Araştırma Makalesi

Research Article

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Households' Perception of Fruits and Vegetables Consumption in Olorunda Local Government Area, Osun State, Nigeria

Abstract
This study assessed respondents' perception of fruits and vegetables consumption in the study area. Relevant data were collected from one hundred and twenty (120) randomly sampled households. Data were analyzed as appropriate. Results showed that 68.3% of the respondents were females, 96.7% had varying degrees of formal education while means of household size and monthly income were 4 ± 2 persons and ₦57,500±23,300, respectively. Respondents had strong perception for the facts that vegetables can be easily incorporated into meals than fruits, fruits have more nutritional benefits than vegetables and too much consumption of fruits and vegetables lead to running stomach and watery stool ranking 1st, 2nd and 3rd, respectively but weak perception for the facts that fruits can be easily incorporated into meals than vegetables, excessive consumption of fruits and vegetables can cause stomach ulcer and fruits and vegetables are often costlier than real food items ranked 8th, 9th and 10th, respectively. Seasonality, availability and taste and preference were the major constraints to fruits and vegetables consumption in the study area. The study concluded that there were misperceptions on consumption of fruits and vegetables and recommended value re-orientation on nutritional and health benefits of fruits and vegetables consumption in the study area.

INTRODUCTION

Fruits and vegetables consumption is crucial to the availability of micronutrients to the body as they are rich sources of vitamins and minerals which are required for the normal functioning of the human body. Apart from providing micronutrients, fruits and vegetables are known to provide dietary fibers (soluble and insoluble) which are vital for the optimal functioning of the gastro-intestinal tract. They also enable the body to use other nutrients required for its normal functioning. Low fruit and vegetable intake is the main contributor to micronutrient deficiencies in the developing world especially in population with low intake of animal protein foods such as meat and dairy products. Fruits and vegetables provide micro-nutrients such as vitamins, minerals and dietary fibre to the body thereby increasing life expectancy, reducing risks of cancer and cardiovascular diseases, and preventing obesity (Rolls et al., 2004; Belivia et al., 2013; Conner et al., 2017; Oyebode et al., 2014; Mathilda et al., 2012; Ifeoluwapo, 2018). Specifically, studies have shown that fruits are rich in potassium which helps to prevent loss of bone and the formation of kidney stones (United States Department of Agriculture (USDA, 2009) and (Ifeoluwapo, 2018). Fruits aid the regular functioning of brain cells thus preventing memory loss and also promote proper functioning of the digestive system and overall well-being of the human body (USDA, 2009 and Ifeoluwapo, 2018). In the same vein, vegetables are loaded with immense health benefits. They prevent obesity, protect vital organs of the body and help in the formation of healthy hair and skin. They are also a good source of antioxidants which boost body immunity against diseases and digestive disorders such as constipation, haemorrhoids and watery stools (Ifeoluwapo, 2018). Food and Agriculture Organisation (FAO, 2003) emphasized the need to increase fruits and vegetables consumption as a major global health challenge. This is sequel to the deficiencies of micro-nutrients experienced globally resulting in serious nutritional disorders such as impaired immune system, birth defects, retarded physical and mental development among other serious conditions. World Health Organisation (WHO, 2003) and FAO (2003) set the population nutrient goals and recommended intake at a minimum of 400g for fruits and vegetables per day in a bid to protect the body against serious heart diseases, cancer, diabetes and obesity. The required daily intake of fruits and vegetables differ considerably across the world. It ranges from less than 100g/day in less developed economies to about 450 g/day in Western Europe. Among the 21 countries considered by the WHO (2003) to determine which developed countries had national average of fruit and vegetable consumptions within the recommended values, only Israel, Spain and Italy were found to have acceptable national average intakes of at least 400g/day at 5 or more servings. It was also discovered that even in developed countries, the intake of fruits and vegetables is lower among African-Americans than Caucasians. Furthermore, it has been noted globally that both knowledge and attitude of adults to fruits and vegetables intake is grossly below the nutritionally recommended threshold and acceptable limits. The situation is more exacerbated in developing economies. Ihucha (2011) affirmed that the risks of disease and death due to malnutrition and non-communicable diseases (NCDs) are higher in households with low consumption of fruits and vegetables. In Nigeria, micronutrient malnutrition has been identified as a widespread problem with serious economic consequences including cognitive losses, work losses, low productivity, ill-health among others (Adish, 1999 and Ifeoluwapo, 2018). Ruel et al. (2004) affirmed that adult intake of fruits and vegetables is low and is solely influenced by income and individuals' perception of the importance of these food items to adequate nutrition in developing countries. To identify effective and long-term strategies to increase fruits and

vegetables intake, it is highly imperative to establish the underlying factors that influence consumption. Hence, this study was poised to investigate households' perception of fruits and vegetables consumption in Olorunda Local Government Area of Osun State, Nigeria. Specifically, the study described socioeconomic characteristics of the respondents; examined the quantity and frequency of fruits and vegetables consumption among respondent; examined respondents' perception of fruits and vegetables consumption and identified the constraints to fruits and vegetables consumption in the study area.

MATERIALS and METHOD

Data used in this study were obtained from primary sources. Purposive sampling technique was used to select three (3) prominent markets (Akindeko, Igbonna and Ota-Efun) having high concentration of fruits and vegetables sellers within the study area while forty (40) households were randomly selected from the clusters of households around each of the three selected markets giving a total of one hundred and twenty (120) households which constituted the study sample. Data were collected from household heads with the aid of well-structured interview schedule. Relevant information were collected to address the stated specific objectives. Data were analyzed using descriptive statistics as well as Likert scale. The descriptive statistics employed included frequencies, percentages, mean and standard deviation.

RESULTS and DISCUSSION

Socio-economic characteristics of the respondents

Table 1 presents the results of the socioeconomic characteristics of respondents. Majority (60.0%) were found in the age range of 20-40 years while mean age was found as 39.9±23.7years. This implies that most of the respondents were middle aged and still in their active years and are therefore expected to be well informed about the significance of fruits and vegetables in human diet. Majority (68.3%) of the respondents were females, and 76.7% were married, a few (3.3%) of the sampled respondents had no formal education, 31.7% were OND/NCE holders, 25.0% were secondary school certificate holders, 21.7% held HND/B.Sc certificates, 15.0% were primary school leavers while 3.3% held postgraduate degrees. This implies that the sampled respondents had fair share of formal education. Half (50.0%) of the respondents were Muslims, 46.7% were Christians while 3.3% practiced traditional religion. Most (86.6%) of the respondents had household size ranging between 1 – 6 persons while 13. 3% had 7 – 9 persons in their households. The mean household size was found as 4±2 persons. This result is a true reflection of the mean age and educational status of the respondents because they kept sizeable families. Results further revealed that 35.0% of the sampled respondents were primarily engaged as civil servants, 38.3% were traders while 23.3% were artisans. Majority (60.0%) of the respondents earned between ₦1,000 and ₦50,000 on monthly basis, 40.0% earned between ₦51,000 and ₦150,000 per month while mean monthly income was found as ₦57,500±23,300. This implies that most of the respondents are average income earners compared with the national minimum wage. Therefore, they should be able to afford decent and healthy meals, fortified with fruits and vegetables consumption.

Table 1. Distribution of respondents based on socioeconomic characteristics

Variables	Frequency	Percentage	Mean
Age (Years)			
20 – 30	24	20.0	
31 – 40	48	40.0	
41 – 50	36	30.0	39.8±23.7years
51 – 60	12	10.0	
Gender			
Male	38	31.7	
Female	82	68.3	
Marital Status			
Single	14	11.7	
Married	92	76.7	
Separated	06	5.0	
Divorced	08	6.7	
Educational Status			
No Formal education	04	3.3	
Primary education	18	15.0	
Secondary education	30	25.0	
OND/NCE	38	31.7	
HND/BSC	26	21.7	
Religion			
Islam	60	50.00	
Christianity	56	46.7	
Traditionalist	04	3.3	
Household size			
1 – 3	40	33.3	
4 – 6	64	53.3	4±2Persons
7 – 9	16	13.3	
Primary Occupation			
Civil Servants	42	35.0	
Trader	46	38.3	
Artisans	32	26.7	
Monthly income ('000 Naira)			
1 – 50	72	60	
51 – 100	36	30	₦57,500±23,300
101 - 150	12	10.0	
Total	**120**	**100.0**	

Source: Field survey, 2018.

Quantity and frequency of fruits and vegetables consumption among respondents

Table 2 shows the distribution of the respondents according to the quantity of fruits and vegetables consumption per week in their households. The table reveals the mean weekly consumption of cashew, onion, tomato, mango, amaranths, citrus, pawpaw, jute mallow and banana/plantain among 9.71%, 58.3%, 53.3%, 5.07%, 4.96%, 4.85%, 4.66 and 4.77% of the sampled respondents as 4.48kg, 3.12kg, 3.10kg, 2.34kg, 2.29kg, 2.24kg, 2.20kg, 2.15kg and 2.14kg respectively. The least consumed fruit and vegetable is apple with a mean consumption of 0.52kg per week by very few (3.3%) of the sampled respondents. This may be due to the high cost of apple since it is mainly imported and is of high premium. Table 3 reveals that the most frequently consumed fruits and vegetables are onions and tomatoes which are both consumed over eleven times in a week by 46.7% and 38.3% of sampled respondents respectively, on the average. This is closely followed by citrus, mango, amaranthus, waterleaf, banana/plantain and carrot which are consumed for 7.93, 7.52, 7.31, 7.04, 6.28, 6.04 mean number of times

per week by 6.67%, 6.67%, 6.67%, 6.67%, 5.0%, and 5.0% of respondents respectively. However, apple being the least frequently consumed was taken for 1.89 times/weekly by a few (3.33%) of the respondents. This trend is not far from the facts that apples are very expensive compared with other listed fruits and vegetables, since they are not grown locally but are exotic species.

Table 2. Distribution of the respondent according to quantity of fruits and vegetables consumed per week

Fruits/vegetables	Mean (kg)	Percentage
Citrus	2.2	5.0
Mango	2.3	13.3
Banana/plantain	2.1	5.0
Pawpaw	2.2	6.7
Garden Eggs	1.6	5.0
Carrot	1.7	8.3
Cucumber	1.3	3.3
Waterleaf	2.3	6.7
Onion	3.1	46.7
Tomato	3.1	38.3
Jute Mallow	2.2	5.0
Amaranthus	2.3	11.7
Telfeira	1.7	6.7
Bitterleaf	1.6	3.3
Cashew	1.5	10.0
Celocia	1.4	3.3
Apple	0.5	3.3

Source: Field Survey, 2018.   **Multiple Response Table** n≠120

Table 3. Distribution of the respondent according to frequency of fruit and vegetables consumption

Fruits/vegetables	Mean (No of times purchased/month)	Percentage
Citrus	7.9	6.7
Mango	7.5	6.7
Banana/plantain	6.3	5.0
Pawpaw	2.3	1.7
Garden Eggs	4.2	3.3
Carrot	5.8	5.0
Cucumber	3.6	3.3
Waterleaf	7.0	6.7
Onion	11.4	58.3
Tomato	11.4	53.3
Jute Mallow	6.4	5.0
Amaranthus	7.3	6.7
Celosia	3.3	3.3
Telferia	4.5	3.3
Bitter leaf	6.0	3.3
Cashew	4.7	3.3
Apple	1.9	3.3

Source: Field Survey, 2018.   **Multiple Response Table** n≠120

Respondents' perception of fruits and vegetables consumption

Table 4 reveals that respondents have strong perception of the facts that vegetables can be easily incorporated into meals than fruits, fruits have more nutritional benefits than vegetables and too much of fruits and vegetables lead to running stomach and watery stool which were ranked 1st, 2nd and 3rd respectively. However, respondents had low perception of the facts that fruits can be easily incorporated into meals than vegetables, excessive consumption of fruits and vegetables can cause stomach ulcer and fruits and vegetables are often costlier than real food items which ranked 8th, 9th and 10th respectively.

Table 4. Respondents' perception of fruits and vegetables consumption (n≠120)

Perception statements	SA (%)	A (%)	U (%)	D (%)	SD (%)	WMS	Rank
Vegetables can easily be incorporated into meals than fruits	43.3	40.0	8.3	6.7	-	4.22	1st
Fruits have more nutritional benefits than vegetables	30.0	31.7	23.3	5.0	5.0	3.81	2nd
Too much of fruits and vegetables usually lead to running stomach and water stools	28.3	31.7	16.7	11.7	8.3	3.62	3rd
Vegetables are more readily available than fruits	20.0	25.0	21.7	25.0	1.7	3.39	4th
Fruits are highly seasonal and should not be integrated into routine the household meal regime	6.7	43.3	25.0	16.7	6.7	3.27	5th
Too much intake of fruits and vegetables can lead to loss of appetite for real food	6.7	31.7	30.0	23.3	6.7	3.08	6th
Vegetables have more nutritional benefits than fruits	16.7	10.0	36.7	26.7	8.3	3.00	7th
Fruits can easily be incorporated into meals than vegetables	10.0	8.3	26.7	38.3	15.0	2.59	8th
Excessive consumption of fruits and vegetables can cause stomach ulcer	-	11.7	33.3	28.3	25.0	2.32	9th
Fruits and vegetables are often costlier than real food items	10.0	11.7	10.0	26.7	38.3	2.26	10th

Source: Field Survey, 2018.   **Multiple Response Table** n≠120

Constraints to fruits and vegetables consumption

Table 5 shows the major constraints to fruits and vegetables consumption in the study area, in their order of severity. Seasonality was ranked 1st as the most severe constraint to fruits and vegetables consumption in the study area. This is followed by availability, taste and preference and price which were ranked 2nd, 3rd and 4th respectively. Taboo and sensory reasons do not constitute serious constraint to fruits and vegetables consumption in the study area, as they ranked 5th and 6th. Though ranked 4th, price is a potent constraint to fruits and vegetables consumption. This is evident in the level of cucumber and apple consumption which is quite low probably because of their relative exorbitant prices.

Table 5. Constraints to fruits and vegetables consumption among respondents

Factors	Frequency (%)	Severity Ranking
Seasonality	80 (66.7)	1st
Availability	44 (36.7)	2nd
Taste and preference	28 (23.3)	3rd
Price	26 (21.7)	4th
Taboo	04 (3.3)	5th
Sensory reasons	02 (1.7)	6th

Source: Field Survey, 2018.   **Multiple Response Table** n≠120

CONCLUSION

The study concluded that the level of fruits and vegetables consumption is very low in the study area, except for onions and tomatoes which are regular meal cooking ingredients. Seasonality, availability and

taste and preference were ranked 1st, 2nd and 3rd as the most severe constraints to fruits and vegetables consumption in the study area. Different misperceptions about fruits and vegetables consumption were also found among respondents. Therefore, awareness and training programmes should be organized to bring about value re-orientation on nutrition and health benefits of fruits and vegetables consumption in the study area.

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