Fish consumption and its role in the diet quality of adolescents from low-income urban Bangladesh

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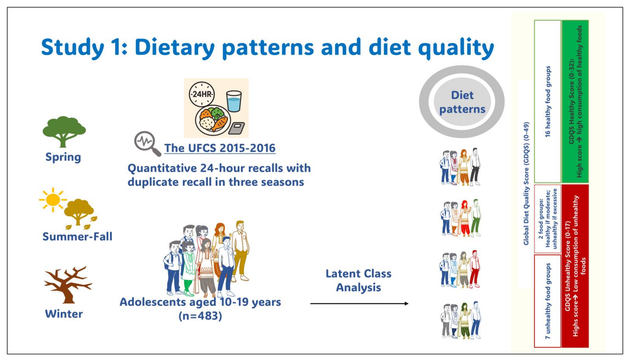
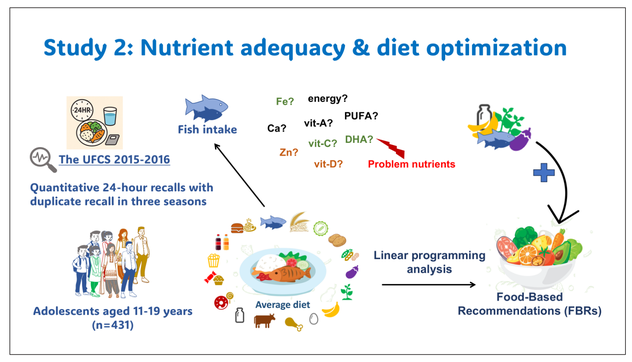
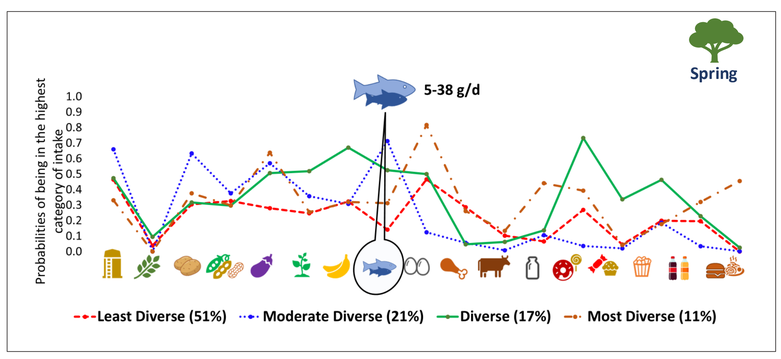
BACKGROUND AND AIM:

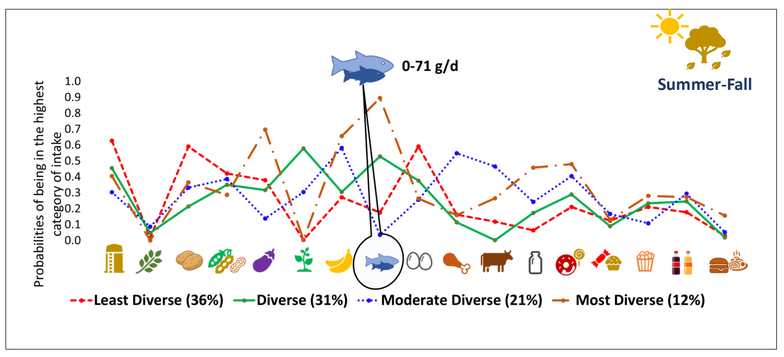
- Adolescence is vital stage for growth, yet urban low-income Bangladeshi adolescents often consume diets that are high in energy-dense but nutrient-poor foods.
- Despite fish is a major part in Bangladeshi diet; little is known about its intake and role in diets of adolescents in urban low-income group.
- We aimed to explore fish consumption, seasonality and its contribution to the diet quality in this population.

METHODS









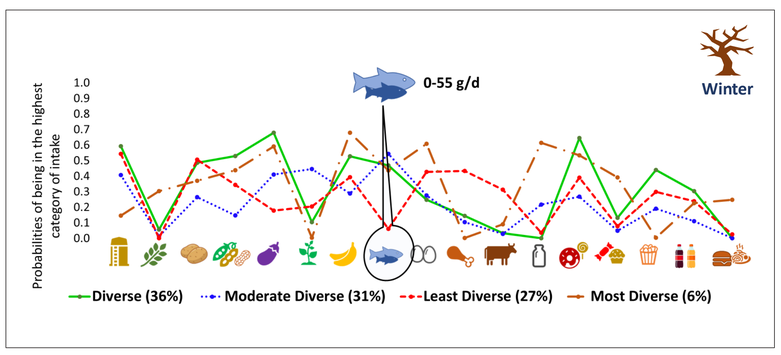


Figure 1: Probabilities of being in the highest category of intake per food group for each dietary patterns per season in 2015-2016

RESULTS: STUDY 1

- We identified four distinct dietary patterns for each season, naming them ‘Least Diverse’, ‘Moderate Diverse’, ‘Diverse’, and ‘Most Diverse’ (Fig. 1).
- Across dietary patterns in each season, fish intake ranged from 5-38 g/d in Spring, 0-71 g/d in Summer-Fall, and 0-55 g/d in Winter. However, median fish intake among all adolescents was 23 g/d (Fig. 1, 2).
- Despite low amount, fish intake contributed to overall diet quality, especially in diversity of healthy food consumed (Fig. 2).

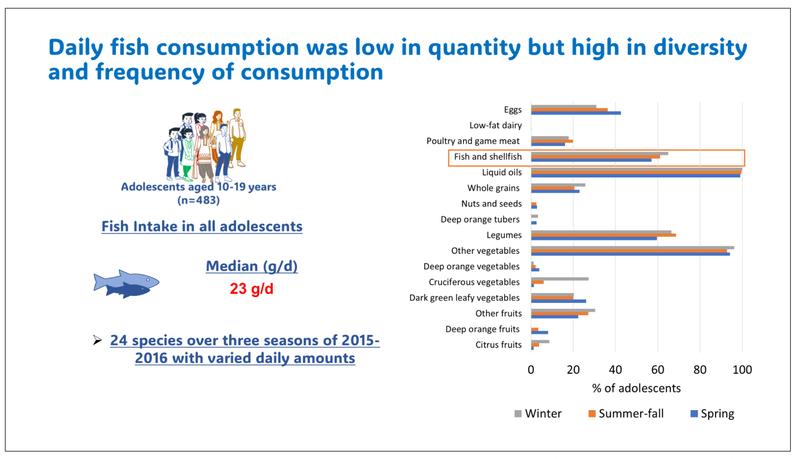


Figure 2: Percentage of adolescents in the middle + high intake category by GDQS-Healthy food groups by season in 2015-2016 and fish intake

RESULTS: STUDY 2

- The optimized diet, a set of food-based recommendations (FBRs) using local nutrient-dense foods, especially fish, intake improved adequacy (≥70% of RNI) for 18 nutrients, including vitamin A, B12, D, calcium, and essential fatty acids (Fig. 3).

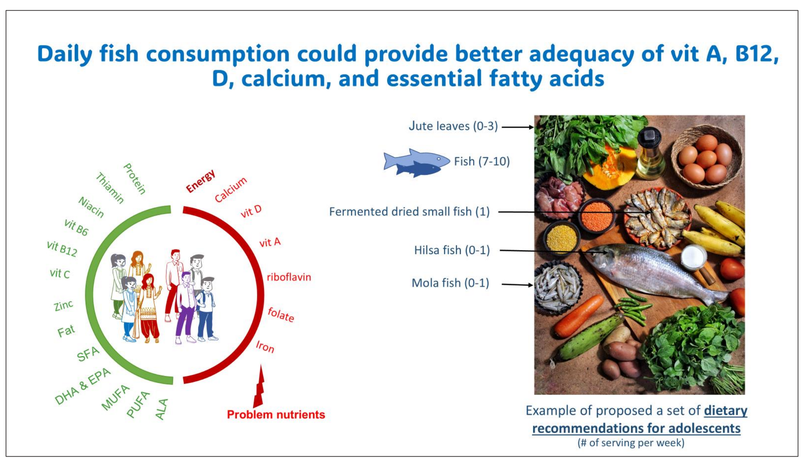


Figure 3: Nutrient (in-)adequacy and the proposed set of food-based recommendations for adolescents (11-19 years)

CONCLUSION

- Fish intake was low in quantity but high in variety of species, and it contributed to the diet quality, by improving diversity of healthy foods and providing better nutrient adequacy in adolescents from urban low-income group.
- A tailored FBRs under the national dietary guidelines and promoting diverse fish intake can improve adolescent diet quality.
- Future research should assess acceptability of our FBRs and potential trade-offs of fish intake in this population.

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