

Nutrition Assessment of Several Sects in the Sri Lankan Community

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Abstract — A questionnaire based community study was carried out to identify the variety and portion sizes of selected foods consumed by different sects of the society. The study included randomly selected sample of 4000 people living in different areas of the country. Sample included office workers, pregnant women, heavy working labourers, lecturers/teachers, executives/managers, housewives, athletes and school children between 12-18 years. Then, those different average portion sizes of selected foods consumed by different sects were analysed in laboratory scale using AOAC standard methods to determine their macronutrient contents, to compare with the WHO's Recommended Dietary Allowance levels for each category. The study revealed that there was no evidence of energy deficiency of any category because of the large consumption of carbohydrates and fat by all the sects. Surprisingly, Protein intakes of meal combinations consumed by all sects were in adequate levels too. But the lack of dietary fibre intake was clearly identified, where it didn't meet the RDA levels, especially in school children (20 g/day) and management level employees (22g/day). Findings of this research reveals of a great danger some sects of our community are facing as a result of lifestyles, where there's not enough concern of taking balanced diets. The information gathered and analysed through this report can be used to prevent an upcoming health crisis, which may be common in almost every urban area in the South Asian region.

Index Terms— Dietary fibre, Macronutrients, RDA, Dietary patterns

I. INTRODUCTION

Sri Lankans were generally recognized as a healthy community around the world many years ago. The quantity and variety of local food production were at a high level in those ancient times. Most people used to consume foods in their nutrient rich, raw stage as well.

With time passed, dietary patterns and values of the Sri Lankan community have changed dramatically in accordance with the change of lifestyles as well as attitudes.

Thus, we are not quite sure whether Sri Lanka is a healthy nation today and it is difficult to assess the nutrient intake of local community since it vary a lot according to the way they spend their lives. This can be considered as a common occurrence in many rapidly developing South and South-Eastern Asian nations.

This research assess and analyses the daily macronutrient intakes by different sects of Sri Lankan people through a broad community study followed by a laboratory nutrition analysis of diets they take. Then results are compared with the 'Recommended Dietary Intakes' for each category, to determine whether Sri Lankans are actually getting the nutrition requirements as recommended scientifically.

II. METHODOLOGY

A community study was carried out to identify the variety and portion sizes of selected foods regularly consumed by different sects of the society.

The study included randomly selected 4000 people around several areas of the country. A questionnaire was given to assess the variety and amount of their daily nutrient intake. The sample population contained.

- Office workers = 800
 - Lecturers / Teachers = 400
 - Private sector Executives/Managers = 400
 - Labourers = 800
 - House wives = 800
 - Athletes = 200
 - School children (Age 12-18) = 600
- } (24 – 54 years)

The total number of 4000 volunteers selected were categorized according to the environment their living as follows to get a better understanding about their dietary patterns.

- Rural population = 1600
- Urban Population = 2400

This study was considered as the basement for making "locally abundant" food combination lists to fulfil RDA levels for different sects of the society.

III. RESULTS AND DISCUSSION

The gathered results of the community study was compared with the RDA limits [4] provided by the 'World Health Organization' (Table 1).

All the people who belong to the sects who are not much involved in physical activities such as office workers in the public sector, teachers, house wives and private sector officials have shown many similarities in their dietary patterns than the usual diets of athletes, labourers and school children. Among them, daily intakes of fat and protein contents of the private sector officials and house

wives were higher than the required amount (Table 2). Considering their less physical activity, that is a great risk to the health [1], [2]. Although the study reveals that the caloric and protein need of a labourer is higher even than an athlete, they have shown relatively a lesser amount of

Life stage	RDA levels (g/d*)			
	Carbohydrates	Proteins	Fats	Total Fibre
Males 14-18 years	130	52	25-35	38
Females 14-18 years	130	46	25-35	38
Males 18-50 years	130	56	20-35	38
Females 18-50 years	130	46	20-35	25

carbohydrate and protein intake than athletes, mainly due to economical inabilities (Table 2).

Table 1: WHO’s Dietary reference intakes of macronutrients.

*g/d – Grams per day

Table 2: Average daily macronutrient intake of different sects of local people

Sample	Avg. Carbohydrate amount in a diet /g	Avg. Total Fibre amount in a diet / g	Avg. Fat amount in a diet / g	Avg. Protein amount in a diet / g
Office workers (Public sector)	140	35	32	55
Lecturers/ Teachers	135	37	30	53
Private sector Executives /Managers	133	22	45	65
Labourers	135	38	34	56
House wives	149	36	42	68
Athletes	150	32	35	63
School children	140	20	34	67

The dietary fibre content or private sector workers and specially school children are considerably lower (Table 2) than the daily requirement of those (Table 1) and may result in severe bowel disorders and other non communicable health disorders if continued in this fashion [3].

Table 3: Difference of Nutrient intake according to the living environment.

Sample	Average Carbohydrate amount in a diet /g	Average Total Fibre amount in a diet / g	Average Fat amount in a diet /g	Average Protein amount in a diet /g
Rural population	140	42	58	57
Urban population	154	26	67	58

Although the average protein and carbohydrate contents do not vary much, daily fat and Dietary fibre intakes were significantly different between rural and urban population samples (Table 3). Rural people clearly takes more dietary fibre as they are used to live more close to the natural environment which supplies them those, while urban people are consuming much more fat and carbohydrate rich diets as a result of consuming junk food and processed foods which are readily available in the market.

IV. CONCLUSIONS

Sri Lankans don’t elicit energy deficiencies, since the carbohydrate intakes in local dietary patterns are higher, although the hard working labourers may require more quantities than what they get.

Many housewives and Managerial level employees consume significantly higher quantities of proteins, fats and carbohydrates than required while not involved in many daily physical activities.

No protein deficiencies were shown among individuals in any sect and instead the protein intakes were higher than required levels in school children, Gov/Pvt sector workers and housewives.

Managerial level workers and school children lack dietary fibre in their daily diets.

People who live in rural areas elicit a better and a healthy combination of macronutrients in their dietary patterns. The change of lifestyles from field work to totally integrated work has reduced the nutritional quality of urban community’s regulatory diets.

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