

Dietary Habit and Nutritional Status of Commercial Tricycle (*Keke Napep*) Riders in Aba South Local Government Area of Abia State

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Abstract

The study was undertaken to investigate the dietary habits and nutritional status of commercial tricycle (*Keke Napep*) riders in Aba South L.G.A of Abia State. Data were obtained from 220 male tricycle riders who were randomly selected. Information on socio economic, demographic characteristics and dietary habit was obtained by means of questionnaire. Anthropometric method was used to determine the nutritional status of the subjects. Data were analyzed using frequencies, percentages and Chi square. The findings of the study among others showed moderate (53.6%) consumption frequency of cereals. High consumption frequency of roots/tubers (51.8%), fish/meat (49.1%), snacks (58.2%) and beverages (69.1%). Legumes (60.0%), fruits/vegetables (71.8%) consumption frequencies were low. There was a significant relationship ($p<0.05$) between nutritional status and source of food consumption.

Key Words: Dietary, Habit, *Keke Napep*, Nutritional, Status.

Introduction

Commercial tricycle (*Keke NAPEP*) is a means of transportation introduced by the Nigerian Government through the

National Poverty Eradication Programme (NAPEP) to help ensure economic empowerment for the poor (Udeozo, 2013). Its history in Nigeria

according to Mgbemena (2013), can be directly traced to Governor Mohammed Buba Marwa of Lagos State (1996 -1999) who was the first to launch its use as a commercial means of transport. This led to its first name “Keke Marwa” and it is still referred to as same in Lagos. NAPEP was inaugurated under the administration of President Olusegun Obasanjo in 2001 when 2000 green coloured tricycle was distributed in Abuja as a commercial means of transportation in the Federal Capital Territory (FCT). The strategy was employed to convert area boys from idlers to a productive work force. NAPEP (2004) opined that the other objectives for the introduction of *Keke NAPEP* was to sustain wealth creation, provide affordable mass transit services, provide opportunity for the growth of other ancillary service such as vending water, mobile food canteens, mobile grocery shops and post delivery services as well as to facilitate technical entrepreneurs and other subsidiary businesses such as the sale of tricycle spare parts dealers, operators and mechanics. Udezo (2013) added that *Keke NAPEP* helped to reduce transportation expenses and that its rate of accident is very low when compared to the use of motorcycle as a commercial means of transportation

Trade eventually began to grow as businessmen started to import, buy, sell and operate *Keke NAPEP* as a means of intra city commercial transportation in Nigerian. In Abia

State, the yellow coloured brand from Bajaj group, India was common. The ban on motor bikes “Okada” as a means of commercial transport in some cities in the South East such as Owerri in Imo State, Uyo in Akwa Ibom State, Port Harcourt in Rivers State, Aba and Umuahia in Abia State, among others significantly encouraged the proliferation of *Keke NAPEP* in those States as “Okada” operators allegedly collaborated with criminals to perpetuate crimes.

The dietary habit of people plays a significant role in their well being. It contributes to good health and can also be a factor on the prevalence of diseases, if not properly handled. The food available to a people to a large extent influence their dietary habit and food choices. Steyn, Nel,

Whadiah, Waudu, Kimiywe, Ajah and Mbithe (2006) reported that recently, the dietary habit of developing countries have been undergoing dramatic transformation from the traditional diets that was high in fiber, low in calories with minimal animal protein to the western type of diet that is low in fiber, calorie dense and high in protein, most of which are processed. This dietary shift has been attributed to the influence of urbanization and globalization (Ekpeyong and Akpan, 2013).

In Nigeria, Albala (2014) noted that formally, it was a common practice to eat three meals, (breakfast, lunch and dinner) in a day. The component of the meals varied across

culture but generally included grains and flesh. Men were mostly eating out while at work rather than families or individuals eating out as a way of socialization. But the trends are changing and that very fast too. Onimawo (2014) opined that dietary habit of people conform to the food habit of their immediate environment, which have changed overtime although some people still stick to what is familiar. For example Steyn *et al.* (2006) reported that in South Africa, the most commonly consumed foods were sugar, tea, maize porridge, brown bread, potatoes, hard blocked margarine and milk. In Kenya, tea, sugar, milk, cooking fat, maize porridge (kale), white bread and hard margarine were the most commonly consumed foods. Mennen, Mbanya and Cade (2000) reported that majority of the people in Cameroun now depend on imported and refined foods. Soft and carbonated drinks were consumed more often than unsweetened juice and diet soda. Tea was also consumed more often than chocolate/coffee and many consumed sweeteners usually sugar with their meals.

In Nigeria, the food habit of adults seem to cut across people from different works of life. Sally, Akarole-Anthony, Folake, Odubore, Vileme, Omolda and Adebamowo (2012) reported that rice was the most consumed food by the urban adult. In rural and urban areas, almost everyone ate bolus meals with soups. Other foods consumed by the people

include cassava, pounded yam and sweetened juice. Olamakiye, Atinmo and Olubayo-Falbragun, (2006) also reported an increase in the consumption of refined sugars, saturated fat and reduction of fiber intake among Nigerians. Rice and pounded yam were formally ceremonial foods or consumed at weekends, but the recent dietary trend have made rice (particularly the imported par boiled long grain variety) to be consumed on week days. The trend have also been strengthened by the introduction of fast food restaurants, whose major products offering is packaged chicken and rice meals. FAO (2010) attributed availability, reduced time and today's easier methods of pounded yam preparation as the reason for its increased consumption frequency.

The nutritional requirement of a person is determined by some factors such as age, height, sex, activity level, health status (FAO, 2013). As one grows from infancy to adulthood, the body requirements increases (Onimawo, 2014). At adulthood the nutritional needs are less age dependent until about 50 years or more when it starts to decrease (WHO/FAO, 2013). The taller an individual, the more foods will be required to stay healthy and the smaller the less. Nutritional requirement vary among sex. Men burn calories than women of the same age and need more food to stay healthy. People who are physically very active need more calories and

nutrients compared to inactive people. Those who are ill or recovering from illness require more nutrients than healthy people do. The average height man needs about 20% more calories a day than the average height woman and a very active person needs 20 – 30% more calories a day than an active person.

Good nutrition means eating a healthy diet consisting of the right kinds of food in the right amounts. Okeke (2014) reported that it helped to prevent diseases and aids in adequate weight management. Ekpeyong and Akpan, (2013) noted that among adults worldwide, poor nutrition and lack of physical exercise are the major causes of overweight and obesity as well as other non communicable diseases. It is important to consume a healthy, varied diet according to British Nutrition Foundation (2014), as it provides the right amount of nutrients in the right quantities to give enough energy to maintain a healthy body weight. The WHO (2014) fact sheet reported that an adult require about 56g/d of protein, 38g/d of fiber, at least 35g of potassium, less than 2g of sodium (equivalent to 5gm of salt) per day. Other vitamins/ minerals are required in small amount, often a few thousand in gram.

Malnutrition can occur if there is not enough of the right food to eat or if too much of a particular kind of food is consumed. For example eating too many calories for a long period will lead to overweight and obesity (WHO

2013). The WHO report also noted that over 26% of Nigerian adults are overweight and over 5% of men and over 9% of women are obese. Except for the study by Henry Unaeze and Ukairo (2012), the consumption pattern of *Keke NAPEP* riders have not been documented anywhere in literature despite their national relevance and the impact that urbanization is exerting on different occupational groups' dietary habits.

Purpose of the study

The major purpose of this study was to investigate the dietary habit and nutritional status of commercial tricycle (*Keke Napep*) riders in Aba South L.G.A of Abia State. Specifically, the study determined

- 1.the demographic characteristics of *Keke NAPEP* riders .
- 2.the socio economic characteristics of *Keke NAPEP* riders.
- 3.their dietary habit.
- 4.Their food consumption frequency.
5. their nutritional status.

Research questions

The following research questions were formulated.

1. What is the demographic characteristics of *Keke NAPEP* riders?
2. What is the socio economic characteristics of the riders?
3. What is their dietary habit?
4. What are the common foods they consume?

5. What is the weekly food consumption frequency of the respondents?
6. What is their nutritional status?

Methodology

Area of the study: The area of the study was Aba South Local government area (LGA) of Abia State, which is located about 64km from Umuahia, the state capital. Aba is the commercial nerve centre of the South Eastern States of Nigeria. *Keke NAPEP* became the predominant mode of transport within the area between 2009 to 2011 to help curb kidnapping cases, following the barn of commercial motorcycle "Okada" who allegedly facilitated and provided a fast means of escape for the criminals.

Population of the study: The population for the study consisted of all the commercial tricycle riders who operate within Aba South L.G.A. route. Ikpeoha (2010) estimated that the number of *keke NAPEP* riders in Abia State was well over 16,000. This population however increased drastically shortly after normalcy returned to the state after the kidnapping era. The Aba South *Keke NAPEP* union office estimated that the riders as at the time of this study was about 4000 (Aba South 2014).

Sample and sampling technique: The sample size was determined by calculating 5 percent of the number given by the union office in Aba South L.G.A. Thirty five was added to the sample size to accommodate drop

outs. In all a sample size of 220 was eventually used for the study.

Instrument for data collection: Questionnaire and anthropometric instruments were used for data collections. Questionnaire was used to obtain information on demographic, socio economic, dietary habit and food consumption frequency of the respondents. It was validated by three university lecturers of Foods and Nutrition Cronback Alpha Statistics was used to determine the internal consistency of the items. A reliability coefficient of 0.91 was obtained.

Data collection methods

Questionnaire administration: Two hundred and thirty five questionnaires was distributed but only two hundred and twenty which was properly filled and retrieved was eventually used for the study.

a. Anthropometric measurements: The height and weight of all the subjects were determined using the method described by WHO (2000).

- i. The weight in kilograms was obtained by placing the scale (Hanson bathroom scale) on a flat surface. The pointer was adjusted properly to zero and the measurement taken The weight was recorded to the nearest 0.1kg.
- ii. The height (in meters) was measured with the subject standing erect on the calibrated wooden meter rule. Reading was taken to the nearest 0.1cm.

iii. The body mass index was calculated as weight in kilograms divided by the square of height in meters.

Data analysis: Frequencies, percentages and Chi-square were used for data analysis.

Findings of the study

Demographic characteristics: Data on demographic characteristics of the respondents showed that all of them (100%) were males. Only 18.2% were between 21 – 30 years. The rest were above 30 years. Although 76.4% had experienced married life, 60.9% were

still married while 11.8% and 3.6% were divorced and separated respectively. The rest 23.6% were single. Majority (85.9%) were of Christian religion, 12.3% traditionalist and very few (1.8%) Muslims. More than half (58.6%) had a small family size of between 1 – 6 members while the rest had large family sizes of 7 and above. Only (6.8%, 11.4%, 22.7%) had no formal education, dropped out of school and had primary education respectively, many (45.0%) had up to secondary school and 14.1% up to university education.

Table 1: The socio economic characteristic of the respondents

Variables	Frequency	Percentage
Means of acquiring tricycle		
Hire purchase	124	56.4
Gift	7	3.2
Drive for tricycle owner	57	23.2
Cash payment	38	17.8
Cost of tricycle		
N180 – N200 (cash fairly used)	32	14.5
N350 cash (brand new)	68	30.9
N400 and > (brand new)	34	15.4
N600 – N750 (hire purchase)	53	24.1
>N750 (hire purchase)	33	15.0
Daily income from tricycle		
N2000 – N3000	134	60.9
N3001- N4000	75	34.1
>N4000	11	30.9
Average monthly maintenance cost		
N10.000 – N15.000	68	5.0
N15.001 – N20.000	143	30.9
>N20.000	9	4.1
Daily government levy		
N150 – N300	220	100

Table 1 shows the socio economic characteristics of the respondents. More than half (56.4%) acquired their tricycle on hire purchase and 23.2% drive for tricycle owners. The cost of tricycle was between N180.000 – N750.000. Some (30.9%) purchased brand new tricycle for N350.000 and 24.1% purchased between N600.000 –

N750.000 on hire purchase. The average daily income from the tricycle was between N2000 – above N4000. The official daily government levy for commercial tricycle ranged from N150 – N300 while the average monthly maintenance cost including exploitation by police and area boys ranged from N10.000 – above N20.000

Table 2: The dietary pattern of the respondents

Variables	Frequency	Percentage
Daily meal consumption pattern		
2 times	130	59.1
3 times	78	35.5
➤ 3 times	12	5.4
Reasons for skipping meals		
High cost of food	52	40.0
No time to eat	78	60.0
Total	130	100
Place of meal consumption		
Home	74	33.6
Restaurant	146	66.4
Cost of meal/ plate		
N150 – N200	125	56.8
N201 – N250	56	25.4
N251 – N300	15	6.8

Table 2 shows the dietary pattern of the subjects. More than half (59.1%) ate two meals in a day. Only 35.5% ate three meals in a day. Many (60.0%) skipped meals due to time constraints.

Over half (66.4%) ate in restaurants while only 33.6% ate at home. Some (56.8%) spent between N150 – N200, others spent between N201 – N300 per meal.

Table 3: The commonly consumed foods (n = 220, the respondents were allowed to choose more than one option).

Variables	Frequency	Percentage
Commonly consumed meals		
Soup and garri / fufu	157	71.4
Rice/'ofeakwu'	142	64.5
Rice and stew	125	56.8
Jellof rice	114	51.8
Roasted yam/plantain/beans	84	38.2
Yam/bean pottage	74	33.6
Bean pottage/egg	43	19.5
Spaghetti/indomie/egg	34	15.5
Breadfruit pottage	33	15.0
Snack consumption pattern		
Biscuits	164	74.5
Bread / doughnut	126	62.4
Meat pie/ cake	134	60.9
Chin chin/egg roll	121	55.0
Plantain chips/ buns	114	51.8
Tapioca/ groundnut/ coconut	84	38.2
None	48	21.8
Fruit consumption pattern		
Orange	84	38.2
Water melon	58	26.4
Banana	54	24.5
Guava	40	18.2
Pineapple	40	18.2
Pawpaw	38	17.3
Consumption of beverages		
Water	220	100
Soft/carbonated drink	160	72.7
Malt drink	140	63.6
Alcohol	115	52.3
Energy drinks	70	31.8
Cocoa drinks/ tea	30	13.6

Table 3 shows the commonly consumed foods by the respondents. Many (71.4%, 64.5% and 56.8%) consumed soup with garri/fufu, rice with ofeakwu and rice with stew. Many (74.5%, 62.4% and 60.9%) also consumed biscuit, bread/doughnut and meat pie/cake respectively. Water was the only beverage consumed regularly and many (72.7% and 63.6%) consumed soft/ carbonate and malt drinks regularly.

Table 4: Weekly food consumption frequency

Food	Low 1-3	Moderate 4 – 6	High 7/>
Beverages	24 (10.9)	44 (20.0)	152 (69.1)
Snacks	30 (16.3)	62 (28.2)	128 (58.2)
Roots/tubers	33 (15.0)	74 (33.6)	114 (57.8)
Fish/meat	25 (11.4)	87 (39.5)	108 (49.1)
Cereals	24 (10.9)	118 (53.6)	78 (34.5)
Fruits/vegetables	150(71.8)	64 (29.1)	6 (2.7)
Legumes	132 (60.0)	51 (23.3)	37 (16.8)

Table 4 shows the weekly food consumption frequency of the respondents. It that showed beverages (69.1%), snacks (58.2%), roots/tubers (57.8%) and fish/meat (49.1%) consumption was high. Cereals (53.6%) was moderately consumed, while fruits/vegetables (71.8%) and legume (60.0%) consumption was low.

Table 5: Body mass index of the subjects

Nutritional status (kg/m ²)	Frequency	Percentage
Underweight (,18.5)	99	45.0
Normal weight (18.5 -24.9)	42	19.1
Overweight (25 -29)	75	34.1
Obese (>30)	4	1.8

Table 5 shows the body mass index of the respondents. Almost half (45.0%) were underweight and as much as 34.1% and 1.8% were overweight and obese respectively.

Table 6: Comparison between the nutritional status of the respondents and source of food consumption.

Nutritional status	Place of food consumption			
	Home		Restaurant	
	F	%	F	%
Underweight	38	49.4`	61	42.7
Normal weight	26	33.8	16	11.2
Overweight	13	16.8	62	43.4
Obese	0	0.0	4	2.8
Total	77	100	143	100

X²= 26.3052, P value <0.00001

Table 6 shows the Chi square test between nutritional status and the source of food consumption. The finding showed there is a significant relationship ($P < 0.05$) between nutritional status and source of food consumption. Many (43.4%) of the respondents who ate in restaurants were overweight and 2.8% were obese while Some (49.4%) of the respondents who ate at home were underweight and none was obese.

Discussion

The result of the study revealed that many of the respondents were matured men between 31 – 50 years of age. This explained why 60.9% of them were married with families. Olurinola, Fadayomi, Amoo and Ola-David (2014) reported that one of the characteristics for distinguishing people in African societies is marital status. Traditionally, marriage confers respect, prestige and responsibility on people which includes the care of women/ wives, children and members of the extended family. Little wonder many (44.5% and 36.8%) had family sizes of 4-6 and 7 -9 respectively. This showed that the subjects had many mouths to feed.

The United Nations (UN) Report (2011) opined that individuals with large families need to be economically empowered in order to assist them meet with the responsibilities of family life. Majority (85.9%) of the respondents were Christians. The result is in line with the Abia State

official portal (2014) which opined that Abians are predominantly Christians of different denominations and that there were good number of traditional worshippers and few Muslims in the state.

Although the (UNFP 2007) rated Abia State a fairly literate state in Nigeria, yet the educational status of the respondents showed that some (6.8% and 11.4%) had no formal education and dropped out of school respectively. Many (45.0%) had up to secondary school education. This is not good as the level of education had been shown to be one of the important factors that adequately empowers individuals to make good economic choices and consume adequate diets (Hossain 2011).

The high cost of acquiring the tricycle (between N180 - >N750.000) suggested a big burden to the riders and may have made many (56.4% and 23.2%) to have acquired their tricycle on hire purchase and others ride for owners on commission basis. The situation was further compounded by the high cost of average monthly maintenance cost of the tricycle with the daily levy charged by the government. This may have a negative toil on the purchasing power and dietary habit of the drivers who were the bread winners of their families. Adekany (2014) had reported that with improved purchasing power, individuals can get better and more nourishing meals

which is a key driver to good dietary pattern.

The dietary pattern showed that more than half (59.1%) of the respondents skipped meals and ate only twice in a day. Meal skipping is an unhealthy practice which deprive the body of necessary nutrients and energy needed for optimal performance (Ndukwe 2014). The major reasons for skipping meals were time constraint (60.0%) and high cost of food (40.0%). This showed that the respondents were always in a hurry to catch up with customers in order to make more money. Majority (66.4%) ate food in restaurants and spent between N150 - N300 per plate. Ekpenyong and Akpan (2013) opined that restaurants were the primary settings where the public buy and eat quick meals. However, the setting was often designed to maximize profit and encourage impulse buying. Moreover most of the food served in restaurants are salt laden which the owners use to improve taste.

Soup and garri/fufu were the most common foods consumed by the respondents followed by rice, biscuits, groundnuts, meat pie/cake and bread/doughnut. Orange was the common fruit and water the common beverage consumed by the respondents. The weekly consumption pattern showed that roots and tubers were the only plant based foods which were consumed on a regular basis. Cereals were consumed moderately but fats/oil, snacks, beverages, legumes, fruits and

vegetable consumption were low. The high snack consumption may be as a result of the rush by the respondents to meet up with customers. Even though snacks can help supply nutrients to the body, but they are not enough to provide all the nutrients required by the body. High intake of fat/oil and fish/meat may also not be very good for the respondents considering the fact that majority of them were above 40 years. Apart from the that, high consumption of some animal products (like fatty meat) could lead to increased cholesterol in the blood. Research (Chinenye, Oko-Jaja and Young 2013) had shown that the prevalence of many NCDs increases with age. Moreover, inadequate consumption of vegetables and fruits are predisposing factors to non-communicable diseases. This is because vitamins contain antioxidants which help to fight against diseases (Onyeka and Nwambekwe 2007). The data on nutrition status showed that 45.0% of the respondents were underweight and 34.1% overweight. This tallied with the report of Onimawo (2014) that the under developed countries are facing the double burden of malnutrition (under and over nutrition) which is as a result of inadequate selection, consumption and utilization of foods and its nutrients. Moreover, overweight (25 - 29.9 kg) and obesity (30kg) as categorized by Wardlaw and Smith (2008) is linked to excessive intake of saturated fats and cholesterol which results to diet related diseases rather

than under nourishment. Underweight (<18.5kg) has also been linked to many NCDs and reduced work capacity. The Chi-square test showed a significant relationship between source of food consumption and dietary habit.

Conclusion

The findings of the study showed poor dietary habits which negatively affected the body weight and nutritional status of the respondents. The poor dietary pattern was necessitated by time constraint, high cost of food and over consumption of snacks, soft drinks, fats and oil and low consumption of fruits and vegetables. This translated to high level of under and over nutrition among the respondents. Overweight was more pronounced among those who eat out probably because restaurants serve large portion size of food.

Recommendations

1. There should be intensive public nutrition education on adequate and proper dietary habits.
2. The issue of poverty alleviation should be revisited to make it more result oriented so that the funds mapped out for such programmes gets to the right and target population

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