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Awareness on Smart Nutrition and Conditioning for Kids (SNACK) Among Mothers of Second Grade Students

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Abstract

Children's nutrition plays a vital role in their overall growth and development. Despite global efforts, malnutrition remains a serious public health issue, particularly in developing countries. While various programs have been initiated to address child nutrition, there is limited research focusing on mothers' knowledge and practices regarding Smart Nutrition and Conditioning for Kids (SNACK), especially in Tamil Nadu.

Aim: To assess the knowledge and practice regarding SNACK among mothers of second-grade students and to explore associations with selected demographic and nutritional variables.

Methods: A descriptive correlational study was conducted among 108 mothers of second-grade children in Ayanambakkam, Chennai, using purposive sampling. Data were collected through interviews using a validated Modified CATCH (Coordinated Approach to Child Health) Nutritional Knowledge Survey. Descriptive and inferential statistics were applied for data analysis.

Results:

The majority of mothers demonstrated moderately adequate knowledge (63%) and moderately adequate practice (58%) regarding SNACK. The overall mean knowledge score was 11.69 (SD = 3.21) out of 20. No significant associations were found between mothers' knowledge and selected demographic or nutritional variables. A low positive correlation (r = 0.0758) was observed between knowledge and practice, which was not statistically significant.

Conclusion: Although most mothers showed a fair level of knowledge and practice regarding SNACK, the study highlights a knowledge-practice gap. Health professionals, particularly nurses, have a crucial role in implementing targeted interventions to enhance mothers' nutritional knowledge and ultimately improve children's health outcomes.

Introduction

Children make up nearly one-third of the population, and proper nutrition is essential during their developmental years. Physical growth serves as a key global measure of a child's overall health and well-being. Malnutrition remains a major global health issue, especially in developing nations, where it affects a significant number of children (Gupta A et al., 2025). Worldwide, it contributes to at least half of all

childhood deaths. Undernutrition alone causes over one-third of child fatalities and represents 11% of the global disease burden. It is most widespread in low- and lower-middle-income countries. Among school-aged children, malnutrition is a critical public health challenge, with over 200 million affected by stunting and underweight, and nearly one billion impacted overall (Kaur A et al. 2025).

There is a paucity of studies on the topic of SNACK (Smart Nutritional and Conditioning for Kids), especially in Tamil Nadu. Therefore, this study was conducted to assess the Smart Nutrition and Conditioning for Kids (SNACK) programme among mothers of second-grade students. The objectives of the study were:

1. To assess the knowledge on Smart Nutrition and Conditioning for Kids (SNACK) among mothers of second-grade students.
2. To find the association between selected demographic variables and the awareness of mothers on Smart Nutrition and Conditioning for Kids.
3. To find the association between selected nutritional variables and the awareness of mothers on Smart Nutrition and Conditioning for Kids.
4. To find the correlation between knowledge and practice on Smart Nutritional and Conditioning for Kids (SNACK) among mothers of second-grade students.

Materials and Methods

A descriptive correlational research design was adopted to conduct this study among 108 mothers of second-grade children from Ayanambakkam, Chennai. The study was conducted after obtaining ethical clearance and institutional permission. Samples were selected using a purposive sampling technique. Verbal consent was obtained from all participants after a brief introduction about the study. Data were collected through interviews using a pre-tested and validated Modified CATCH (Coordinated Approach to Child Health) Nutritional Knowledge Survey to assess the awareness on SNACK among mothers of second-grade students.

Results & Discussion

The frequency and percentage distribution of demographic variables showed that the majority of the mothers were Hindus (63%), and more than half were aged between 26–30 years (56%). Over half of them had a monthly family income of less than ₹25,000 (52%), and 52% had male children. About 36% had completed secondary-level education. Most of the children were 7 years old (76%), and a majority were the first child in the family (61%).Regarding nutritional variables, most mothers were non-vegetarians (82%). Half of the mothers (50%) reported providing three meals per day (morning, lunch, and dinner). Among 7-year-old children, 72% had a normal healthy BMI, whereas among 8-year-olds, 54% had a normal healthy BMI.

Table 1
Frequency and Percentage Distribution of SNACK practice among Mothers of Second Grade Students (N=108)

Level of SNACK practice	f	%
Adequate Practice	43	40
Moderately Adequate Practice	63	58

Inadequate Practice	02	02

It is inferred from Table 1 that practice was moderately adequate among more than half of the mothers (58%), followed by adequate practice (40%), and only 2% had inadequate practice.

Table-2
Frequency and Percentage Distribution of Level of Nutritional Knowledge of Mothers of Second Grade Students (N=108)

Level of Nutritional knowledge	f	%
Adequate Knowledge	34	31
Moderately adequate knowledge	67	63
Inadequate knowledge	7	6

It is inferred from the table 2, knowledge was moderately adequate among more than half of the mothers (63%), followed by adequate knowledge on SNACK(31%),and only in 7% of them knowledge was inadequate.

The above findings are supported by data from a cross-sectional study on mothers of 6–10-year-old children, which showed that 62.9% had good knowledge, 93.9% had positive attitudes toward packaged snacks, yet only 11.2% demonstrated good practices (Talagala & Gunawardhana, 2025).

Table-3
Mean and Standard Deviation of Knowledge on SNACK programme among mothers of second grade students.
(N=108)

Category	Obtainable Score	Obtained range		Mean	Mean %	SD
		Minimum	Maximum			
Carbohydrate	0-4	0	3	1.73	58	**0.948**
Protein	0-5	0	5	2.73	55	**1.191**
Fat	0-3	0	3	1.55	52	**0.822**
Vitamin and minerals	0-8	0	8	5.68	71	**1.772**
Overall Score	**20**			**11.69**		**3.215**

Table 3 indicates that the overall mean knowledge score was 11.69 out of 20 (SD = 3.215), with the highest knowledge in the vitamins and minerals category (71%).

Most mothers responded correctly to questions on dairy products (86%), better drink choices (81%), calcium-rich items (77%), and fruit items (79%). They also identified grain-based preparations (68%), vitamin D items (62%), and sodium-rich items (69%). Awareness was lower in identifying foods that promote muscle growth (34%), give long-lasting energy (33%), and low-calorie foods (31%).

There was no significant association between selected demographic variables (age, religion, education, income, gender, birth order) and mothers' nutritional knowledge. Hence, the null hypothesis H01 was

retained. Similarly, there was no significant association between selected nutritional variables and mothers' knowledge. The null hypothesis H02 was retained. A low positive correlation (r = 0.0758) was found between knowledge and practice regarding SNACK among mothers. This correlation was not statistically significant, thus retaining the null hypothesis H04.

Conclusion

The study findings revealed that a majority of mothers had moderately adequate knowledge and practice related to Smart Nutrition and Conditioning for Kids. This underscores the need for targeted health education and awareness programs to enhance mothers' understanding of child nutrition. Nurses and health professionals play a crucial role in empowering mothers to make informed dietary choices that can significantly improve the nutritional status of school-aged children in the community.

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