0(0.0)	51(39.2)	69(53.1)	10(7.7)
7	**Seafood**				
	Fresh or dried fish, crayfish, shell fish	0(0.0)	14(10.8)	95(73.1)	21(16.2)
8	**Any food made from;**				
	Beans *(Vigna unguiculata)*, nuts e.g beans cake, cowpea paste, moi moi	0(0.0)	28(21.5)	86(66.2)	16(12.3)
9	**Any food made from;**				
	Milk and other milk products	0(0.0)	41(31.5)	75(57.7)	14(10.8)

Table 2 reveals the frequency of food consumption of pregnant women within 30days reference period, it shows that the intake of pregnant women in cereals (60.0%) 15days in a month is high and their intake in fruits (10.0%), seafood (16.2%), vegetables (18.5%) were still low, this further buttress the findings in Table 1a.

Table 3: Distribution of respondents to selected sources of information on food intake.

Sources	**Frequency (%)**
Radio	42(32.3)
Television	9(6.9)
Friends	89(68.5)
Health center	128(98.5)
Association	15(11.5)
Family	67(51.5)

Table 3 shows that majority (98.5%) of the respondents obtain information on health issues through basic health center. It also showed that 68.5% and 51.5% obtained information on health related issues from friends and family respectively. However, television (6.9%) and association (11.5%) were not major source of information on health related issues.

Table 4: Distribution of respondents based on constraints to food intake.

Constraints	**Not a constraint F (%)**	**Mildly severe F (%)**	**Severe F (%)**	**Mean**	**Rank**
Inadequate Income	10(7.7)	34(26.2)	86(66.2)	1.59	1st
Pregnancy condition	8(6.2)	98(75.4)	24(18.5)	1.12	3rd
Inadequate Knowledge on food intake	122(93.8)	8(6.2)	0(0.0)	0.06	7th
Season	80(61.5)	48(36.9)	2(1.5)	0.40	5th
Culture	113(86.9)	17(13.1)	0(0.0)	0.13	6th
Preference	32(24.6)	90(69.2)	8(6.2)	0.82	4th
Cost of food	26(20)	38(29.2)	66(50.8)	1.31	2nd

Table 4 above presents a list of various constraints that affects respondents' food intake. Inadequate income (mean = 1.59) and cost of food (mean = 1.31) were ranked first and second among the constraints faced. Pregnancy condition (mean =1.12) and preference for food (mean = 0.82) were ranked 3rd and 4th respectively. However culture (mean = 0.13) and inadequate knowledge on food intake (mean =0.06) were not major constraints to food intake.

Discussion of Findings

The findings of the study based on 24 hours diet recall reveals that pregnant women consume more of cereals and meat and only few consume vegetables, fruits, tubers, foods made from beans and milk products. Williamson (2006) opined that pregnant women intake in foods rich in protiens, vitamins, minerals is very necessary to enhance the growth of feotus and help build immunity against diseases. The intake of foods rich in proteins, minerals and vitamins is rather low among pregnant women in Ifelodun local government area, this negates (Allen, 2005) who confirmed the nutrients requirement of pregnant women that will help them go through pregnancy without complications on the mother and child.

Food intake of the pregnant women based on the 30 days reference period also reveals that the intake of carbohydrates foods is very high and their intake of foods rich in proteins, minerals and vitamins is low. This further confirms that the food intake of pregnant women within 24 hours, which was maintained and had an overall effect on their food consumption within 30 days reference period. This also negates the opinion of (Anyakoha, 2015 and Joshi, 2010) who agreed that pregnant women should have increase intake in proteins, fruits and vegetables during pregnancy. This could be attributed to the income of pregnant women, that is insufficient thereby it allows these foods to be unaffordable within the period of 15days in a month by the pregnant women.

The pregnant women agreed that the major source of information on their food intake were obtained from the health centers which was not reflected in their food intake as they did not make good use of information given to them. Also, friends and families serves as a source of information, this is an indication that the pregnant women rely on interpersonal means of communication. However, television and radio were not good source of information for pregnant women on food intake. Annie and Otolo (2007) posited that rural women lack information needs that helps them in carrying out their individual living activities and Information Communication Technology can be used to pass reliable and comprehensive information to women which could be of great help in this information age. Rural women most often fail to access various information resources and services, even when such information is available. The reason may be related to socio economic status of the women or the format in which such information is packaged. This findings is in consonance with Hossain

and Islam (2012) who affirmed that women who live in villages lack access to information resources and ability to access information communication technology (ICT) resources.

The major constraints faced by the pregnant women on food intake were low income and high cost of food, this could be as a result of occupation of the pregnant women which is marketing which fetches them income that may not be sufficient for them to by nutritious foods. Pregnant women face the challenge of high cost of foods which were unaffordable by them and they were also limited by inadequate income which affects their purchasing power to nutritious foods. Hence, they result to cheaper foods which at times may not contain the adequate nutrient required. This finding is consistent with Anugwom, (2012), who posited that rural dwellers lack access to needed food and nutrition which could be cause by their socio economic status.

Conclusion

The survival of living organism is dependent on their ability to access vital substance required for growth and development. Nutrition is a means by which individuals make provision for materials necessary (in terms of food) to support life and it adds that many common health problems can be prevented with healthy diets. It was observed that the major source of information of pregnant women on their food intake was the health center but information gotten was not utilized appropriately. Also, inadequate income, cost of food and pregnancy condition were major constraints faced by pregnant women, because they agreed to the consumption of cereals and meat in their daily diet but not enough vegetables, fruits and milk products required by them in such condition. The study concluded on the importance of nutrition which was well known by the pregnant women but were limited by socio-economic factors which affects their food intake.

Recommendations

Based on the conclusions above, the following were recommended;

1. Care givers at the ante natal clinic should encourage and monitor women regularly on their intake of foods rich in proteins, minerals and vitamins.
2. Perishable foods like fruits and vegetables that are majorly consumed by pregnant women should be produced locally to enable affordability and accessibility.
3. Efforts should be made by governments to stabilize prices of staple food commodities that are locally produced.
4. More enlightenment programmes should be created on the importance of nutrition and dissemination of information regarding pregnancy and nutrition.

References

Adebisi, W.O. (2015). "Effect of Nutritional Intake on the Anthropometry Status of Rural Pregnant Women in Ifelodun Local Government Area, Kwara State".

An Unpublished Master's Thesis, Faculty of Agriculture and Forestry, University of Ibadan, Ibadan.

Adepelumi, P.A. (2012). "Women Entrepreneurship as a tool for Economic Development in Nigeria". *Centre for Advocacy and Human Development* (ACAHD).

Allen, L. (2005). "Multiple micronutrients in pregnancy and lactation": An overview, *American journal of clinical Nutrition*, 81 (12).

Anugwom, E.E. (2009). "Women, Education and Work in Nigeria. *Educational Research and Review.* 4 (4), 127-134.

Anyakoha. E.U. (2015). *Home Management for Schools and Colleges*. Onitsha, African firstpublishers' plc.

Barasi, E. M. (2003). Human Nutrition- A Health Perspective. London: Arnold.

Bredbenner, C., Beshgetoor, D., Moe, G and Berning, J. (2009). "*Wardlaws Perspective of Nutrition*". McGraw Hill Education, Boston Burr Ridge.

Elamin, A. (2012). *Assessment of Nutritional Status*, Paper presented at the College of Medicine, Oman, Sultan Qaboos University.

Fall, C. H., Yajnik, C. S. and Rao, S., (2003). Micronutrients and fetal growth. *Journal of Nutrition* 133(2):1747–1756.

Kamau-Mbuthia, E. and Elmadfa, L. (2007). Diet quality of pregnant woman attending ante-natalclinic in Nakuru, Kenya. *Annual Nutrition Metab* 51(4): 324-330.

Kwapong, OATF (2007). "ICTs and Adult Education for Empowerment of Rural Women in Africa". *International Journal of Rural Studies.* 14(2).

Olusanya, J., Bala, F., Eyisi, O. and Olojola, D. (2010). *Exam Focus; Foods and Nutrtion*, University Press, Plc. Ibadan, Pp 1.

Rao, S., Yajnik, C. S. and Kanade, A. (2001). "Intake of Micronutrient-rich Foods in Rural Indian Mothers is associated with the size of their babies at birth": Pune Maternal Nutrition Study. *Journal of Nutrition* 131(4):1217–1224.

Widen, E. and Siega-Riz, A.M. (2010). Prenatal Nutrition: A practical guide for assessment and counselling. *Journal of Midwifery & Women's Health.* 55 (6): 540-549.

Williamson, C.S. (2006). Nutrition in Pregnancy, *British Foundation Nutrition Bulletin* 31: 28-59.

Yaten, A. (2006). "Dietary Reference Intake: Rationale and Applications, *Modern Nutrition in Health and Disease*". Philadelphia, Lippincott, Williams and Winkins.