

# Perceptions, Factors, and Impact of Unhealthy Snack Foods and Beverages during the Complementary Feeding Period in Kathmandu Valley, Nepal



Many low- and middle-income countries are experiencing a “nutrition transition” with diets increasing in added sugars, fats, and refined carbohydrates. Children living in countries undergoing this transition are increasingly consuming snack foods and beverages typically high in calories and low in essential nutrients—potentially displacing healthier, more nutritious foods and impacting taste preferences throughout childhood and even adulthood.

To better understand how this nutrition transition is impacting child feeding during the complementary feeding period, Helen Keller International’s Assessment and Research on Child Feeding (ARCH) project assessed: caregivers’ perceptions of commercial snack foods and beverages, the factors leading to their use, and their influence on children’s nutrition in Kathmandu Valley, Nepal. ARCH conducted a quantitative survey and qualitative focus group discussions among primary caregivers of children 12-23 months between October 2016 – April 2017 in Kathmandu Valley.

## Key Findings:

- Children in Kathmandu Valley are consuming commercially produced snack foods and beverages at a high rate, the majority of which are “unhealthy” according to their nutrient profile.
- Despite negative perceptions about snack foods, caregivers cite convenience and children’s preference as major drivers for feeding them.
- Unhealthy snack foods and sugar-sweetened beverages contribute to nearly one-quarter of the dietary energy intake for children 12-23 months of age. Nearly half of children’s dietary energy intake comes from snack foods and beverages.
- Children who were high consumers of unhealthy snack foods and sugar-sweetened beverages had lower dietary intakes of 8 micronutrients and had lower length-for-age z-scores as compared to low-consuming children.
- Unhealthy consumption patterns were greatest among populations of lower socio-economic status.

## Background

The nutritional needs of children are highest during the complementary feeding period (6-23 months) due to the rapid growth and development that occurs during this critical window. Good nutrition during this period helps protect children against the lifelong effects of malnutrition, including illness susceptibility, impaired cognitive ability, and reduced school and work performance. To meet the unique nutritional needs of children during the complementary feeding period, the foods they eat must have a higher nutrient density than what is required for adult diets.

Malnutrition remains a critical challenge in Nepal—stunting among children under five years of age is high at 36% and wasting is 10%.<sup>1</sup> In 2014, only 35% of Nepali children 6-23 months of age were achieving a minimum acceptable diet (MAD) and 74% of Kathmandu Valley children 6-23 months of age were found to be consuming commercial snack food products.<sup>2, 3</sup> Given this indication of inadequate diet quality during the complementary feeding period, the increased availability and consumption of energy-dense, nutrient-poor foods high in sugar or salt is a cause for concern for the nutritional status of young children in Nepal.

## Snack food and beverage consumption – contribution to overall diet

### Unhealthy snack foods included:

Biscuits/cookies



Instant noodles



Candies



Chocolates



Savory snacks



Juice drinks



Chocolate/malt  
powder-based drinks



This study reaffirms what Helen Keller International found in prior research: the consumption rates of commercially-produced snack foods among young children in Kathmandu Valley is high. This new survey found that nearly all caregivers (99%) reported feeding their child snack food products in the previous week, despite negative perceptions about their health and nutritional quality. Of the over 200 unique snack foods or beverages consumed by children 12-23 months of age, three-quarters were categorized as “unhealthy” when their nutrient content was profiled.<sup>4</sup>

Nine out of ten of these “unhealthy” snack foods or sugar-sweetened beverages (USF/SSB) were commercially-produced or

1 MOHP New ERA and ICF DHS Program. Nepal Demographic and Health Survey 2016. 2017.

2 Na, M., Aguayo, V. M., Arimond, M., Dahal, P., Lamichhane, B., Pokharel, R., ... Stewart, C. P. (2017). Trends and predictors of appropriate complementary feeding practices in Nepal: An analysis of national household survey data collected between 2001 and 2014. *Maternal and Child Nutrition*, (June), 1–13. <https://doi.org/10.1111/mcn.12564>

3 Pries AM, Huffman SL, Adhikary I, Upreti SR, Dhungel S, Champeny M, et al. High consumption of commercial food products among children less than 24 months of age and product promotion in Kathmandu Valley, Nepal. *Matern Child Nutr* [Internet]. 2016;12 Suppl 2:22–37.

4 Department of Health UK. *Nutrient Profiling Technical Guidance* [Internet]. London; 2011. Available from: [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/216094/dh\\_123492.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/216094/dh_123492.pdf)

branded, as opposed to other products sold by a shop or vendor but not necessarily branded.

Not only are children consuming unhealthy, commercially-produced snack foods at a high rate, but a significant portion of their dietary energy intake is also coming from such products. USF/SSB contributed about a quarter of all calories consumed by the children and a made-up a substantial portion of their total sugar and sodium intakes. The most commonly consumed USF were biscuits, candy, and savory snacks.

### Caregivers' perceptions of commercial snacks

While caregivers repeatedly ranked snack foods and beverages as “less healthy” during focus group discussions, the convenience of and their children’s preference for these foods were found to be drivers for their use in young child feeding. Nearly half of caregivers reported providing a snack food because it was easy to feed or easy to prepare, and ‘my child likes it’ was the most common reason mothers and grandmothers reported for feeding nearly all types of commercial snack products.



*Participatory exercise with caregivers of children 12-23 months of age: (From left to right) Free listing of snack foods fed to children, ranking snacks based on healthiness, ranking snacks based on convenience.*

Children’s consumption of snack foods was also influenced by their social context. Caregivers noted that the influence of another person—such as when fed as a treat by a neighbor or guest—contributed to children eating snack foods or beverages. Children were also more likely to eat certain foods when either the caregiver or another adult/relative was eating the food themselves. Both findings indicate the importance of social modeling in shaping a child’s diet.

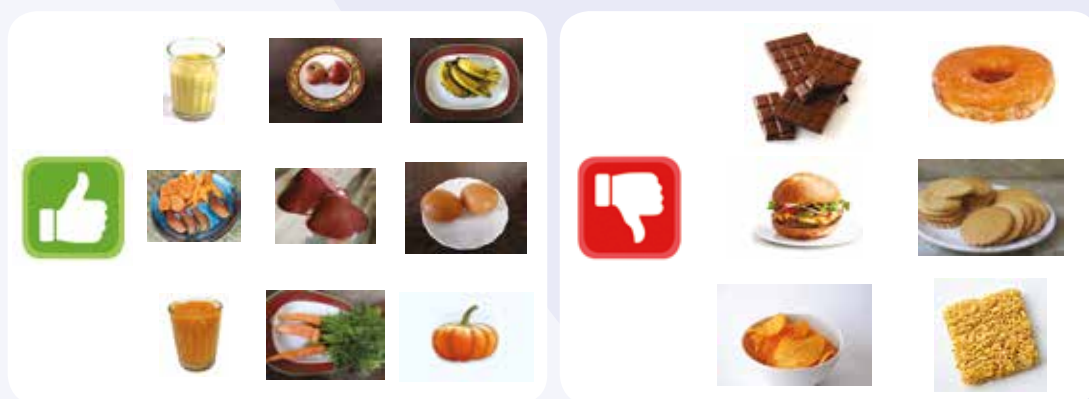
### Caregiver and child characteristics associated with snack consumption

Several factors were related to children’s high consumption of unhealthy snack foods and sugar-sweetened beverages. Female children and children with employed caregivers had higher energy intake of unhealthy snack foods, compared to male children and children with caregivers not engaged in paid work. Lower wealth and educational

attainment correlated with high consumption of unhealthy snack foods and sugar-sweetened beverages. However, while the median cost of unhealthy snack foods and beverages was found to be lower than healthy ones, cost was not reported by caregivers as a consideration when deciding to feed snack foods or beverages to their child. The wealthiest households were found to spend significantly more on healthy snacks for their children as compared to the poorest households.

### Unhealthy snacks and nutritional outcomes

Unsurprisingly, higher consumers of USF/SSB had less nutritious diets than low consumers, with lower intakes of most nutrients—including those vital for growth and development during the complementary feeding period such as calcium and zinc. High USF/SSB consumers were at a greater risk of not receiving adequate amounts of critical vitamins and minerals and were significantly shorter for their age compared to children who were low consumers—indicating that these dietary patterns could be influencing undernutrition among young children in Nepal.



To tackle the growing use of unhealthy snack foods and beverages for young child feeding, the range of factors and perceptions influencing caregiver behavior needs to be understood and addressed. Interventions should target populations that consume high amounts of USF/SSB, namely the poorest and least educated, and consider women’s time constraints and the rapidly changing food environment in urban settings. Programs should help ensure Nepali caregivers are well informed about the nutritional quality of commercially-produced foods, and regulations should ensure their child feeding decisions are free from marketing influence.