

Frequency of Food Items among Households in a Low Socioeconomic Area of Karachi

Abstract

Objective: To describe the frequency of certain food items among families in a low socioeconomic area of Karachi and their association with socioeconomic variables.

Methods: A cross sectional survey of houses selected through random sampling using a pre-tested structured questionnaire.

Results: A total of 294 houses were surveyed, 23% households consumed meat almost daily, 55% consumed vegetables almost daily.

Conclusion: The survey showed that the consumption of food items in our study population is less as compared to what is recommended (JPMA 54:580;2004).

Introduction

Diet and nutrition are important issues related to many diseases in the populations. Obesity and under-nutrition are the two extremes related to dietary habits. According to the National Health Survey, about one out of seven older adults are obese or overweight; one in three adults is underweight or severely thin; one out of every three children in Pakistan is malnourished. Thus malnutrition and micronutrient deficiencies are prevalent in our settings, which can be attributed to dietary inadequacies.¹ The deprived population is mostly living in slums or low socioeconomic areas where the utilities of life are hard to find. These are the people who do not even get safe drinking water and have no proper sanitation facilities. They eat what they can buy in their limited resources and thus become deprived of essential food constituents.

International studies have shown that socio-demographic characteristics affect the dietary behaviors in different populations.²⁻⁴ A study in USA has also demonstrated that the family meal patterns play an important role in determining dietary patterns.⁵

This survey aims to describe the frequency of certain food items among families in a low socioeconomic area of Karachi and their association with socioeconomic variables.

Methods

This study was a cross sectional survey of households living in a squatter settlement in Karachi. It is predominantly inhabited by the pathans with a low literacy rate. The community coordinator with the help of volunteers mapped the houses in the area. The total households were 1070, out of which 350 houses were selected through random sampling and interview was done using a pre-tested structured questionnaire, which assessed the socioeconomic status and the consumption of certain food items. The houses were observed for the type of construction, type of toilet facility, availability of utilities and various household goods. The frequency of food items consumed on average in a week was asked from any adult member of the house. The non-response and locked houses were visited two more times to complete the questionnaire. The data was entered in Epi-info 6 and frequencies calculated for the different categories. Cross-tabulation was done to compare the frequency of food items with selected socioeconomic variables. The test of Proportions and Chi-square test were performed at the significance level of $p < 0.05$.

Results

total of 350 houses were selected, 294 (84%) responded. The average household size was 8.3 ± 4.1 and mean number of persons per room was 4.9 ± 2.4 . The houses were owned by 58% of the households and 61% had just one earning member. The median income of the households was 3750 rupees and the average per capita income was calculated as Rs. 635 per month.

Most houses (75%) had just one or two rooms, 66% had pour flush and 27% had pit latrine or bucket. The roofs were of either concrete (27%) or asbestos (65%); 88% houses had pakka (cemented) floor for rooms and doors were mainly of wood (86%) and iron (11%). Almost all (99%) had electricity, 88% households had sui gas while water supply was through tankers in majority of the houses (77%), the rest had a hand pump. Among the household durable goods, 36% had a radio, 42% had a television, 41% had a washing machine and 27% had a refrigerator. For transport, 35% had a bicycle,

7% had a motor cycle and 4% had a car.

Table 1. Frequency of food items (n=294).

Food items	Atleast 4-5 times / week		2-3 times / week		Upto once / week	
	n	(%)	n	(%)	n	(%)
Meat	68	(23)	91	(31)	135	(46)
Fish	7	(02)	7	(02)	279	(96)
Chicken	17	(06)	49	(17)	228	(77)
Green leafy vegetables	140	(48)	91	(31)	62	(21)
Other vegetables	161	(55)	95	(32)	38	(13)
Daal	84	(29)	79	(27)	52	(18)
Fruits	86	(29)	56	(19)	152	(52)
Egg	95	(32)	45	(15)	154	(53)
Milk	199	(68)	27	(09)	68	(23)

Seventy-seven percent of the houses used ghee for cooking while the rest used some form of cooking oil. Over half of the households (60%) used iodized salt. Among the food items, 23% households consumed meat, 48% took green leafy vegetables and 29% ate fruits almost daily. The

Table 3. Consumption of food items as compared to having household appliances.

Food Items	Households consuming the food item at least 4-5 times per week						p-value
	No household appliance (n=93)		1-2 household appliances (n=128)		3-4 household appliances (n=73)		
	n	(%)	n	(%)	n	(%)	
Meat	17	(18)	29	(23)	22	(30)	0.002*
Chicken	2	(02)	8	(06)	7	(10)	nv
Green Vegetables	48	(52)	60	(47)	32	(44)	0.07
Other Vegetables	58	(62)	73	(57)	30	(41)	0.02*
Fruits	20	(22)	39	(31)	27	(37)	0.25
Egg	23	(25)	42	(33)	30	(41)	0.08
Milk	52	(56)	91	(71)	56	(77)	0.04*

* significant at p<0.05

nv = not valid due to low frequencies

frequency of food items consumed by the respondents is given in Table 1.

The socioeconomic variables used for cross-tabulation with the food items included per capita income, ownership of house, type of roof and door of the house, possession of household appliances and owning any form of transport. No significant association was found for type of

Table 2. Consumption of food items as compared to owning a transport.

Food items	Households consuming the food item at least 4-5 times per week			
	No transport (n=176)		At least one means of transport (n=118)	
	n	(%)	n	(%)
Meat	26	(15)	42	(36)
Chicken	8	(05)	9	(08)
Green Vegetables	87	(50)	53	(45)
Other Vegetables	107	(61)	54	(46)
Fruits	46	(26)	40	(34)
Egg	45	(26)	50	(42)
Milk	112	(64)	87	(74)

* significant at p<0.05

roof with food frequency. Among the food items there were no significant associations for fish or lentils (daal).

Ownership of the house was significant for meat (p<0.001) and egg consumption (p=0.04). Having an iron door was significantly associated with greater frequency of fruits (p=0.002). The per capita income was grouped into three tertiles i.e. less than

Rs. 375 p.m., Rs. 375 to 700 p.m. and more than Rs. 700 p.m. Households with higher per capita income had greater consumption of green leafy vegetables (p=0.04) and fruits (p=0.09). Having any form of transport and number of household appliances had the greatest association with the frequency of food items as shown in Tables 2 and 3.

Discussion

The food guide pyramid recommends 2-3 servings from the milk group, 2-3 servings from the meat group, 2-4 servings of fruits, 3-5 servings of vegetables whereas fats, oils, and sweets should be used sparingly. At least the lowest number of servings from the five major food groups should be taken for the vitamins, minerals, carbohydrates, and protein they provide.⁶ Our study group consumption of food items is less as compared to what is recommended, as it is a low socioeconomic area. It is also seen from a study done in Africa that economically disadvantaged and socially isolated households tend to have frequent depletion of fat and vegetable content or elimination of a daily meal.⁷

The household size of our study population is comparable to the national household size of 8.78. Similarly the average monthly income of our study households is lesser than Rs 4391, the national monthly income. The families in Pakistan spend 48.3% of their total expenditures on food, beverages and tobacco. The poor seek foods that cost less per calorie and unit of nutrient value; thus, for example, consumption of wheat is higher and that of meat is lower among low socioeconomic groups.⁸ The per capita income of this area brings it in the criteria of living close to the poverty line of Rs 650 per capita per month.⁹

The food consumption data in this study population is not consistent with the National Health Survey which states that more than 95% of Pakistanis eat oil, ghee or butter daily, about 86% eat vegetables daily or on alternate days, just over half eat fruits this often. Meat consumption more than once a week is 17% for rural Pakistanis as compared to 43% of the urban population.¹

The households that owned at least one means of transport in this study were found to have a significantly better consumption of food items as compared to those that had no transport. Similarly the number of household appliances were also significantly associated with a better consumption of food items. These two variables are indicators of the socioeconomic status of the households even among a squatter settlement, where there is poor socioeconomic status.

A study done in Denmark revealed that education is one of the most important social variables that affect diet.¹⁰ Our study has a limitation of not relating education with the dietary habits. The calorie intake was not measured, nor the gender or age group inequities of diet considered, just the household data collected. Further studies are required to elaborate on these areas.

Eating well is necessary for good health, either directly or in association with infectious diseases, inadequate diets account for a large share of the world's disease burden, including as much as a quarter of that among children. Increasing the income of the poor is most effective for reducing protein- energy malnutrition, government can also play an effective direct role through nutrition education and measures to increase consumption of micronutrients. Public action is also essential for preventing the dietary inadequacies.

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