

SOCIO-DEMOGRAPHIC DETERMINANTS OF PERCEIVED INFLUENCES ON HOUSEHOLD FOOD CHOICE IN SRI LANKA

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Abstract

Food choices are changed by individual, societal, and cultural factors. Pre tested food frequency questionnaire which consisted of 30 food items belong to seven (7) food groups was used to evaluate the habitual food intake pattern of the 160 households over seven days. Women consume significantly more cereals ($r = 0.229$, $p = 0.005$), fruits ($r = 0.193$, $p = 0.018$) and vegetables ($r = 0.221$, $p = 0.007$) than men. Across age groups, individuals above 35 years significantly consume more fruits ($r = 0.066$, $p = 0.021$) and vegetables ($r = 0.018$, $p = 0.015$) than younger counterparts. The higher income groups consumed significantly more fruits ($r = 0.381$, $p = 0.000$), vegetables ($r = 0.739$, $p = 0.000$), dairy ($r = 0.197$, $p = 0.016$) and meat ($r = 0.475$, $p = 0.000$). Socio-demographic profiles, including age, income, family size, education, gender and geographic region were responsible for habitual food intake patterns. This study suggests that nutritional programs should focus on the implications to improve eating habits.

Keywords: Socio-demographic profiles, household food choiced

Introduction

Food is not just eaten for its nutrients but, for many it is a source of pleasure, an enjoyable experience and even a comforting activity (Clark, 1998). Khan and Hackler (1981) have described food habits as 'the way of individuals' response' to social and cultural pressure and food choices. Cultures and traditions are the foundation of all food choice decisions. Sri Lankan traditional

diets contain plenty of vegetables and rice but food preparation is unique and change from region to region. Traditional diets were changed drastically during the recent years with a concurrent adoption of westernized diet. Food consumption data provides estimation on the quantity of each prepared food consumed by individuals, which will vary considerably from

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country to country and even within a country due to variations in ethnicity, geographical areas, age and sex. The World Health Organization (WHO, 2007) recommends those individual countries should estimate their own food consumption pattern. It requires a food frequency questionnaire which is a useful method to evaluate habitual food intake of individuals (Kelemen *et al.*, 2003; Subar, 2004). This study aimed to evaluate the food intake patterns among respondents with respect to examine variations in food intake pattern by age, gender, region of residence, employment, income, education family background and ownership of home garden or rearing farm animals in their homes.

Methods

A random sample of 160 households was selected from four districts, Galle, Kalutara, Matara and Moneragala. There were 4 individuals in the studied household sample in average. Primary data were collected using a pre-tested food frequency questionnaire over a period of seven days to evaluate habitual food intake. One in individual per one household was examined during later part of 2010. Food intake was categorized to seven food groups (fish, meat, egg and nuts; dairy; vegetables; fruits; cereals; fat, oil and sugar; water and beverages) which includes 30 food items. The food groups were evaluated on the study population and compared across their individual characteristics. The cereal group included the summed equivalent of rice, rice based products (hoppers, string hoppers, "pittu" etc), bread and biscuits. The meat group included the summed equivalent of poultry, pork, beef, mutton and processed meat like sausages. Respondents were asked to indicate their average frequency of consumption of each food item over the week, using 7 frequency categories; namely, "never", "once a week", "rarely per week", "2-3 times per week", "5-6 times per week", "2-3 times per day", "4-6 times per day".

Data were analyzed using SPSS statistical package (version 10.0). For the univariate analysis, measures of mean of food intake were

computed. Variations in food group consumption frequency by individual characteristics were analyzed using the chi-squared. To ascertain the relationship of food intake pattern by age, gender, religion, region of residence, employment, income, education, family background and ownership of home garden or rearing farm animals, the Pearson correlation coefficient was used.

Results and Discussion

Demographic characteristics of the selected sample were urban (43.3%); female (80%); aged less than 35 years (32%); aged between 35-55 (66%); completed either secondary or higher education (90%); being a permanently, casually or self-employed (88%); income receiving less than Rs. 10000 group (17%); Buddhists (69%); household having 4 members (39.3%). Percentage of respondents who shared 65% of their income to the food budget for the whole family per month was 61.3% and contributed significantly with their income ($r = 0.654$, $p = 0.004$). There is no doubt that the cost of food is a primary determinant of food choice. Whether cost is prohibitive depend to an individual family and fundamentally on person's income. Having access to more money does not automatically equate to a better quality diet, but the range of foods from which one can choose was increased. Around 81% households had home garden, out of that 54.5% had vegetables, fruits and flowers in their home garden. Number of individuals having a home garden was significantly correlated with geographical region ($r = 0.223$, $p = 0.006$). About 11% of the household reared chicken, cattle, goat or duck in their homes. Out of the balance (89 %), 31% reared cattle for milking purposes in their homes, which was especially observed in Moneragala district.

Eating behaviour is complex and an understanding of the impact of the factors that affect food choice is vital given the priority for population's dietary change. Committee on Nutrition (1964) stated that emotional and cultural factors were of exceptional importance in determining the food intake. Rozin and

Vollmecke (1986) emphasized that food choice was immensely varied among members of the same culture. Examining the individual food group constituents, it could be seen that consumption of the different types of food groups varied by individual socio-demography status. And also 82% of households failed to consume foods from every food groups daily. Survey revealed that households' diet was mainly rice based. Rice was eaten twice daily by individuals (97%) and some households ate bread as a substitute to rice 2-3 times (Figure 1). This could be expected as rice is the staple food of Sri Lanka. Women consumed significantly more cereals ($r = 0.229$, $p = 0.005$), fruits ($r = 0.193$, $p = 0.018$) and vegetables ($r = 0.221$, $p = 0.007$) than men, whereas slight difference was seen in dairy consumption across gender, which was insignificant. Men consumed significantly more meat ($r = 0.056$, $p = 0.012$), fish ($r = 0.074$, $p = 0.017$), egg ($r = 0.480$, $p = 0.018$), oil ($r = 0.088$, $p = 0.01$) and sweets ($r = 0.247$, $p = 0.002$) than women. Almost 64 % of individuals were complying with the recommended sparingly servings of fat and sugar group (oil, butter, margarine, sweet, meal) with women being significantly more likely to meet this target than men. Men consume a greater amount of food from most food groups than women, whereas women consume a greater variety of foods than men did. Gender differences in food choices therefore appeared to be partly affected by their strong belief in healthy. Age related differences were observed with regard to food consumption. Across age groups, those above 35 years of age consumed significantly greater amount of fruits ($r = 0.066$, $p = 0.021$) and vegetables ($r = 0.018$, $p = 0.015$), but lesser number of servings of cereals, animal flesh, fat, oil and sweets than younger counterparts. Similarly, when age increased, individuals consumed significantly fewer numbers of dairy servings per day ($r = 0.138$, $p = 0.009$). Respondents who were in the higher income groups consumed significantly more fruits ($r = 0.381$, $p = 0.000$), vegetables ($r = 0.739$, $p = 0.000$), dairy ($r = 0.197$, $p = 0.016$) and meat ($r = 0.475$, $p = 0.000$) than those in lower income groups. Employment status showed a significant gradient with higher

income groups consumed more meat ($r = 0.168$, $p = 0.040$), fruits ($r = 0.109$, $p = 0.004$), vegetables ($r = 0.248$, $p = 0.002$) and dairy ($r = 0.079$, $p = 0.025$) servings. Johansson and Andersen, (1998) and McClelland *et al.* (1998) has indicated that individuals with higher education, income and social status showed a higher consumption of fruit and vegetables than those with lower education and income. Kearney *et al.* (2000) also indicated the level of education could influence the dietary behaviour. Survey also revealed that family size influenced the dietary status of the households, i.e. the smaller the family the better its dietary rating. Region of residence (urban or rural) significantly influenced the consumption pattern of marine fish ($r = 0.079$, $p = 0.000$), cow milk ($r = 0.066$, $p = 0.025$) and leafy vegetables ($r = 0.828$, $p = 0.018$). Rural people consumed more cow milk and leafy vegetables than those in urban areas. In contrast, urban people consumed more marine fish than their rural counterparts. The availability and the affordability (price) of these food items might be the possible reasons for this dietary pattern. Pollard *et al.* (2002) determined that consumers did not choose their foods exclusively for their nutritional status. People who were having home gardens or animals had more access to the dairy or vegetable and fruit consumption. Rural households did not recognize fruits as important food group and they spent money on them very rarely. Eleven households of the surveyed sample never have eaten fruits for the whole week, but the respondents from Moneragala district consumed fruits at least 5 or 6 times per week.

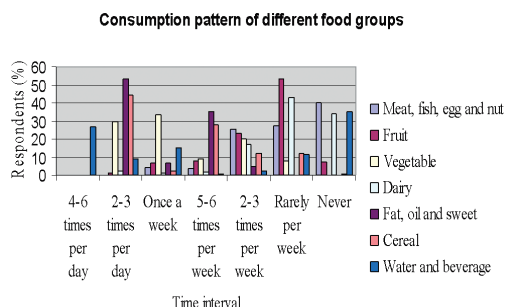


Figure 1. Consumption pattern of different food groups by household in Sri Lanka

Religion influences the habitual consumption of certain foods and traditions of food preparation in certain cases leading to restrictions in consumption such as exclusion of meat and milk from the diet. Religion influences are however amenable to change. Despite the fact that 69% were Buddhists, in the sample only 6% of them avoided consumption of animal flesh. Consumption of water did not vary by socio-demographic characters. Respondents indicated the habit of drinking plain water, with 99% drinking of plain water at least five times daily. Sixty four percent of respondents used tap water and 27% used boiled water.

Around 30% surveyed respondents changed their meal pattern during the past two years mainly due to health risk and the change of life style. Around 6% respondents skipped their breakfast while most of the respondents (90%) had their breakfast either late or not at all, because they were not accustomed to having a morning meal due to rush time schedules. Several investigations have suggested that omission of breakfast may be a factor contributing to dietary inadequacies and that nutritional loss is rarely made up by other meals during the remainder of the day (Ohlson and Hart, 1965; Ruxton and Kirk, 1997). The study by Lappalainen *et al.*, (1997) indicated that lack of time is frequently mentioned for not having breakfast meal particularly by the young people. Meanwhile 12% and 13% respondents had their lunch and dinner on time, respectively.

Fifty five percent of the sample prepared rotti, kola kanda, pittu, kiribath, string hoppers and hoppers as special diets for their breakfast, 27% respondents prepared vandu, cake, halapa, sandwiches and vadae in the afternoon snack, and 42% prepared soup, kurakhan thalapa, rotti, fried rice, thosai, noodles and string hoppers as alternatives to their main meal during night. These were mainly decided by the housewives and prepared either to celebrate a ceremonial occasions or as a change for normal meal.

Nearly 39% of respondents purchased their meal from an outside home and admitted they have their meals from outside at least once a week. The reasons given to such a practice were

mainly the convenience and nobody was at home to prepare their meals. Respondents who had their meals from outside were varied by age and gender. Though the differences were not significantly based on their education or income. Younger respondents were more likely to have their meal from outside (age below 30: 66%; age 30-45: 24%; age above 45: 10%) as were the male respondents (85%). Out of respondents who had their meals from outside, 68%, 30.5% and 59% had their breakfast, lunch and dinner from food outlets or restaurants, respectively. This phenomenon was more common in households where both husband and housewife are working.

A study by Frazao and Cleveland (1994) identified the nutrition and health awareness effects on the actual consumer's dietary behavior. Among respondents, 83.3% admitted to do meal planning either frequently or occasionally in their house. Housewives (67%) mainly contributed to meal planning while 45% and that based on food availability. Socio-demographic profiles, including age ($r = 0.246$, $p = 0.006$), income ($r = 0.308$, $p = 0.001$), family size ($r = 0.261$, $p = 0.005$), education ($r = 0.235$, $p = 0.004$), gender ($r = 0.223$, $p = 0.006$) and geographic region ($r = 0.175$, $p = 0.032$) had a significant contribution to meal planning habit. Rimal *et al.* (2001) examined the effects of socio-demographic characteristics on household meal planner's consideration and indicated that the household income, the number of children in the household, the geographic location, gender, age, and education significantly contributed to meal planning.

Conclusions

The findings of this study have significant implication to understand the complexity of respondent's food preferences and consumption. This study critically linked to raise people's concern about the implications of meal planning for their better nutritional health. The type of meal was constrained essentially by social and cultural circumstances. This showed that there was a clear difference in social classes with

regard to food intakes. Poor diets create problems, which are faced by different sectors of society. Therefore, different levels of expertise and methods of intervention focused on increasing the familiarity, availability and accessibility of all food groups to target messages appropriately for the respondents with less food preferences.

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