Background

- Challenges for healthfulness of diets in South Asia

- Perceptions of food drive food choice and ultimately diets
  - E.g., affordability, availability, desirability, convenience

- Limited quantitative assessment of how perceptions of food relate to diet quality

Objective

- To quantify the relationship between individuals' food perceptions and their **diet quality** across five districts in rural South Asia (Bangladesh, India, and Nepal)
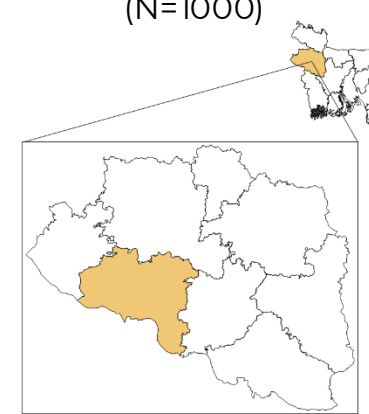
Data

- TAFSSA Local Agrifood Systems Assessment

- Setting: 5 districts across 3 countries in 2023
  - Rajshahi and Rangpur in Bangladesh
  - Nalanda in India
  - Banke and Surkhet in Nepal

- 4,000 rural households
  - 3,902 adult females
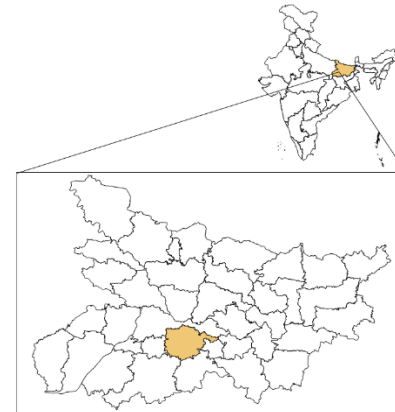 - 2,025 adult males
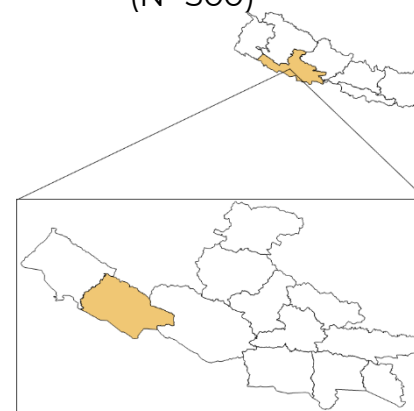 - 3,775 adolescents

Rangpur, Bangladesh (N=1000)
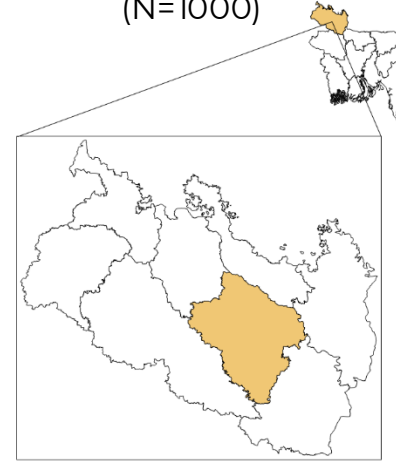
Rajshahi, Bangladesh (N=1000)

Nalanda, India (N=1000)

Banke, Nepal (N=500)

Surkhet, Nepal (N=500)
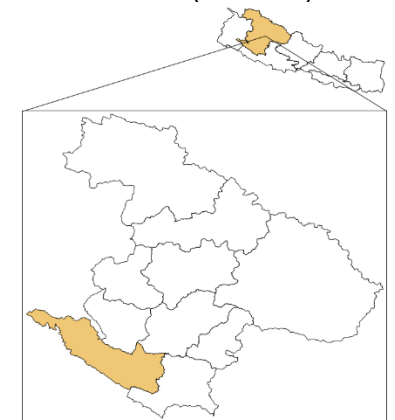
Outcome: Global Diet Quality Score (GDQS)

- Ingredient-level 24-hr dietary recall data

- Metric consisted of 25 food groups
  - 16 healthy
  - 7 unhealthy
  - 2 unhealthy when consumed in excess

GDQS healthy score
(0-32)

↑ score ↑ consumption
of **healthy** foods

GDQS unhealthy score
(0-17)

↑ score ↓ consumption
of **unhealthy** foods

GDQS healthy score (mean)

Bangladesh	6.8
India	6.6
Nepal	7.3

GDQS unhealthy score (mean)

Bangladesh	9.6
India	11.7
Nepal	10.8

Predictors

- Food perceptions data (adapted from Choo 2023)
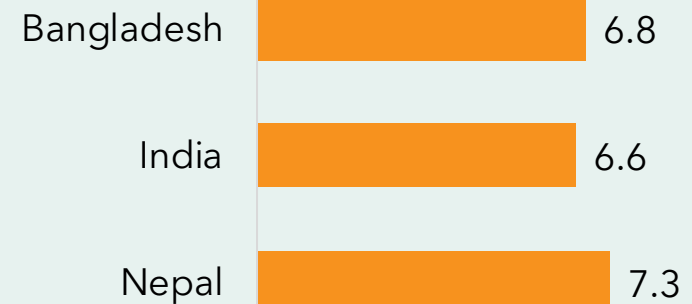 - Agree/disagree/neither to eight statements related to individual-level DFC
  - Statements posed for six foods (dal, eggs, green leafy vegetables, banana, biscuits, fried food)

- Principal Component Analysis (PCA)
  - Perception statements for healthy and unhealthy foods

Theoretical drivers of consumption	Indicators (agree, disagree, or neither)
Affordability	Given my income, _____ are not too expensive.
Accessibility	It is easy to acquire _____ close to where I spend most of my time
Desirability	I like the taste of _____
	My family enjoys eating _____
Food quality	_____ are nutritious
Food safety	_____ are safe to eat
Convenience	_____ are fast and easy to prepare, in general
Availability	I know of at least one vendors/shop who sells _____

Choo, E. M. (2023). Improving Nutrition in Nepal: An analysis of food environments, behavioral determinants of consumption, and costs of a multisectoral nutrition program. Doctoral dissertation. University of Washington.

PCA Examples

Theoretical drivers of consumption	Indicators (agree, disagree, or neither)
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Convenience	_____ are fast and easy to prepare, in general
Availability	I know of at least one vendors/shop who sells _____

PCA Examples

"Availability and accessibility"

| Theoretical drivers of consumption	Indicators (agree, disagree, or neither)
Affordability	Given my income, _____ are not too expensive.
Accessibility	It is easy to acquire _____ close to where I spend most of my time
Desirability	I like the taste of _____
	My family enjoys eating _____
Food quality	_____ are nutritious
Food safety	_____ are safe to eat
Convenience	_____ are fast and easy to prepare, in general
Availability	I know of at least one vendors/shop who sells _____

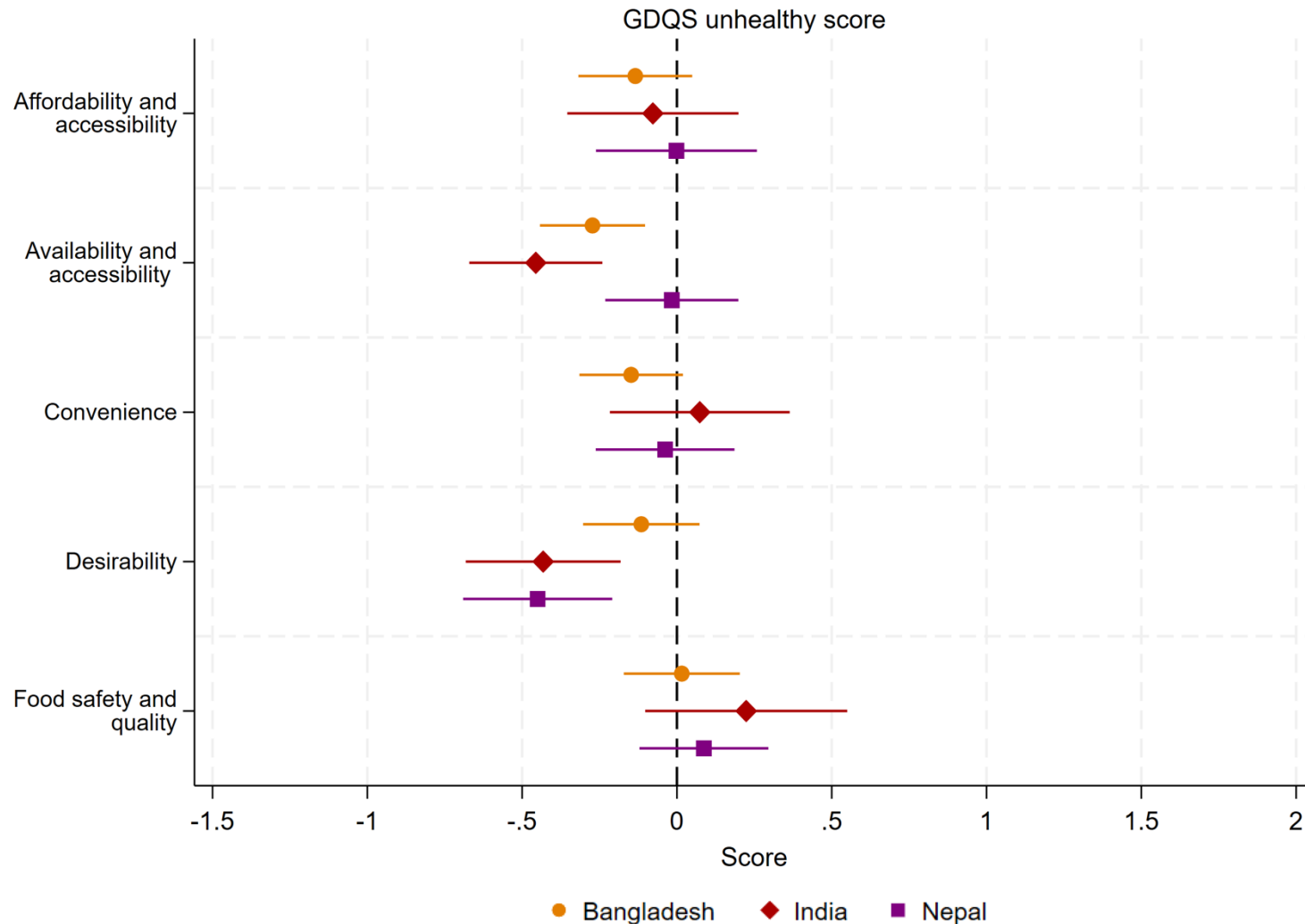Accessibility → 0.403

Availability → 0.9022

OLS estimates of GDQS healthy score by drivers of healthy foods, by country.
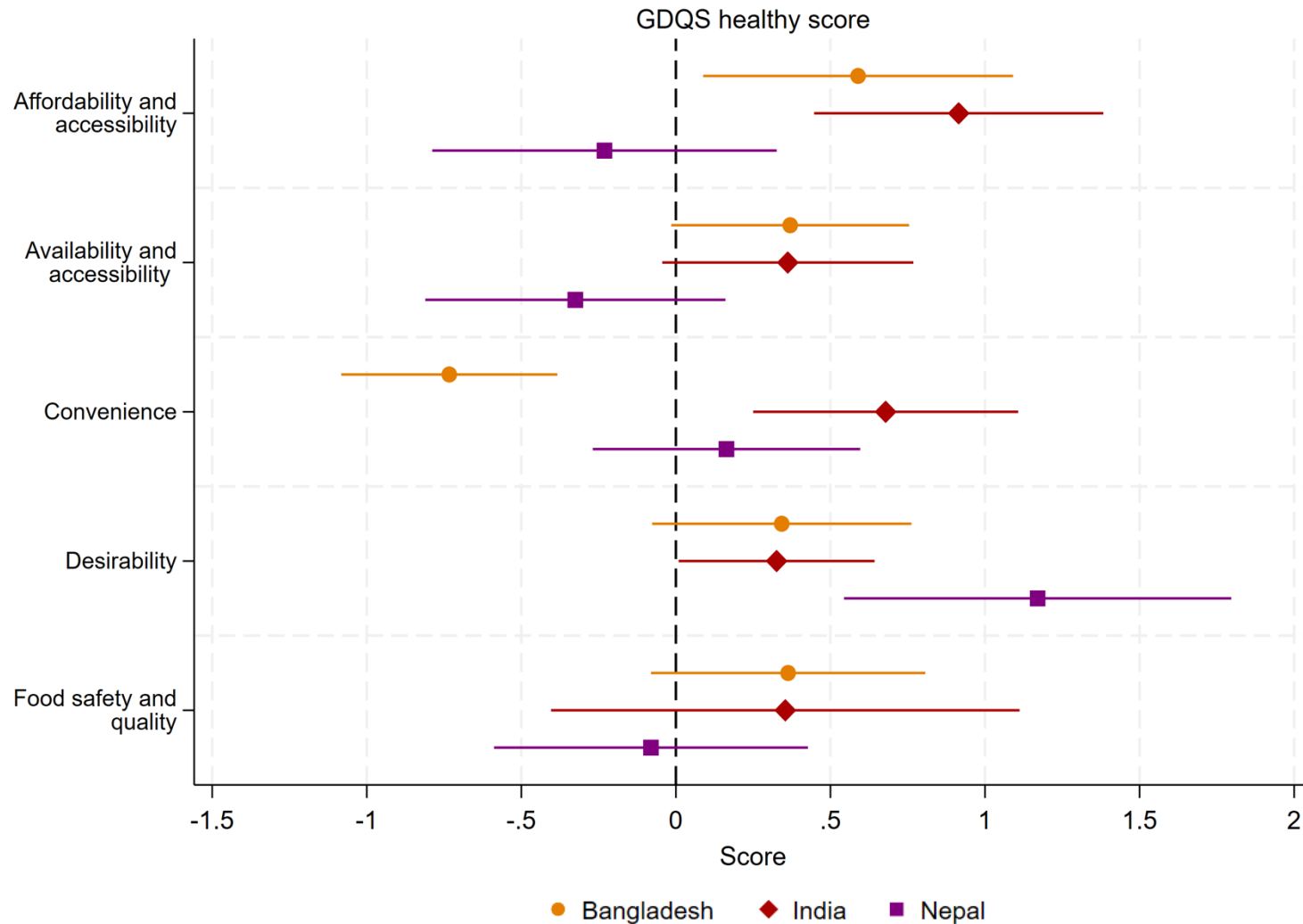
- Affordability, accessibility, convenience, desirability significantly associated with higher healthy food consumption

- In Bangladesh and India, multiple drivers associated with higher diet quality

- In Nepal, only desirability significant

Controls: gender, age, wealth, years of education, household size, food insecurity, and district fixed effects.

OLS estimates of GDQS unhealthy score by drivers of unhealthy foods, by country

GDQS unhealthy score

- Availability, accessibility, desirability significantly associated with higher unhealthy food consumption

- In Bangladesh, availability and accessibility significant

- In India, all three drivers significant

- In Nepal, only desirability significant

● Bangladesh   ◆ India   ■ Nepal

Controls: gender, age, wealth, years of education, household size, food insecurity, and district fixed effects.

Key takeaways

- Two types of desirability identified:
  - Desirability for healthy foods and desirability for unhealthy foods
- Drivers of consumption differ for healthy and unhealthy food
- Drivers of consumption differ by local context
- Understanding perceptions of food that drive food choice can aid interventions for improving healthfulness of household diets