



Dietary Habits of Urban Vulnerable late Adolescents in three selected Grama Niladhari divisions of Jaffna Municipality

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Abstract- Adolescence is a period of rapid growth and development. Dietary habits of adolescents are in limelight as they are in the period between childhood and adult. Healthy eating habits during adolescent period promote healthy ageing. Overcrowding and limited infrastructure facilities at urban underserved settlements of the Jaffna Municipality of Sri Lanka are crucial for the health of the residents. The study aimed at finding food consumption patterns and factors that influencing the limited nutritional food intake by late adolescents from three selected Grama Niladhari divisions (Reclamation East, Reclamation West and Moor Street North) of Jaffna Municipality. Data collection was made by visiting households, interviewing the participants, administering a questionnaire added with food frequency table, 24 hour dietary recall and collecting a week's food diary from the participants, observing cooking facility at households and availability of food items nearby environment of study areas. The findings highlighted that underconsumption of fruit, vegetables and dairy products and overconsumption of nutritionally poor foods and carbonated beverages among the sample of adolescents residing in crowded divisions of Jaffna Municipality. Higher prices of food commodities, limited infrastructure facilities and knowledge on nutritional food intake were identified as barriers for limited nutritional food intake. Such nutritional unhealthy dietary habits may lead to nutritional problems among adolescents and they have to be moved towards a healthy way of life in order to build up a healthy and disease-free society in the future. The findings of the study could be a revelation for the relevant authorities to support a correct national intervention programme.

Keywords: Adolescents, Food consumption, Jaffna, Dietary habits, Food diary

I. INTRODUCTION

The adolescent period is an important stage in human life as rapid growth and maturation occur (Venkaiah et al., 2002). It is the transition period between childhood and adulthood. Dietary patterns in this stage have impact on the nutritional status in later life (Ahmad et al., 2009). Good nutrition is essential for better academic performance and productivity which can lead to socio-economic development of a country (Galgamuwa et al., 2017). A well-balanced diet provides the energy and nutrients needed to excel in sports and maintain overall fitness. Adolescence is a formative period when individuals are more open to adopting new habits. Developing healthy eating habits during this time can set the stage for a lifetime of nutritious food choices (Pfeifer and Berkman, 2018). Poor dietary pattern and physical activity patterns of childhood accumulate health related problems leading to obesity, heart diseases and osteoporosis during adulthood. Skipping breakfast is common among the adolescents (Nafis et al., 2014).

Jaffna is located in Southern part of the Jaffna district; Sri Lanka and it is the major town for the Northern Province. Being a multicultural country Sri Lanka shows different dietary habits (Weerasekara et al., 2018). Less data is available in Sri Lanka on food consumption survey due to lack of financial and human resources (Jayawardena et al, 2014). The economic crisis in Sri Lanka is spiralling into a humanitarian emergency as millions of people face acute shortages of food, fuel, cooking gas and medicine. The civil unrest and food shortages gripping the country were sparked by an economic crisis that has been developing throughout the COVID-19 pandemic. Sharp declines in agriculture production has resulted in rapid price increase for staple food items like rice and vegetable, which directly impact the household economy and food security of the most vulnerable (IFRC, 2022).

Overcrowding and limited infrastructure facilities at urban underserved settlements of the Jaffna Municipality of Sri Lanka are crucial for the health of the residents. The settlements face challenges in accessing food and drinking water facilities and receive healthcare facilities (Balachandran and Thennakoon, 2023).

II. METHODOLOGY

A cross sectional descriptive study is being carried out to find the nutritional status of adolescents (between 17 and 19 years) of Jaffna district. A multistage stratified cluster sampling was used to identify a sample that represents the adolescent population of Jaffna district. A subsample was used to identify the food consumption pattern and factors influencing the limited nutritional food intake by late adolescents from three selected Grama Niladhari (GN) divisions (Reclamation East (J/68), Reclamation West (J/69) and Moor Street North (J/87) of Jaffna Municipality according to the population size. First household was selected randomly in each GN division. Next house to be visited was the fourth house from the right side of the first house. In each house visited all males and females in the age group between 17 and 19 were listed and the person to be interviewed was selected using the date of birth. The person with higher age was interviewed. Consent was taken from participants. 105 adolescents were selected (35 in each GN division) for the study.

An interviewer administered questionnaire was administered to find the sociodemographic information of the participants. Dietary information was obtained from the food frequency table, 24 hours dietary recall method and food diary. An awareness session was conducted to participants to fill the food diary. The participants were asked about the types and frequency of foods consumed, breakfast skipping habits, food purchasing habits and trends of home cooking. Additionally, discussion was carried out with parents or caregivers of the participant, Grama Niladharis, Development officers, Public Health Inspectors and Public Health Midwives of the divisions regarding the availability of food commodities in the study area. Ethical clearance was obtained from Ethics Review Committee, Faculty of Medicine, University of Jaffna.

III. RESULTS AND DISCUSSION

The adolescent period is the key decade in life with implications on adult health, socio-economic well-being of a country and the health of future children. Nutrition and heredity are the major determining factors of growth of adolescents (Soliman et al., 2014). Healthy dietary habits in younger ages are important to achieve better health conditions in later life (Donati et al., 2016).

Table 01: Sociodemographic information of adolescents (between 17 and 19 years) of (Reclamation East (J/68), Reclamation West (J/69) and Moor Street North (J/87), Jaffna district

	J/68	J/69	J/87
Gender			
Male	14 (40%)	18 (51.43%)	19 (54.28%)
Female	21 (60%)	17 (48.57%)	16 (45.72%)
Age			
17	14 (40%)	11 (31.42%)	10 (28.57%)
18	10 (28.57%)	15 (42.86%)	11 (31.43%)
19	11 (31.43%)	9 (25.72%)	14 (40%)
Religion			
Christian	35	35	0
Islam	0	0	35
Civil Status			
Single	33	32	29
Married	2	3	6
School going adolescents			
Yes	22 (62.86%)	20 (57.14%)	10 (65.71%)
No	13 (37.14%)	15 (42.86%)	25 (34.29%)
Working adolescents			
Yes	4	9	10
No	21	26	25
Frequency of cooking at home per day			
Once	16 (45.7%)	17(48.6%)	21 (60%)
Twice	18 (51.4%)	16 (45.7%)	14 (40%)
Thrice	1 (2.9%)	2 (5.7%)	0

Table 01 show that above 30 % of the adolescents left school from three of the GN divisions studied. 10.5 % of the adolescents are married while two of them are pregnant and there are four lactating mothers in the group. The nutritional status of such adolescents has an important role to play in improving the health of pregnant teenagers, adolescent mothers and their babies (Marvin *et al.*, 2016).

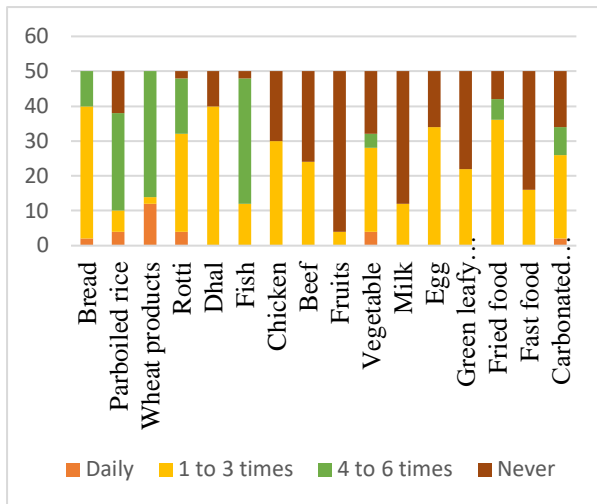


Figure 01: Food consumption pattern of adolescents (between 17 and 19 years) of (between 17 and 19 years) of (Reclamation East (J/68), Reclamation West (J/69) and Moor Street North (J/87), Jaffna district

The findings (figure 01) highlighted that the fruit and vegetable consumption by the participants were below the recommended level. The adolescents from the study area failed to receive 2-4 servings of fruits and vegetables. Higher prices and less availability of fruits near by areas were reported reasons for the less fruit consumption. Banana is the only fruit consumed by the participants. It was observed that less fruit trees available in the crowded areas. The field observations showed that less availability of fruits and vegetables near by shops to the residents in three of the study areas. Consumption of wide variety of fruit consumption is essential for the adolescents to get rid of the micronutrient deficiencies. A study conducted by Udari *et al.*, 2021 on fruit and vegetable intake by Sri Lankans revealed that Sri Lanka's per capita fruit and vegetable consumption remains far below the medical recommendation.

As two of the GN divisions (Reclamation East and Reclamation West) are situated near the fishing sites and the livelihood of most of the families is fishing, the residents can get adequate fish in their diet.

The food frequency table shows that the dairy consumption by the participants is very low and according to the food diaries only 13 participants (12.4.3%) consumed milk or milk products last seven days of the study period. Less land available to livestock rearing and increased price was identified as the cause for the limited consumption of milk products. In a secondary school survey Allen *et al.* (2017) found that low iron status and anaemia remain common issue in adolescents of the socioeconomically disadvantaged Tamil population.

Healthy food options are limited for low income families and making it difficult for adolescents to obtain the nutrients they need. Food costs are a barrier for low income-families to choose healthy food (Lo *et al.*, 2009). Rising food prices are having severe impacts on the nutritional status of the population (West and Mehra, 2010). Changing the diet pattern for economic crisis may develop a range of nutritionally-related diseases (Washington., 2019).

Foods are purchased away from home rather than prepared at home in the study area. Consumption of starch foods and carbonated beverages were reported in high frequency among the participants. Discussing with the parents and administrative officials, poor residential environment, limited kitchen facilities, shared kitchen for families, more members in a family, higher prices of fuelwood, availability of food corners near to the residential area and selling of home prepared foods at neighborhoods were identified as the reasons for purchasing food s away from home. Low income population in Sri Lanka is underprivileged of using modern fuels for cooking and livelihoods due to poverty making them dependent on traditional use of firewood which takes place informally and inefficiently creating many ill effects in the socio-economic, health and environment sectors (Sunday Observer, 2022).

Sri Lankan population is struggling to meet their daily food needs in the face of shortages and higher food and fuel prices. The majority of households are regularly using food-based coping strategies such as eating less preferred, less nutritious food, and cutting back on food. Poverty and socio-economic inequalities remain important barriers to accessing diverse and nutritious foods (Baxter, 2022). Low dietary diversity impacts nutrition status and health (Weerasekara *et al.*, 2020).

Adolescents should aim to eat a balanced, nutrient-dense diet that provides the necessary nutrients to support their growth and development. Parents, caregivers, and healthcare providers can help guide adolescents in making healthy food choices and developing positive dietary habits (Daly *et al.*, 2022).

IV. CONCLUSION AND RECOMMENDATION

Encouraging home garden and organizing farmer's market are essential to improve the fruit and vegetable consumption by the urban vulnerable late Adolescents in Jaffna Municipality. The findings will help to design suitable nutrition programs for vulnerable people in underserved communities and to use these to strengthen a sustainable food and nutrition system in Sri Lanka.

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