



Inadequacy of dietary intake among mothers and children aged 6-23 months in Estate sector, Sri Lanka

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RATIONALE & OBJECTIVE

Dietary diversity is defined as the number of individual food items or groups consumed over a given period of time (FAO, 2013). Limited dietary diversity is a major challenge and the cause of malnutrition (Arimond *et al.*, 2010). Young children and mothers are the most nutritionally vulnerable groups having malnutrition. Maternal and child under-nutrition are the most pressing public health problems around the world and in Sri Lanka (UNICEF, 2018). Prevalence of micronutrient deficiencies also still the nutritional issues among children and women in Sri Lanka (DHS, 2016). Despite attempts to diversify the diet, a considerably proportion of estate people rely on monotonous diets, suggesting an influence of several factors determining dietary diversity.

Hence, this study was conducted to assess dietary diversity and identify its determinants among mothers and their children aged 6-23 months in estate communities in Ambagamuwa in Nuwara-Eliya district in Sri Lanka.

METHODOLOGY

Study design: Cross sectional study

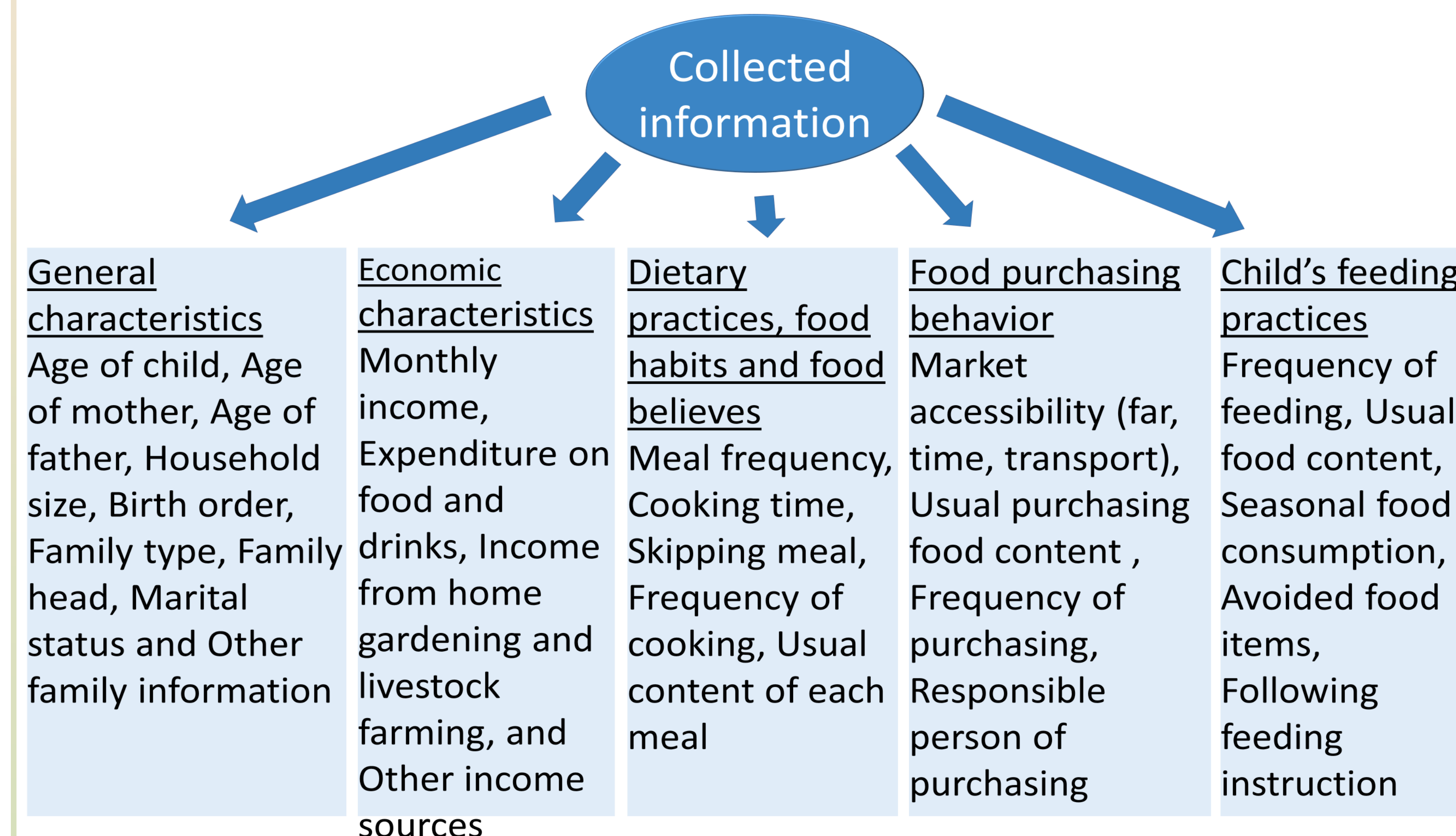
Study area: Selected estate from Ambagamuwa Divisional Secretariat

Study sample: Mother and child (6-23 months of age) pairs

Sample size : Sample was selected based on the multi stage simple random sampling method and the sample size was 123.

Data collection tools:

2. Single 24 hour dietary recall
1. Pre-tested interviewer administrated questionnaire



General characteristics	Economic characteristics	Dietary practices, food habits and food believes	Food purchasing behavior	Child's feeding practices
Age of child, Age of mother, Age of father, Household size, Birth order, Family type, Family head, Marital status and Other family information	Monthly income, Expenditure on food and drinks, Income from home gardening and livestock farming, and Other income sources	Meal frequency, Cooking time, Skipping meal, Frequency of cooking, Usual content of each meal	Market accessibility (far, time, transport), Usual purchasing food content, Frequency of purchasing, Responsible person of purchasing	Frequency of feeding, Usual food content, Seasonal food consumption, Avoided food items, Following feeding instruction

Data analysis

- Calculation of Minimum Dietary Diversity (MDD)
- **Percentage of children who have MDD**

$$= \frac{\text{Children 6 – 23 months of age who received foods from 4 or > 4 food groups among the 7 food groups during the previous day}}{\text{Total number of children 6 – 23 months of age surveyed}} \times 100$$
- **Percentage of mothers who have MDD**

$$= \frac{\text{Mothers who received foods from 5 or > 5 food groups among the 10 food groups during the previous day}}{\text{Total number of mothers surveyed}} \times 100$$

(INDDEx Project, 2018)

Multinomial logistic regression analysis was used to determine the determinants of dietary diversity

RESULTS

Table 01: Minimum dietary diversity score (MDDS) among mothers and children aged 6-23 months

	Mean DD	SD	% of people who had MDD
Mother	5.13	1.2	68
Children	3.9	1.3	60

Determinants of Dietary Diversity of mothers: monthly income (AOR= 5.75), educational level (AOR=3.17), occupation (AOR=7.48), engaging livestock farming (AOR=1.48), and meal skipping (AOR=1).

Determinants of Dietary Diversity of children: monthly income (AOR=1.65), mother's educational (AOR=2.42), age of child (AOR=2.46), home gardening (AOR=1.62), meal frequency (AOR=3.36), and instruction from MCHC (AOR=1.25)

CONCLUSION and IMPLICATIONS

68% of mothers and 60% of children achieved MDDS. Therefore incorporation of identified determinants of DD of mothers and children for the nutrition intervention programs are imported to improve the nutritional status of mothers and children of the study area.

References

- Food and Agriculture of Organization of the United Nation (2013). Guidelines for Measuring Household and Individual Dietary Diversity
- UNICEF, WHO, World Bank Group (2018). Levels and trends in child malnutrition
- Arimond, M. *et al.* (2010) 'Simple Food Group Diversity Indicators Predict Micronutrient Adequacy of Women ' s Diets in', *The Journal of nutrition*, 140(11), pp. 2059–2069. doi: 10.3945/jn.110.123414.2059S.
- Department of statistics (2016) 'Nutritional status of children Wasting or weight-for-height', pp. 157–184. Available at: http://www.statistics.gov.lk/social/DHS_2016a/Chapter11.pdf.