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ABSTRACT

Appropriately evidence-based infant feeding practices are essential for attaining and maintaining proper nutrition and health of infants and young children. Without appropriate measurement tools, the design and evaluation of programs to improve complementary feeding practices cannot move forward.

The present paper is the first systematic attempt in Sri Lanka to prepare a tool to assess these complementary feeding practices into a **composite index** in consideration with all major components of the infant feeding practices such as continued breast feeding, bottle feeding practices, introduction of complementary feeding at correct age, appropriate frequency, consistency and the diversity of foods into one single variable. Using this composite index, factors influencing these feeding practices such as socio demographic, physical growth, knowledge on complementary feeding, and service provisions were studied.

The study was done in two phases. In phase one, a tool was prepared by adapting Ruel and Manon tool, which was utilized in the Ethiopian and Latin American countries to assess complementary feeding practices into composite index taking into consideration of the Sri Lankan context and guidelines. Sub indices were also calculated for breast feeding, bottle feeding, food diversity, food frequency, and frequency of solid and semisolid feedings between the ages of 6-9 months.

In the second phase, a cross sectional descriptive community level survey and anthropometric measurement were carried out in 423 randomly selected infants aged 6-9 months in the Trincomalee MOH area. Complementary feeding practices were assessed by using the tool adapted. Socio demographic factors, knowledge on complementary feeding and service provisions of the area were assessed by using a interviewer administered questionnaire. The Z score of anthropometric measurements of weight and length were taken promptly according to the WHO standard and Weight for length, Weight for age, Length of age and Body Mass Index for age were calculated.

With the assistance of tool adapted, the complementary feeding composite index and sub indices such as breast feeding index, bottle feeding index, dietary diversity index, food frequency index, solid and semisolid index were calculated. The association of composite index and sub indices with the selected factors such as socio demographic factors, physical growth, knowledge on complementary feeding, service provision were studied.

Only 49.4% of infants had overall satisfactory complementary feeding composite index. Of the sub indices the highest percentage with the satisfactory index was for breast feeding (70%) followed by

dietary diversity (57%), and solid and semisolid (44.2%). Only 22% of total study group had satisfactory dietary food frequency index.

Study population consisted mainly of Tamil (78.5%) followed by Moors (13.7%) and Sinhalese (7.3%). Among them Sinhalese ethnic group had higher overall satisfactory complementary feeding composite index, compare to the other two ethnic groups and the difference was statistically significant ($p < 0.05$). The breast feeding index, higher proportion of the Muslim had satisfactory index than other two communities but the difference observed was not statistically significant ($p = 0.073$). A higher proportion of mothers aged 25 and below had satisfactory composite index than older mothers. Difference observed was statistically significant ($p = 0.000$). Number of children in the family was significantly associated with the food frequency index ($p = 0.01$). Majority of mothers were unemployed (84.9%). While a higher percent of working mothers had satisfactory food diversity and solid and semisolid index but the difference was not statistically significant ($p = 0.258$ and 0.130 respectively). Non working mothers had a higher level of food frequency and the breast feeding index. The difference observed for the breast feeding was statistically significant ($p = 0,000$) but the food frequency was not statistically significant ($p = 0.559$). Majority of mothers (68.6%) were educated above the O/L and the educational level was significantly associated with the composite index. Higher proportion of educated parents had satisfactory index compared to the low educated parents ($p = 0.000$).

A higher percentage of satisfactory level of Z score for all growths (satisfactory Z score of weight for length, weight for age, length for age, body mass index for age) were significantly positively associated with complementary feeding composite index. All the other sub indices were significantly associated with all growth variables except the length for age.

Knowledge on complementary feeding was significantly associated to the composite index. A higher proportion of care givers who had good knowledge had satisfactory composite index and this difference was statistically significant ($p = 0.000$).

Those who had more visits by the PHM and the clinic visits had satisfactory complementary feeding composite index compared to those who had few visits. The differences were found to be statistically significant ($p = 0.025, 0.000$ respectively)

It also found that the major source of the knowledge on complementary feeding were the PHM (55.6%), family members (44%) and the CHDR (43.3%).

The tool adapted in this study could be improved further and it can be used by the PHM at the field level to identify problems related to feeding practices. By which early intervention could be provided to improve the nutritional status of the infants and young children.