

Unhealthy foods in Surkhet, Nepal

*Consumption, perceptions, and
exposure to advertisements*

Data Note 42

December 2023

ABOUT THIS DATA NOTE | The

Transforming Agrifood Systems in South Asia (TAFSSA) district agrifood systems assessment aims to provide a reliable, accessible, and integrated evidence base that links farm production, market access, dietary patterns, climate risk responses, and natural resource management with gender as a cross-cutting issue in rural areas in Bangladesh, India, and Nepal. It is designed to be a district-level multi-year assessment. Using data collected in March-April 2023, this data note describes the types of unhealthy foods people are eating, where they get those foods, perceptions about key unhealthy foods, and from what source they receive information about different unhealthy foods. This is one of a set of data notes that, together, provide a holistic picture of the agrifood system in the district.

Figure 1. District location within Nepal

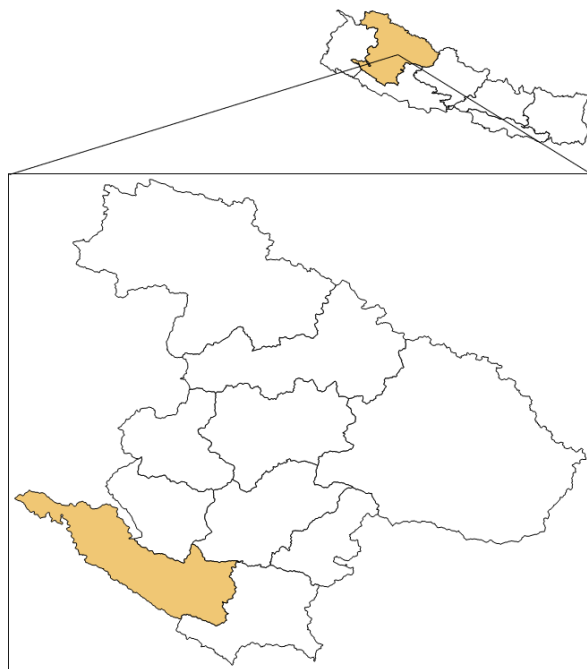


Figure 2. Highlights from this data note



>40%

Adults and adolescents consumed sweets and ice cream in previous 24h



~90%

Adults and adolescents considered instant noodles easy to acquire and prepare



26%

Male adults consumed unhealthy foods during breakfast



>90%

Households purchased unhealthy foods from retail shops



~1.5

Times higher exposure to ads for soft drinks among male adults than female adults

OVERVIEW OF CONTENTS

TAFSSA's district-level agrifood systems assessment included interviews with three respondents per household: a female adult (aged 20+ years), a male adult (aged 20+ years), and an adolescent (aged 10-19 years). A description of the household and respondent sampling strategy is provided at the end of this data note.

In this data note, you will find information on background characteristics of the households and individuals who were interviewed. This is followed by information on the types of *unhealthy foods* people are eating, which was measured using two methods. Respondents were asked about the unhealthy foods they ate the day before the interview (24-hour recall) and about how often they ate certain unhealthy foods in the past week (food frequency questionnaire). The 24-hour recall was conducted using the Global Diet Quality Score (GDQS) application, which also captures when (at different eating occasions such as breakfast, a snack between breakfast and lunch, lunch, etc.) people ate each unhealthy food item.

In addition to what people eat, you will find information on *where* they get their unhealthy foods.

Finally, you will learn *why* people choose to eat certain unhealthy foods. Respondents were asked about the availability, accessibility, taste, and other factors that may influence their decisions to consume certain unhealthy foods.

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Table 1. Household and individual characteristics

Household characteristics		Individual characteristics				
			Adult female	Adult male	Adolescent female	Adolescent male
Number	500	Number	505	235	246	254
Female-headed, %	54	Age, yrs. mean (range)	37 (20-88)	46 (20-84)	15 (10-19)	14 (10-19)
Education of head, yrs, mean	5	Currently in school, %	-	-	85	95
Involved in agriculture, %	96	Education, yrs. mean (range)	4 (0-17.5)	5 (0-17.5)	8 (0-11.5)	7 (3-11.5)
Has improved toilet ¹ , %	100	Married, %	93	96	14	2
		Employed, %	70	81	5	1
Drinking water source		Primary occupation				
		Unpaid household work, %	15	2	9	1
Piped into yard or plot, %	61	Farming, %	72	57	6	1
		Casual non-farm labor (paid), %	3	11	0	1
Public taps or standpipe, %	12	Student, %	0	0	85	96

¹Improved toilet includes flush or pour flush toilet, pit latrine, and twin pit/composting toilet

MEASURING UNHEALTHY FOOD CONSUMPTION I

Diets were measured by asking people about what they ate or drank on the previous day, from the time they woke up until the time they went to bed and did not eat or drink anymore. This includes all foods, both healthy and unhealthy, consumed at home and away from home. This data note focuses only on the unhealthy foods, which were categorized in 7 groups (see box on right). The Global Diet Quality Score (GDQS) application (Bromage et al, 2021)² was used to capture this information.

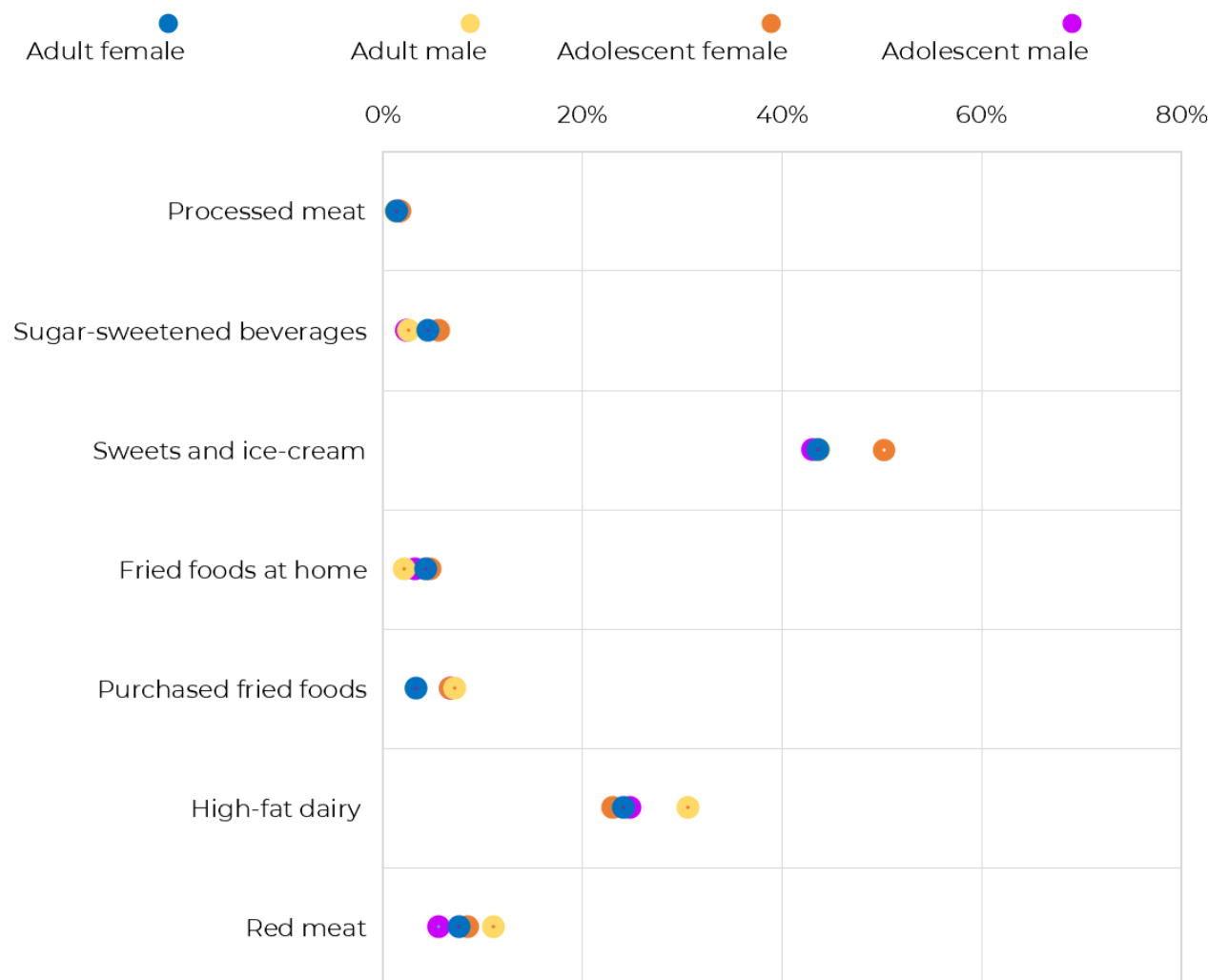
Among the 9 GDQS unhealthy food groups (7 unhealthy food groups plus red meat and high-fat dairy, which are unhealthy when consumed in excess), we have excluded two – refined grains and baked goods, and white roots and tubers. These were excluded because the consumption rates for these two food groups approached nearly 100% among all survey respondents, as these foods constitute staple dietary items or the most consumed sources of carbohydrates across the study regions. We show the percentages of individuals who consume foods from the 7 unhealthy groups (**Figure 3**), commonly consumed foods and beverages within unhealthy food groups (**Figure 4**), how many times per day people eat unhealthy foods (**Figure 5**), and who eats unhealthy foods at various eating occasions (**Figure 6**).

GDQS unhealthy food groups included in this data note

1. Processed meat
2. Sugar-sweetened beverages
3. Sweets and ice cream
4. Fried foods at home
5. Purchased fried foods
6. High-fat dairy²
7. Red meat²

²Bromage S, Batis C, Bhupathiraju SN et al. Development and validation of a novel food-based global diet quality score (GDQS). Journal of Nutrition 2021, volume 151, number 10S, Supplement 2.

Figure 3. Consumption of unhealthy food groups on previous day (GDQS unhealthy food groups)



FINDINGS

- ✓ Around 50% of female adolescents consumed sweets and ice cream.
- ✓ Female adults and adolescents consumed around 2 times more sugar-sweetened beverages than their male counterparts.
- ✓ Compared to female adults, male adults consumed more purchased fried food, red meat, and high-fat dairy foods per day.
- ✓ Male adults consumed red meat twice as much as male adolescents.
- ✓ Female adolescents consumed 1.5 times higher red meat and fried foods at home than male adolescents.

Note: 'High-fat dairy and red meat are considered unhealthy when consumed in high quantities.

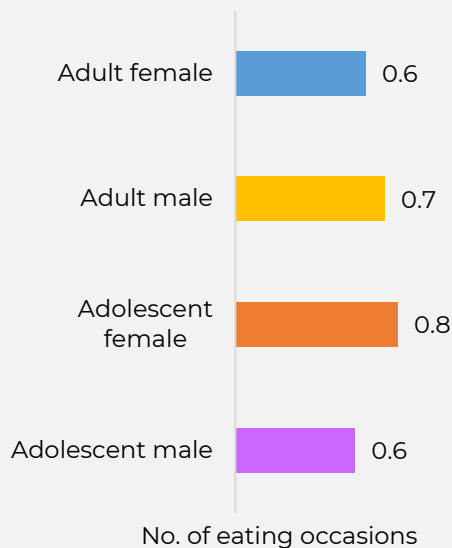
Figure 4. Foods and beverages consumed by GDQS unhealthy food group

These figures show the percent reporting consumption of each food and beverage for each GDQS unhealthy food group. Only the foods and beverages consumed in larger proportions are indicated by name. The width of the outer blocks for each food or beverage shown is scaled according to the relative percent reporting consumption of that food or beverage. The size of each block in the inner circle reflects the sum of all percentages across all foods and beverages reported as consumed for that unhealthy food group.

FINDINGS

- ✓ Around 45% of total unhealthy foods consumed were sweets and ice creams for all respondents. Sugar, biscuits, and cane sugar were the most common items.
- ✓ Within the purchased fried foods group, the specific foods consumed differed across respondent types.

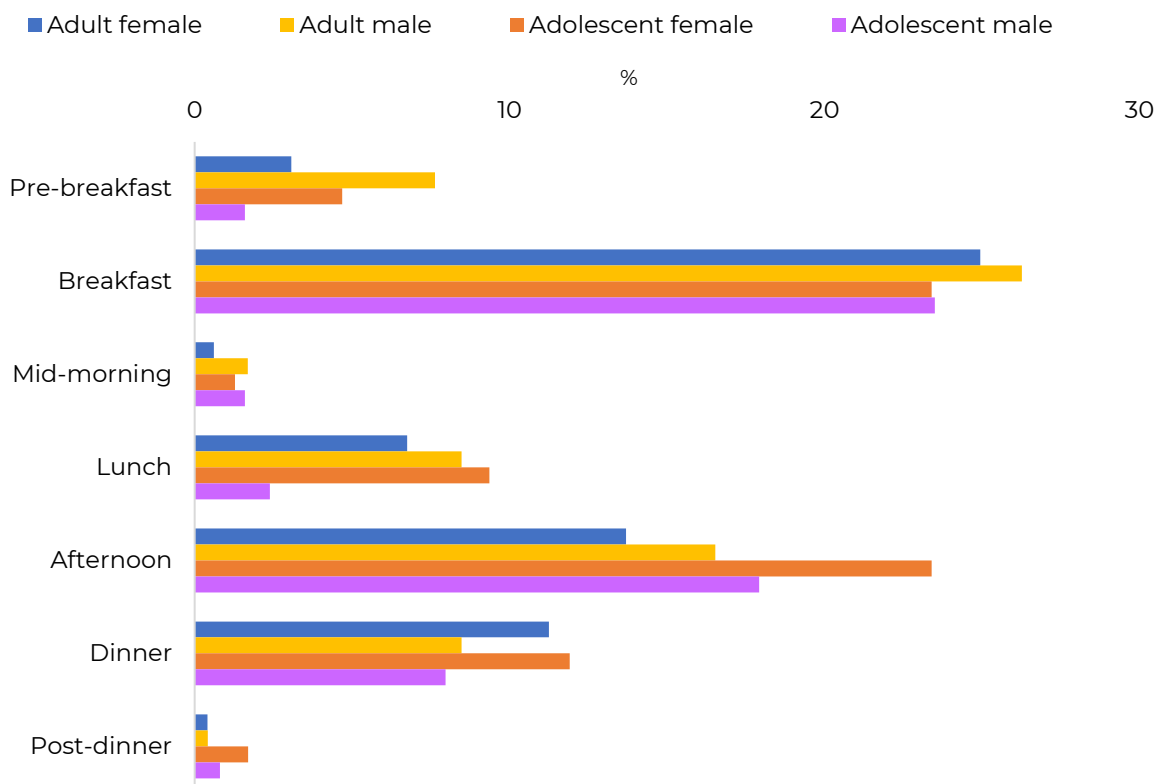
Figure 5. Mean number of eating occasions when unhealthy foods were eaten on previous day



FINDINGS

- ✓ Adults and adolescents consumed unhealthy foods slightly more than one-half eating occasions per day.
- ✓ Unhealthy foods were mostly consumed during breakfast followed by the afternoon among all respondents.
- ✓ Female adults and adolescents consumed around 1.5 times more unhealthy foods during dinner compared to their male counterparts.
- ✓ Compared to male adolescents, female adolescents consumed 4 times more unhealthy foods during lunch.

Figure 6. Percent who ate any unhealthy food on previous day, by eating occasion



SENTINEL UNHEALTHY FOODS | In addition to the GDQS, which provided information about all unhealthy foods consumed in the previous 24 hours, we selected a set of 6 “sentinel unhealthy foods” (see box on right) to better understand how frequently these common examples of unhealthy foods are consumed, where people buy them, and their perceptions about these foods.

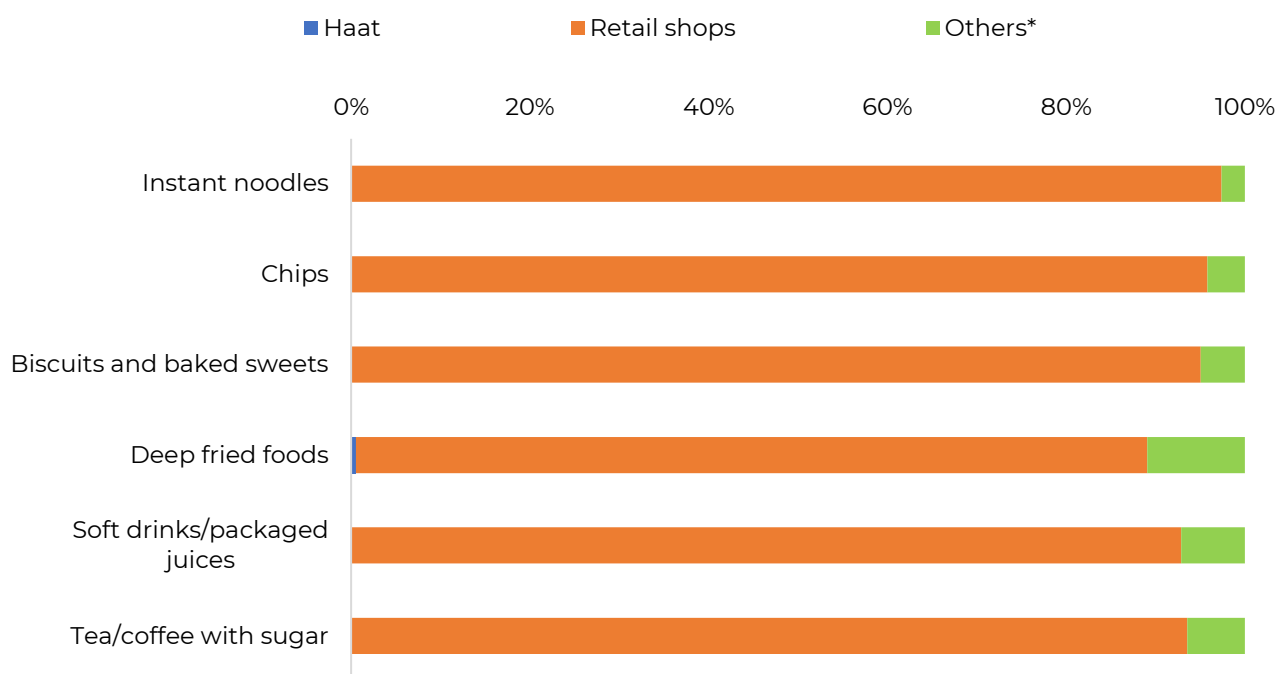
Respondents were asked about where they purchased these unhealthy foods (haat, retail shop, or other sources) (**Figure 7**) and how frequently they consumed these foods in the past 7 days (**Figure 8**).

For the three most-consumed unhealthy foods (biscuits, fried foods, and instant noodles), we examined people’s perceptions about some key aspects. These included whether they know of a vendor who sells the food, if the food is safe to eat, easy to acquire near where they spend most of their time, is not too expensive, is fast and easy to prepare, tastes good, fills their stomach, is nutritious, and if their family enjoys eating it (**Figure 9**). Understanding these perceptions provides insights into drivers or barriers of food choice.

List of sentinel unhealthy foods

1. Instant noodles
2. Chips
3. Biscuits and baked sweets (e.g., cakes and cookies, mithai)
4. Deep fried foods (e.g., samosa, pakora)
5. Soft drinks/packageaged juices
6. Tea/coffee with sugar

Figure 7. Where households purchase unhealthy foods (6 sentinel unhealthy foods), among households that purchase unhealthy foods



“Others” includes weekly market, city market, mobile vendor, and road market. Haats are wholesale markets where foods are sold in bulk directly by manufacturers/ farmers/ artisans at a fair price, in permanent or semi-permanent infrastructure. Retail shops means fixed or mobile individual shops where foods are sold directly to the consumers and include local grocery stores, specialized shops, vegetable/fruit shops, restaurants, and tea stalls.

FINDINGS

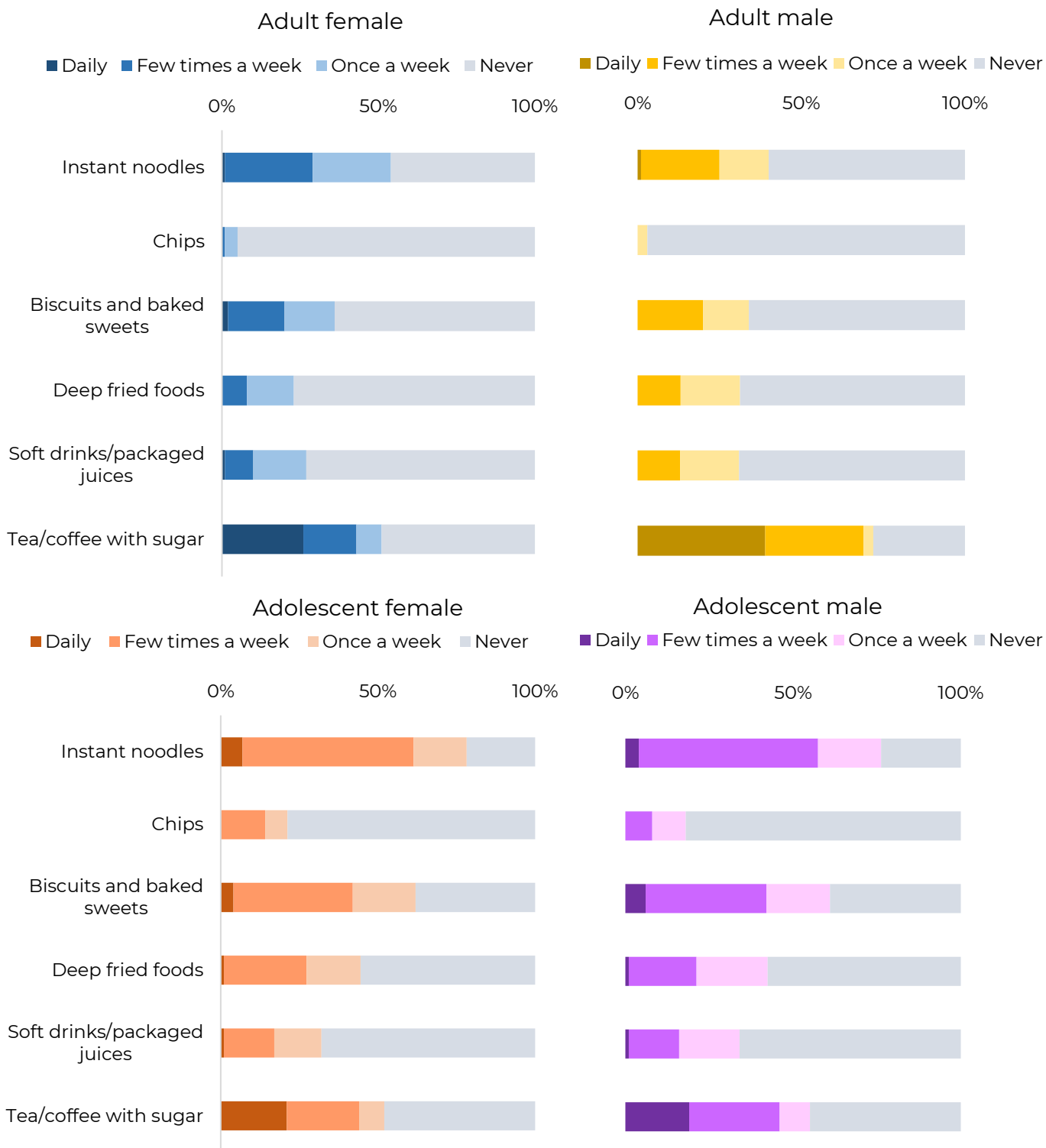
- ✓ Among households that purchased instant noodles, chips, biscuits and baked sweets, more than 95% of households purchased these foods from retail shops.
- ✓ Around 10% of households purchased deep fried foods from other sources such as weekly markets, city markets, mobile vendors, and road markets.



Unhealthy food purchases

More than 90% of households purchased unhealthy food items at retail shops

Figure 8. Frequency of consumption of unhealthy foods in previous 7 days (6 sentinel unhealthy foods)



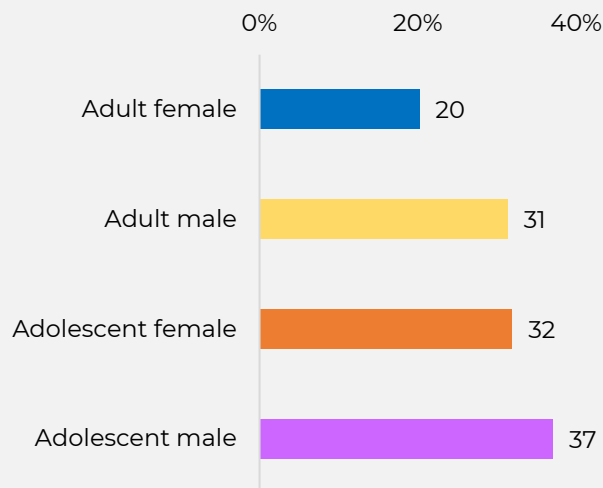
FINDINGS

- ✓ Around 39% of male adults and 26% of female adults consumed tea/coffee with sugar every day.
- ✓ Most adolescents consumed instant noodles and biscuits and baked sweets, with more than 36% consuming these foods multiple times a week.

Figure 9. Perceptions about biscuits, fried foods, and noodles (% who agree with each statement)**FINDINGS**

- ✓ More than 85% of respondents considered instant noodles to be easy to acquire and prepare.
- ✓ More than 87% of respondents knew of a shop that sells instant noodles, biscuits and deep fried foods.
- ✓ Instant noodles, biscuits and deep fried foods were considered tastier by adolescents compared to adults. Adults preferred these foods for family enjoyment.
- ✓ Biscuits were considered more stomach filling by adolescents than adults.

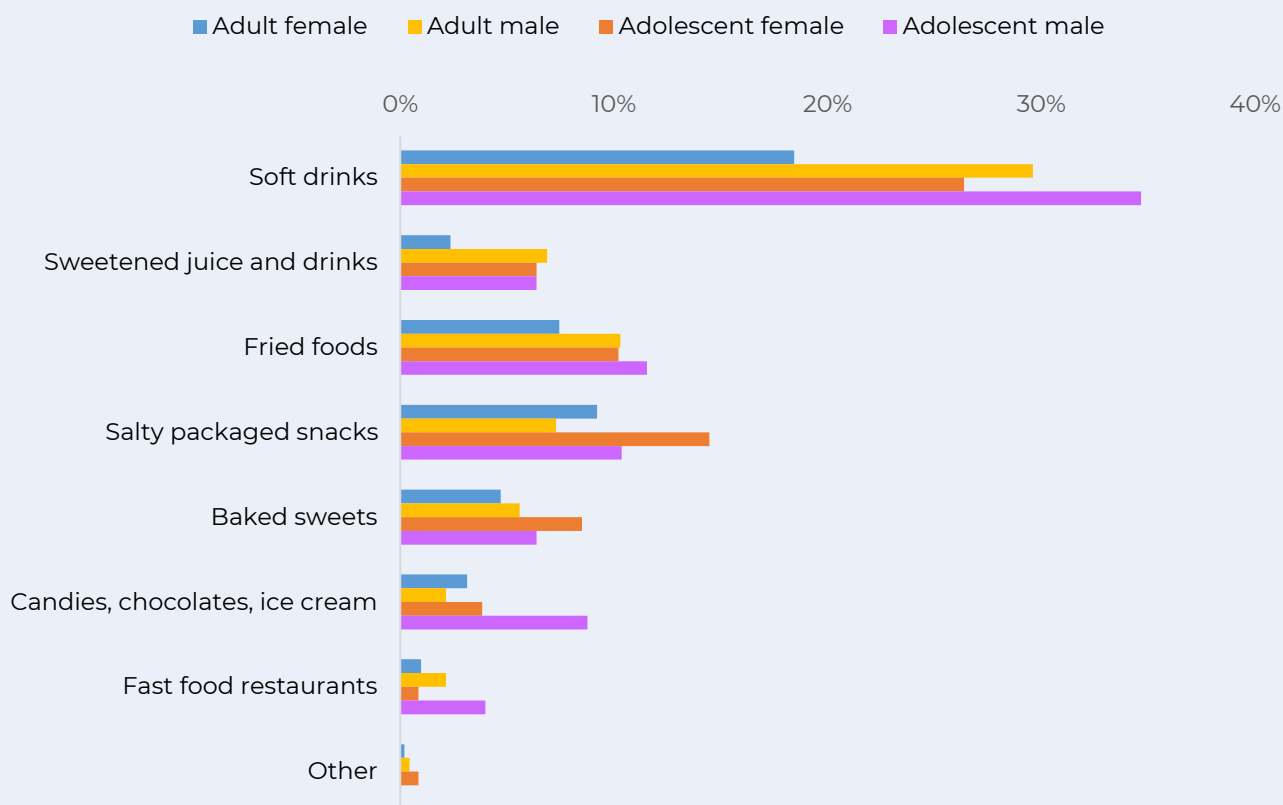
Figure 10. Percent who saw/heard any advertisement for unhealthy foods in the past 30 days



FINDINGS

- ✓ Adolescents were more exposed to advertisements for unhealthy foods compared to adults.
- ✓ Among advertisements for unhealthy foods, soft drink advertisements were the most frequently encountered.
- ✓ Compared to female adults, male adults were 1.5 times and 3.5 times more exposed to advertisements for soft drinks and sweetened juice and drinks, respectively.
- ✓ Male adolescents were more exposed to soft drinks, fried foods and candies, chocolate and ice-cream advertisements compared to female adolescents.

Figure 11. Percent who saw/heard any advertisement for different unhealthy food or packaged drinks in the past 30 days

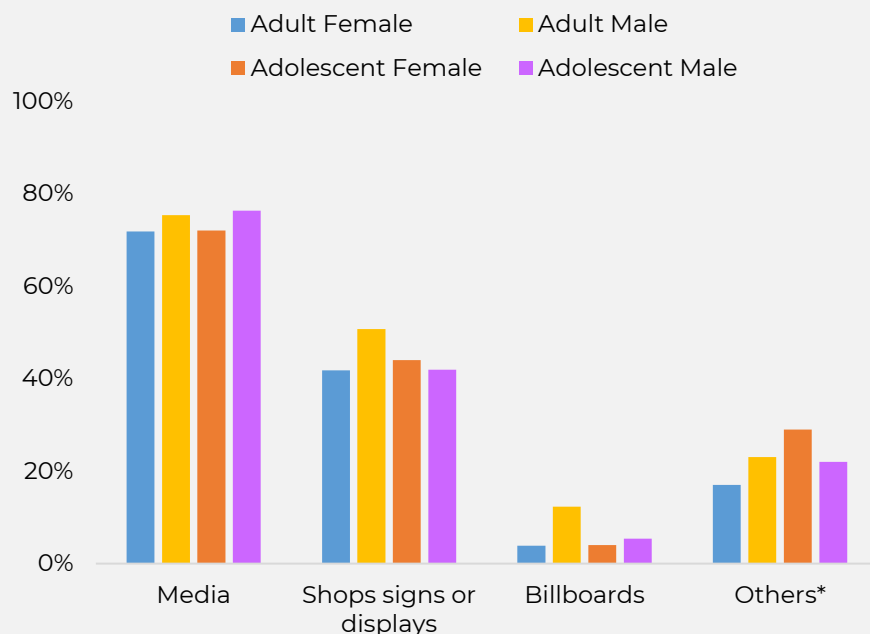


Advertisements for unhealthy foods

More than 30% of adolescents and male adults saw or heard food advertisements in the last month

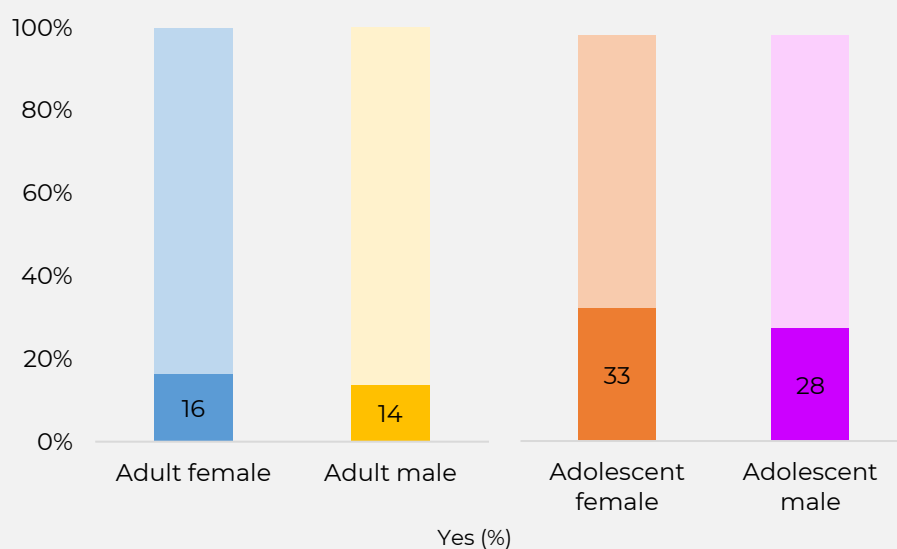


Figure 12. Sources of advertisements for unhealthy foods or packaged drinks (among those who saw/ heard advertisements in the past 30 days)



“*Others” includes signs on back of trucks, printed on walls, etc.

Figure 13. Percent who saw/heard any information about avoiding unhealthy foods in the past 30 days



FINDINGS

- ✓ More than 70% of all respondents were exposed to advertisements for unhealthy foods through mass media channels such as television, radio, newspapers, posters, and social media.
- ✓ More than 40% of all respondents noticed unhealthy food advertisements on shop signs or displays.
- ✓ Compared to adults, adolescents reported nearly 2 times more information on avoiding unhealthy foods.
- ✓ Male adults reported the least information (14%) on avoiding unhealthy foods in past 30 days.

KEY TAKEAWAYS

1. Notable patterns of unhealthy food consumption among adults and adolescents:
 - Male adults and female adolescents consumed more unhealthy foods than others. Sweets and ice-cream were the most consumed unhealthy foods per day for all.
 - Consumption was higher during breakfast and the afternoon for all. Around 26% of male adults consumed unhealthy foods during breakfast.
 - Noodles, chips, biscuits and baked sweets, and fried food consumption frequency was higher among adolescents compared to adults. Adults consumed more tea/coffee with sugar in last 7 days.
2. Among households that purchased different unhealthy foods, more than 90% of households purchased those foods from retail shops.
3. More than 85% of respondents considered instant noodles to be easy to acquire and prepare. Instant noodles, biscuits and deep fried foods were considered tastier by adolescents than adults.
4. Adolescents reported more exposure to advertisements for unhealthy foods compared with adults. Soft drink advertisements were the most common.
5. Mass media channels were the source of more than 70% of unhealthy food advertisements for all. Adult males were 2 times more exposed to advertisements through billboards.
6. Around 15% of adults received information on avoiding unhealthy foods. Adolescents received 2 times more information than adults.

KEY QUESTIONS FOR ACTION

1. What are the key barriers to reducing unhealthy food consumption among adults and adolescents in the district?
2. What are a few potential solutions to overcome these barriers? What is needed from decision-makers and from program teams to implement these solutions?
3. How do adults' and adolescents' experienced food environments impact their demand for unhealthy foods in the district?
4. How can understanding of interpersonal (e.g., identity, motivation) and socio-cultural (e.g., values) drivers of unhealthy food choices help inform strategies to influence consumption of these foods?

SURVEY METHODOLOGY

Village and household sampling

We selected 25 wards in the district with a probability proportional to the number of households that reside in each ward. Within each ward, we conducted a household listing to identify eligible households, that is those with adolescents (10-19 years old). From the households with adolescents, we randomly invited 20 households to participate in the survey. If a household refused, we replaced that household with another randomly selected eligible household, to retain a total of 500 households in the district. Thus, the findings reported in this data note are representative of rural households from this district that include an adolescent.

Respondent selection

Within households, one adult female aged 20+ years, one adult male aged 20+ years, and one adolescent aged 10-19 years were selected as the respondents for the survey. When multiple adolescents were living in a household, the oldest adolescent was selected. In some households, an adult male was not available (often due to migration for work). In such households, the female was the only adult respondent (See Table 1 for respondent sample sizes). At the beginning of the interview, the adult in the household primarily involved in agriculture (either male or female) and the adult primarily responsible for food purchasing (either male or female) were identified as the primary respondents.



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ABOUT TAFSSA

TAFSSA (Transforming Agrifood Systems in South Asia) is a CGIAR Regional Integrated Initiative that supports actions improving equitable access to sustainable healthy diets, that boosts farmers' livelihoods and resilience, and that conserves land, air, and water resources in a climate crisis.

ABOUT CGIAR

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