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FOOD FORTIFICATION STUDY BRIEF

SCOPING OF FORTIFIED & NUTRITIOUS FOOD
PRODUCTS FOR THE TARGETED
HOUSEHOLDS AND STRENGTHENING THE
DISTRIBUTION NETWORK TO THE LAST MILE

Overview

Globally, more than two billion people, including women and children, do not get the micronutrients they need to survive and thrive. Micronutrient deficiencies can have severe effects on overall health and nutrition—specifically when lacking the vitamins that are necessary for energy production and immune function, and minerals which play an important role in growth, bone health, and other healthy body processes.

One of the health consequences of micronutrient deficiency is anemia, caused by iron deficiency, and remains one of the biggest public health concerns in Bangladesh affecting over 50% of young children (<5 years old), 11% of school-aged children and over 50% of women of reproductive age. Food fortification has received worldwide recognition for its potential to address the issue of micronutrient deficiency as one of the most cost-effective strategies to increase the regular consumption of micronutrients.

Since 2018, to fight malnutrition in Bangladesh, the **Joint Action for Nutrition Outcome (JANO)** project aimed to contribute to ending malnutrition of children under five years of age, together with addressing the nutritional needs of Pregnant and Lactating Women (PLW) and adolescent girls by providing support with strengthening access to and availability of fortified and nutritious food items. By doing so, the project expects to improve the affordability and intake of nutritious products to meet the nutritional needs of pregnant and lactating women, adolescents, and children.

Food Fortification Study

Under JANO, with funding from the EU and Austrian Development Cooperation, **icddr,b** lead a research scoping of fortified and nutritious food to better understand the knowledge, attitudes, and perceptions of fortified products amongst JANO's target population.

Objectives

The primary study objectives included:

1. Understand the perceived benefits and disadvantages of fortified food (FF) consumption
2. Capture the perceived incremental cost of fortified vs. non-fortified foods
3. Identify the incremental cost families would be willing to spend to obtain benefits from FF
4. Understand the perceptions about FF sellers
5. Identify the constraints and opportunities from suppliers' perspective (both public and private) for last-mile reach/distribution of fortified and nutritious food products.

Methods

Using a mixed methods approach, quantitative and qualitative data was collected simultaneously but independently between August and September 2021, to understand knowledge, attitudes, preferences, and practices related to fortified food products and fortified product supply chain actors; specifically, perceptions regarding the advantages and disadvantages of fortified food products, acceptability and affordability, and challenges in reaching the last-mile population.

In total, seven upazilas from two districts of Rangpur and Nilphamari were selected from the JANO program area, of which 14 villages were selected for:

- Household survey of **507 women** (participants who had delivered within the last years and were randomly selected from the village).
- Key informant interviews were conducted with **16 fortified food suppliers** including public and private sector.
- In-depth interviews were conducted with **23 pregnant and lactating women** and their husbands, **14 married and unmarried adolescent girls**, and **15 in-laws, CSG members and health workers**.
- A semi-structured checklist was utilized for market observation interviews of **42 shopkeepers**.



Key Findings

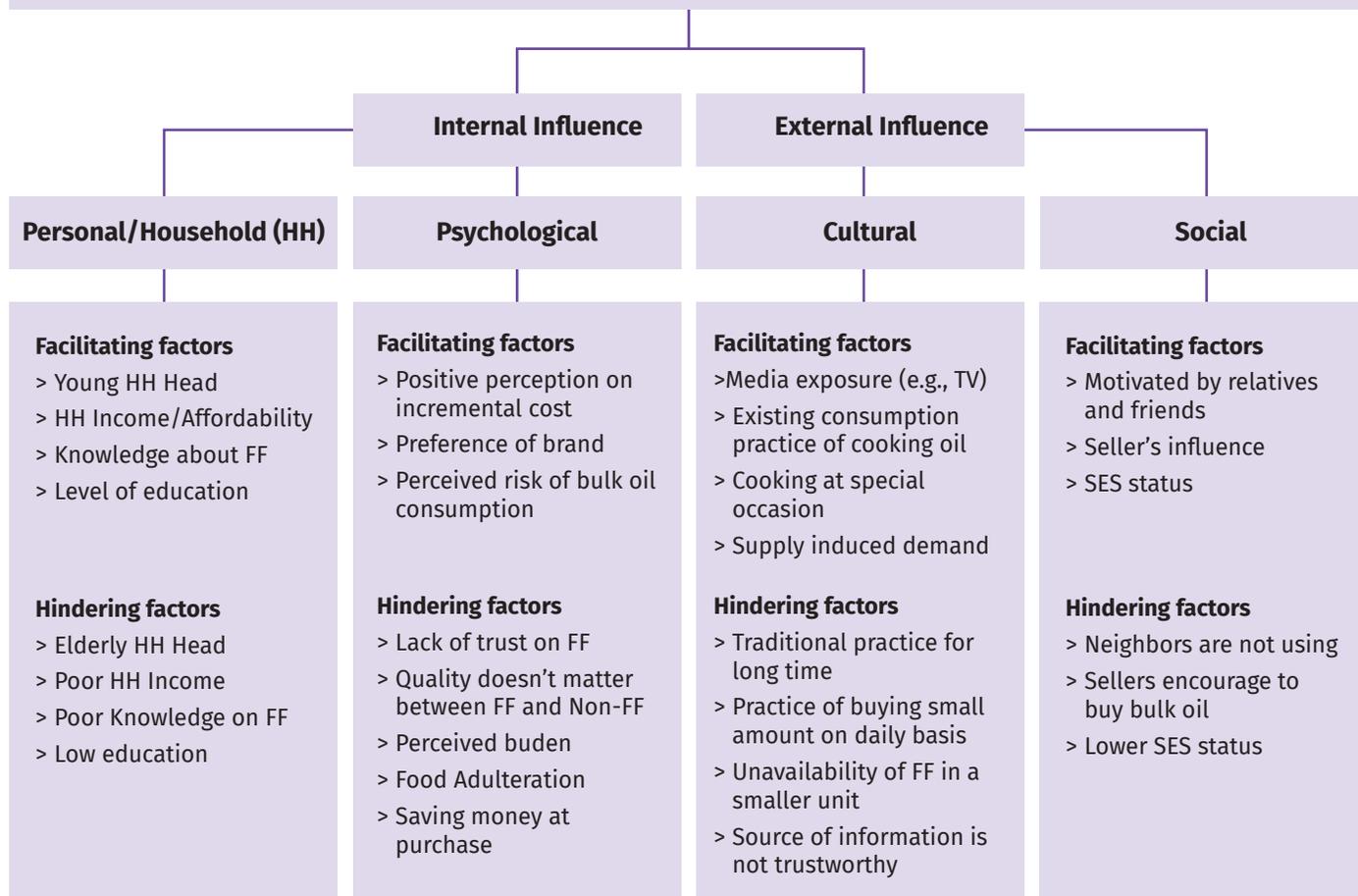
- Only 41% of respondents had heard about fortified food, and among them 52% did not know the process of food fortification.
- Respondents were aware of nutritional benefits from natural sources of food such as spinach, carrots, and milk. More specifically knowledge about the nutrition available naturally in foods such as vitamin A (70%), protein (60%) and carbohydrates (49%).
- Despite the increased cost, respondents were willing to pay for fortified food considering the health benefits. In addition to the regular household expense, respondents were willing to spend 107 BDT (approximately \$1.23 USD) per week for Vitamin A fortified oil and 15 BDT (\$0.17 USD) for iodized salt per week.
- Less than half of respondents (48.9%) were using other fortified food in addition to iodized salt. Almost all the respondents knowingly consumed iodized salt and knew that packaged salts are iodized, which can be contributed to government education campaigns.

The Food Friendly Program serves as an important safety net for the poor people of Rangpur and Nilphamari. Low-income people also have the opportunity to buy essential food products during the COVID-19 pandemic. Now these programs have become an important platform to reach out to people living at the union level. This supply chain from the Government of Bangladesh is important because the prices of the fortified foods are lower than the price in the market.

- Mass media, relatives and neighbors, and the fortified food suppliers are the major source of information in areas where community health workers and community mobilization programs are not playing a major role in raising awareness about the importance of fortified food.
- Challenges in the supply chain among private sector actors stockpiling fortified oil to create demand demotivate retailers from selling fortified oil.
- Affordability was reported as one of the primary barriers to consuming fortified foods. In addition to this, several other factors influenced fortified food purchase and consumption: lack of availability in markets, decision-making power between men and women within the household, knowledge about adulteration, lack of trust in fortified food products, and input from relatives.
- A handful of respondents believed that there is no difference between packaged and unpackaged salt, same as for cooking oil, whether it is sealed bottle or open oil.
- Few respondents said they don't believe that fortified products have extra nutrient value.
- Intake for milk or milk products was consumed never or rarely in a month by almost half of the respondents.
- 37% had faced difficulty in buying fortified food and 40% had not been able to buy fortified foods. The most common reason mentioned for not being able to buy fortified food during covid-19 was decrease in income (97%).
- Almost 95% of the sellers had also identified the high price of fortified food as an obstacle in selling fortified food products.

Key Factors Influencing Choice

Facilitating and Hindering factors influencing fortified food intake purchase decision





Locally available fortified oil and iodized salt (pictured right) were found to be sufficient. Quantitative data from the household survey showed that 49% of people consume fortified oil and 65% consume iodized salt, with only 1% of the population consuming zinc-fortified rice.

Recommendations

- Although the target population comprises pregnant and lactating women and adolescents, husbands and **household heads should also be informed** of micronutrient deficiencies and ways to address it.
- Community-based **social behavior change interventions** are needed to increase awareness and better involve individuals, families, and communities to promote the use of fortified food.
- Consumer motivation **activities at market level** should be done by local government agencies through the orientation of retailers.
- Work with the existing community mobilization team (e.g., Community Support Group) to **inspire mothers and husbands at the household level** through sensitization and promotion on the use of fortified foods.
- Work at the market level with market committees **to establish a system for continuous monitoring** to address the trust issues about artificial fortified food components.
- **Engage relevant government** departments ensuring the food safety should monitor the issue of food adulteration.
- Advocacy to government should be emphasized to **develop or modify policies** to involve TCBS in the supply chain to distribute subsidized fortified foods in the rural areas.
- Private investors/distributors should consider making the fortified foods (e.g., vitamin A soybean oil, iodized salt) available in affordable sizes with subsidized prices to **reach the last mile** as a corporate social responsibility.