



World Food Programme

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WFP EVALUATION

# IMPACT OF SCHOOL MEALS IN JORDAN ON CHILDREN IN SCHOOLS

Jordan's National School Feeding Programme (NSFP) is part of the National School Feeding Strategy (2021-2025) launched by the Government of Jordan in 2021. Every day, the NSFP provides over 430,000 students from 2,314 schools in vulnerable areas across the country, with centrally procured date bars or high-protein biscuits.

The Government of Jordan asked the United Nations World Food Programme (WFP) Jordan Country Office to pilot an alternative school feeding model which aims to increase children's nutritional diversity through healthier meals, and foster socioeconomic development in vulnerable areas<sup>1</sup> by creating jobs for women.

In partnership with the Royal Health Awareness Society (RHAS), the new model introduces two important features: moving towards healthier school meals distribution, and shifting from centralized to decentralized procurement of school meals. Under this model, community-based organizations (CBOs) run kitchen facilities to deliver healthier meals to children.

WFP in partnership with the Government of Jordan and the World Bank conducted a rigorous impact evaluation using a randomized controlled trial to examine the effects of the new school-meals delivery model within Jordan's National School Feeding Programme. The impact evaluation analysed how this change in meal composition affected children's nutritional diversity, behaviour, education and learning outcomes.

<sup>1</sup> Areas where at least 25 percent of the population fall below the poverty line.

## KEY EVIDENCE 🔑

Providing healthier meals in schools significantly improved children's diets. They ate a wider variety of foods and were less likely to bring extra food or money to school. Physical activity levels increased, and absences decreased by approximately one day per school year. Although the evaluation found no significant changes in attention, learning, or cooperation, boys showed greater improvements in nutrition and physical activity. The impact evaluation highlights the potential of school feeding programmes to enhance children's well-being.

## SCHOOL-BASED PROGRAMMES IMPACT EVALUATION WINDOW

School-based programmes are one of the most extensive social safety nets worldwide. There is a growing need for more evidence to inform the trade-offs in school-based programmes' designs and implementations and understand how they can play an important role as a social safety net protecting boys and girls during shocks.

In 2021, the [World Food Programme](#), in partnership with the [World Bank](#), launched the [School-based Programmes Impact Evaluation Window](#) to generate a portfolio of impact evaluation evidence to inform policy decisions and programmes. Since then, five experimental impact evaluations have started in The Gambia, Jordan, Burundi, Guatemala and Malawi.

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## KEY FINDINGS

### 1 What is the impact of providing healthier school meals on primary school students' dietary diversity, attention span, educational and learning outcomes?



Children receiving healthy meals noted increased dietary diversity by a quarter of a food group, compared to children receiving the date bars. This increase is due to higher consumption of fruit, vegetables, and dairy included in the healthy meals.

Students' nutritional behaviour also improved. Children in healthy meal schools are less likely to bring food and money to school, suggesting that healthy meals replace meals from home or the school cafeteria, reducing parents' financial burden to supply school meals for their children.

Additionally, healthy meals encouraged other healthy behaviours. Children in healthy meal schools are more physically active, report feeling less tired, and find it easier to focus on learning, than children in schools receiving date bars.

Absenteeism decreased by 1 day in the healthy meal schools during the school year (2022-23) for the sample of schools that can be matched in the administrative data.

However, the change in meal modality did not lead to detectable changes in students' attention span, cognitive memory (as measured by digit span test), student behaviour, or voluntary and involuntary meal-sharing. These findings may be due to similar calorie content between the two meal modalities, rather than the introduction of school meals to no school meals, and the short-term follow-up after two scholastic semesters.

### 2 Does the introduction of healthier school meals change service delivery (e.g., the timely delivery of the number of meals ordered)?



The new school-meals model provides more diverse, healthier food groups, with less sugar and less fat. The healthier meal model offers similar nutritional support in terms of calories (283.5 kcal for the healthy meal model, 344 kcal for the date bar model). However, with the addition of a vegetable, fruit, and dairy in the pastry, the new model provides more diverse food groups than the date bar modality. The healthier meal also offers more protein (about 10 g for the healthy meal model, about 5 g for the date bar model) and much less sugar (about 20 g of total sugar for the healthy meal, about 32 g of total sugar for the date bar meal).

Monitoring data and teacher feedback show excellent service delivery for both school meal models, with delivery numbers reaching close to targets, meals matching student numbers, no quality issues, and adherence to protocols.

### 3 Are there heterogeneous impacts of providing healthier school meals to primary school students?



The introduction of healthy meals was significantly more effective in achieving behavioural change in boys than in girls. When comparing boys in healthy meal schools to boys in date bar schools, the former are significantly less likely to bring money to school and buy food from the cafeteria. In contrast, girls in healthy meal schools are less likely to bring food to school, compared with girls in date bar schools. Similarly, the increase in physical activity due to healthy meals is larger for boys than for girls.

# KEY CONSIDERATIONS

This impact evaluation of the WFP's healthy school meals programme in Jordan highlights positive impacts on both school children and kitchen workers after two semesters. Considering the benefits for children, there is a compelling case for **scaling up the provision of healthier meals in Jordan**. The following considerations can support future scale-up efforts.

## 1 STRENGTHEN THE EDUCATION MANAGEMENT INFORMATION SYSTEM (EMIS) AND ENSURE RELIABLE DATA.

Strengthening data infrastructure is crucial. Collaborating with government agencies to enhance the EMIS infrastructure will provide a reliable foundation for programme monitoring. This involves incentivizing accurate and timely data entry, as well as implementing stringent data quality controls. For WFP monitoring data, strengthening data coverage and data collection frequency is also essential.

## 2 EXPLORE SIMPLIFIED MODELS AND EVALUATE THEIR COST-EFFECTIVENESS TO ENSURE LONG-TERM SUSTAINABILITY OF THE HEALTHY MEALS.

Drawing lessons from other countries and adapting effective strategies will enhance the programme's long-term viability. This includes comparing cost-benefit ratios, automating tracking and monitoring data collection as much as feasible, as well as simplifying procurement and delivering processes to maximize efficiency.

Recognizing that children in healthy meal model schools are less likely to bring money to school when teachers run the cafeteria as a business, the programme may want to consider exploring the impact on teachers. Supporting teachers by actively mitigating the negative effects of children bringing less money to schools, could foster a positive teaching environment.

## 3 UNDERSTAND LONG-TERM IMPACTS ON HEALTH MEASURES SUCH AS OBESITY AND LEARNING OUTCOMES.

Building upon the short-term positive impact on children, the programme may want to consider exploring the long-term impacts. Conducting comprehensive studies to measure enduring health benefits for children and incorporating specific indicators into the programme's evaluation framework will contribute to a more profound understanding of its impact over time.



## ABOUT THE PROGRAMME

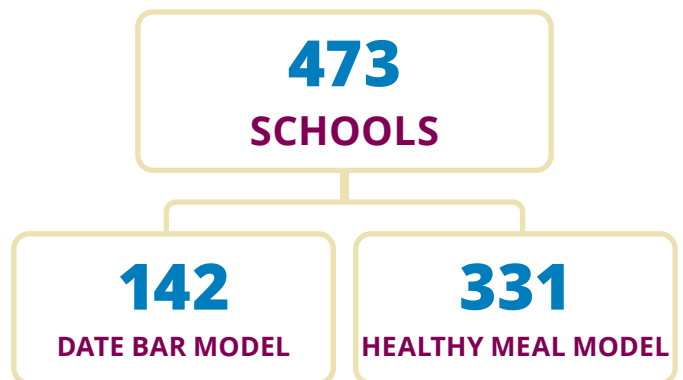
With an estimated 418 million children currently benefiting globally, school meals are one of the most widespread social safety nets in the world, encouraging the poorest families to send their children to school. Once in the classroom, school meals ensure children are well-nourished and ready to learn. Therefore, school meal programmes are crucial for promoting children's health, nutrition, education, and learning. At the same time, with a global annual investment of USD 48 billion in school meal programmes, school meals are increasingly recognised as a key investment to boost demand for locally produced food, create local jobs, and promote more sustainable food systems. However, limited empirical evidence exists on how best to design these programmes, and understand their effects on the local economy. The WFP Office of Evaluation, in partnership with the World Bank, launched the [School-based Programmes window](#) in 2021 to generate new evidence in school feeding.

## EVALUATION DESIGN

To evaluate the impact on children's nutrition and education outcomes, the impact evaluation uses a cluster-randomised control trial (RCT) design that includes 473 schools. Out of 473 schools (grouped into 456 clusters), 142 schools (138 clusters) provided the date bar model, while 331 schools (318 clusters) provided the healthy meal model.

In the healthy meal model, children receive a stuffed pastry (filled with either cheese, cheese and thyme, cheese and vegetable, or thyme) plus a vegetable (typically a cucumber) and a fruit (typically an apple or a banana) for four days, and two date bars on one day. In the date bar model, children receive one packed meal per day for five feeding days each week. The snacks consist of two date bars.

The meals in the healthy meal model are assembled daily in community-based kitchens run by CBOs. They are delivered to schools each morning and are meant to be consumed immediately by students in the classroom. Data collection included administrative data, school monitoring data, and child surveys, with a baseline that took place in September 2022 and an endline before the end of the school year in June 2023. The child endline survey was successfully completed by 2857 children in 422 schools.



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