Improving the quality of complementary feeding in Rohingya refugee camps in Bangladesh

A women prepares a nutritious meal for herself and her six children in Cox's Bazar, Bangladesh

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KEY MESSAGES

- Cooking demonstrations and traditional ceremonies marking the start of complementary feeding (*'Mukhe Bhaat'*) were implemented in Rohingya refugee camps in Cox's Bazar, Bangladesh, with the aim of addressing poor complementary feeding practices.
- Using a "learning by doing" approach, mothers quickly learned how to prepare diversified foods at home for their children using culturally acceptable recipes, in a sustainable way.
- Despite relatively limited food options available under the general food assistance, caregivers started to prepare diverse and nutritious foods, putting what they had learned into practice.

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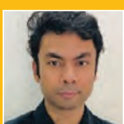

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Background

The Rohingya crisis has resulted in a large influx of refugees in Cox's Bazar District, Bangladesh. As of July 2022, Bangladesh was hosting almost one million Rohingya refugees from Myanmar in 33 camps in Cox's Bazar District and Bashan Char Island. About 52% of the refugee population are children under the age of 18, and 16.5% of them are children under the age of five (UNHCR, 2022).

The latest Refugee Influx Emergency Vulnerability Assessment, conducted in March 2022, showed that 95% of all Rohingya households were moderately to highly vulnerable (WFP, 2022). Commodities such as rice, wheat, flour, lentils, soybeans, fish, meat and eggs were available in the local markets, but the prices were too high for refugees to be able to purchase these goods. With limited access to regular income and livelihood opportunities, the Rohingyas were highly reliant on food assistance provided by the World Food Programme (WFP) every month.

The nutrition survey conducted in October and November 2021 reported that the prevalence of stunting was 30.2% among children aged 6–59 months (UNHCR, 2021), which is stagnant at a very high level. The same survey found that the prevalence of wasting, measured through weight-for-height, was 13.7%. Although the prevalence of severe wasting increased overall to 1.3% in 2021 after the COVID-19 pandemic, the levels showed an encouraging and declining trend in the camps from 3% in 2017 to 1% in 2020. This declining trend, despite dependence on humanitarian aid, may reflect the availability of integrated nutrition services for managing children with severe and moderate wasting.

The latest infant and young child feeding (IYCF) assessment, conducted in May 2019, found that less than optimal IYCF practices were prevalent and could be contributing to the high levels of malnutrition among Rohingya children. Timely introduction of semi-solid, solid or soft foods, which is recommended when children are six months of age, was practised by half of the caregivers (51%). Dietary diversity and meal frequency among children aged 6–23 months was generally poor, with only 46% of children meeting the minimum dietary diversity, 56% reaching minimum meal frequency and 27% having a minimum acceptable diet. The nutrition causal analysis conducted between August and December 2019 found there was limited knowledge on complementary foods and dietary diversity in the refugee settlements (ACF, 2019). The meals prepared for adults were often given to children, despite this food being bulky and with poor energy and nutrient density for children's growth needs.

Table 1 Key food items available with the WFP e-vouchers

	Food items	Remarks
1	Rice	Fixed item
2	Red lentils	Fixed item
3	Fortified soybean oil	Fixed item
4	Eggs	Fixed item
5	Sugar	Fixed item
6	Fortified salt	Fixed item
7	Wheat flour	Flexible item
8	Dried fish or anchovy	Flexible item
9	Chicken	Flexible item
10	Live fish	Flexible item
11	Fresh fruits and vegetables	Flexible item
12	Spices	Flexible item

In the Rohingya camps, nutrition services are currently delivered through 45 integrated nutrition facilities – this is explored in further detail in an article in Issue 67 of Field Exchange (Rahimov et al, 2022). Each such facility delivers a comprehensive package of nutrition services, which includes the management of children with severe and moderate wasting, promotion of and support for IYCF, and the distribution of blanket supplementary foods. To address the poor complementary feeding practices, UNICEF strengthens community mobilisation activities. These activities focus on practical demonstrations of the various ways to improve the quality of complementary foods and to make meals more energy-dense and diverse through the utilisation of locally available and culturally acceptable foods.

Cooking demonstration sessions and *"Mukhe Bhaat"* ceremonies

Since January 2022, UNICEF has been implementing cooking demonstration sessions and *"Mukhe Bhaat"* ceremonies in the Rohingya camps in Cox's Bazar. *Mukhe Bhaat* is a cultural tradition observed in the country where rice is put to a child's mouth for the first time when the child reaches six months of age; it marks the initiation of complementary feeding. These activities aim to help initiate complementary foods on time using a common cultural custom, and to build the capacity of mothers and caregivers to enhance the quality of complementary foods in terms of energy density, diversity and frequency. *Mukhe Bhaat* ceremonies target children aged six to eight months, while the cooking demonstrations target mothers of children aged nine to 23 months. Due to the limited space available in the Rohingya camps and the lack of adequate and safe environmental conditions, cooking demonstrations and *Mukhe Bhaat* ceremonies are organised in the nutrition facilities.

For the cooking demonstrations, mothers are expected to attend one session per month. Sessions stress that complementary foods should be energy- and nutrient-dense, micronutrient-rich and diverse; soft, palatable and safe; and not monotonous. Attendees are informed that these foods can be made using family foods as a base, but they should then be adapted because first foods are very different from meals consumed by adults and older children. Several recipes were prepared guided by the traditional practices of the Rohingyas, using diversified food groups such as egg *"suji"* (semolina), *"kheer/firni"* (rice pudding), vegetable *"khichuri"* (traditional food made with rice and lentils), egg khichuri and chicken khichuri. These recipes also align with national IYCF guidelines. The recipes are simple to cook and are mainly based on rice, cereal, lentil, egg, and vegetables; they can be sweet or salty to taste and are made from various food items provided by WFP as a part of the general food assistance[1] (GFA) provided through an e-voucher system in the Rohingya camps, as detailed in Table 1. The acceptability of these recipes have been tested through field trials, and the final recipes were selected based on discussions with the mothers and caregivers of children aged 6–23 months. Active feeding is promoted in these sessions. In addition, a complementary feeding bowl and spoon are given to the mothers/caregivers to help them remember nutrition messages when preparing food for their children at home and to provide them with serving size guidance.

Methods to assess results

An assessment was undertaken in July 2022 to understand the initial results of the community mobilisation interventions for nutrition. A mixed-method approach was employed consisting of qualitative and quantitative data collection and analysis. Qualitative data were gathered through a series of focus group discussions (FGDs). A household survey was conducted to gather quantitative data. A semi-structured questionnaire was used as a quantitative tool.

Dietary intake was assessed by 24-hour dietary recall method (24HR) applying a structured interview to capture detailed information about all foods and beverages consumed by the respondent in the past 24 hours, from midnight to midnight the previous day.

A total of 260 mothers and caregivers of children aged 6–23 months were randomly selected from the cooking demonstration sessions and *Mukhe Bhaat* ceremonies (attended between January and June 2022). Data were collected by the IYCF counsellor of the UNICEF implementing partners.

Results achieved

Caregivers' participation in *mukhe bhaat* and cooking demonstrations

A third of the mothers and caregivers interviewed (32%) attended at least half of the sessions (i.e. three sessions) between January and June 2022.

During the FGDs, caregivers highlighted the difference between cooking demonstration sessions and regular nutrition education sessions. All interviewed mothers and caregivers said they enjoyed participating in the cooking demonstration sessions, as they had become a common meeting place for women to discuss various issues relating to child health and nutrition; they also said the sessions helped them prepare nutritious food using the GFA food rations. The food prepared during these sessions was offered to the children and the mothers said the children ate better during these sessions. Altogether, mothers were motivated to regularly attend these sessions. These sensitisation sessions were culturally acceptable and almost all (94%) mothers reported not facing any challenges or barriers from family members, e.g. husbands and mothers-in-law, to attend. For the 6% who faced challenges, the primary challenge was having a smaller child in their household and no other caregiver to take care of them while they were away.

Caregivers' knowledge

Mothers and caregivers who attended these sessions were found to have increased their knowledge on IYCF practices. Caregivers' knowledge on making nutritious-dense foods (using UNICEF-recommended food recipes) increased from 41% at pre-intervention to 97% at post-intervention stages. Over 95% of mothers reported actively engaging in different activities to encourage their children to eat. Participants in the FGDs acknowledged that "learning by doing" was a better approach to learn and this encouraged them to start practising the recipes at home.

Preparation of more diversified foods

Among mothers and caregivers interviewed, 65% mentioned they had started preparing diversified foods at home for their children after receiving guidance from the cooking demonstrations. The practice of preparing diversified foods at home was significantly associated with the number of cooking demonstration sessions attended. Mothers who attended more than three sessions were twice as likely to prepare diversified foods at home than those who attended fewer than three sessions. During the FGDs, mothers and caregivers highlighted that, even though they had started preparing the diversified food recipes at home, they were not able to prepare separate meals for their children every day. From a 24-hour dietary recall, only 38% of children had consumed at least five out of eight food groups on the previous day which increased from 22% in the pre-intervention period.

Children's perceptions of the foods prepared

Almost all caregivers interviewed (99%) said

[1] The WFP has been proving GFA through an e-voucher system that allows households to purchase up to 24 food items in shops (10 fixed and 14 flexible items).

their children liked the diversified foods prepared at home. Mothers also started to observe some changes in their child's health and nutritional status: among those who regularly prepared diversified foods, 52% reported that their child's appetite had increased and 83% observed that the child was growing healthily and was more active (being playful and responding to surroundings).

Learnings

A child's nutrition requirements are different from those of an adult's, and meeting those requirements is critical for developing the child's full physical and cognitive potential. Food prepared at home for the child should be energy and nutrient-dense, micronutrient-rich and diverse. In the Rohingya camps, mothers do not prepare separate meals for children every day. Adult meals are often given to the child, but are insufficient to meet the child's energy and nutrient requirements. Changing the mindset of the families regarding separating food preparation for children every day has been a major challenge.

The entitlement for GFA through e-vouchers was US$ 13 per family member per month, in line with the minimum expenditure basket approved by the government. Fixed subsidy levels on income earning limits a family's ability to choose the variety and quantity of food items. With no other or very limited income earning opportunities in the camps, it has been a challenge for a Rohingya family to buy diversified food every day.

Because of overcrowding and limited space availability in the Rohingya camps, cooking demonstrations and *Mukhe Bhaat* ceremonies are organised in the nutrition facilities. Caregivers usually cross hilly terrain and walk long distances to reach the nutrition facilities, which make them reluctant to come to the facility only to attend the cooking demonstration sessions. Because of space constraints and limited capacity in the nutrition facilities, one session is organised per day, which can accommodate 10–12 participants. Reaching all targeted mothers and caregivers of children aged 9–23 months remains a challenge. The mothers and caregivers of malnourished children (stunting, underweight and wasting) and pregnant and lactating women with IYCF issues are therefore given priority for these sessions. The survey findings give an indication that increasing the number of sessions would allow mothers to attend more sessions, and this would lead to further improvement in outcomes. From the beginning of 2023, the plan is to organise more cooking sessions to enable mothers and caregivers from every catchment to attend one session per month.

As this article is being finalised, a detailed IYCF assessment is being undertaken in the camps and host communities, from which we hope to see improvements in the IYCF indicators.

A woman buys fresh vegetables, inCox's Bazar, Bangladesh

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Conclusion

Doing more of the same (messaging and counselling on IYCF) will not make a significant difference to complementary feeding practices. If we want to change behaviours and improve feeding and caring practices, we must look beyond counselling or make it more enriching and participatory, as shown from the learnings of this programme. It is essential to make this change, as the quality of children's diets is more important before the age of two than at any other time of life.

The cooking demonstrations and -ceremonies in the Rohingya camps focus on how various diverse and nutritious foods can be prepared using the relatively limited options available under GFA. These sessions address key elements of complementary feeding: timely introduction, diversity, nutrient density, inclusion of animal source foods and vegetables, age-appropriate amounts, meal frequency and consistency, food safety and preserving nutrients during the process of food preparation, and responsive feeding and caring. The sessions used a participatory "learning by doing" approach; mothers easily accepted the diversified food recipes and quickly learned how to prepare diversified food at home, thus practising the learnings and ensuring that children have continued access to nutritious and safe diets in a sustainable manner.

In the Rohingya camps, the various ingredients required for a more diverse and nutritious diet are already available as a part of the GFA (though in limited quantities). Using food items from the GFA and employing culturally acceptable recipes, the dietary requirements of children aged 6–23 months can be successfully met. This learning is already being replicated in the host communities in Cox's Bazar utilising the existing government health systems. The use of a "learning by doing" approach and developing culturally acceptable recipes can be easily replicated in any emergency settings with GFA, as well as in non-emergency settings. While it is important to focus on the various activities for protecting and promoting breastfeeding, there is also an urgent need to put extra effort into improving complementary feeding and caring practices if we are to significantly reduce levels of undernutrition among young children.

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