Diet quality of urban poor Bangladeshi adolescents and the role of fish

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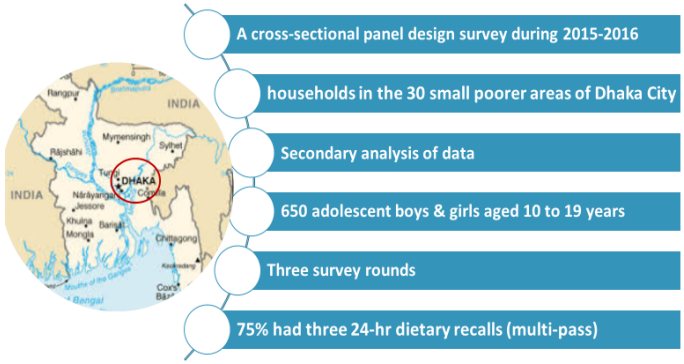
Introduction

- Adolescence (10-19 years of age) provides a window of opportunity to address malnutrition.
- In LMICs, adolescents' diets include energy-dense and nutrient-poor foods. This situation is worse in the urban food environment where adolescents have access to unhealthy and processed foods.
- In Bangladesh, little is known about the diets of urban adolescents.
- Fish plays a central role in the traditional diet of adults, but little is known about the fish consumption of adolescents.

Aim: To assess the diet quality of urban poor Bangladeshi adolescents and explore the role of fish within the diet.

Methods|



Data analysis|

Data Preparations

Within-person variation adjustment by National Research Council method

Labelling of 30 food groups
Fish categorization by
- Main production source (farmed/non-farmed)
- Physical characteristics (size, fat content, fresh/dried)

Data Analysis

Diet quality indicators

I Minimum Dietary Diversity Score for women (MDD-W, with 15 g restriction)

II Nutrient adequacy as (Mean) Probability of Adequacy, (M) PA

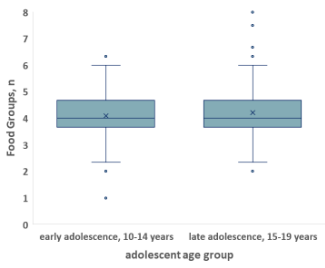
Animal-source food & fish subgroup consumption

- **Descriptive statistics**
- **Differences by age group** (10-14 years old Vs. 15-19 years old)
- **Pearson correlations MDD-W & MPA**

Results|Diet quality indicators

Dietary Diversity Scores, MDD-W

Figure 1 *A box plot of the average dietary diversity scores of all adolescents, stratified by age group*



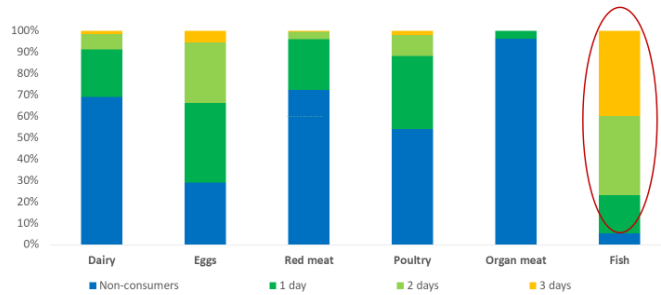
Nutrient Adequacy, (M)PA

Table 1 The probability of adequate nutrient intakes and MPA by age group

	Probability of Adequate Intake	
	Early Adolescence (10-14 years)	Late Adolescence (15-19 years)
Calcium, mg	0.00	0.00
Iron, mg	0.24	0.10
Zinc, mg	0.98	0.78
Vitamin A, µg RAE	0.00	0.00
Thiamin, mg	0.38	0.07
Riboflavin, mg	0.00	0.00
Niacin, mg	0.95	0.82
Vitamin B6, mg	0.36	0.28
Vitamin B12, µg[5]	0.19	0.13
Vitamin C, mg	0.10	0.01
Folate, µg	0.00	0.00
	0.29	0.20
MPA (adjusted for energy)	0.32**	0.18**

Results| Animal source food consumption

Figure 2 *The proportion of adolescents with three dietary recalls who consumed animal source food groups on zero, one, two or three recall days (subsample, n=480)*



Key findings

- The average MDD-W score was 4.2 (±0.9) out of 10, and only 19% of adolescents achieved MDD-W cut-off ≥5, indicating that they were more likely to meet their micronutrient needs.
- The probability of adequacy was <0.50 for most nutrients, except niacin and zinc.
- Fish was the most frequently consumed animal-source food and median consumption was 50 g per day per adolescent (range 32 - 73 g).
- Large fatty and non-fatty fish were consumed most frequently (by 47% and 49%, respectively and median intake was higher compared to small fish (36 - 59 g vs. 30 - 37 g per day per adolescent).

Conclusion

- The diets of urban poor Bangladeshi adolescents was poor in quality, lacked adequate diversity and were inadequate for nine key micronutrients.
- Fish was the most important animal-source food in adolescents' diet and they would benefit from an increased and diversified intake of fish.

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