The impacts of nutritional assistance interventions on child development: Evidence from the McGovern-Dole Food for Education and Child Nutrition Program in Kyrgyzstan

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Outline

1. Context
2. Research questions
3. Contributions
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6. Conclusion

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The McGovern-Dole Food for Education and Child Nutrition programme in Kyrgyzstan

→ Multi-component nutritional assistance program implemented by Mercy Corps

→ Core component: provision of hot meals at school for primary grade students

→ Key additional component: Social and Behavioural Change (SBC) intervention at the community and parent levels

→ Programme duration: 2 years (start in autumn)

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The McGovern-Dole Food for Education and Child Nutrition program in Kyrgyzstan

- Staggered, nationwide roll-out:
  - → 2017 (or earlier): 154 schools/communities
  - → 2018: 139 schools/communities ("2018 cohort")
  - → 2019: 218 schools/communities started ("2019 cohort").

→ Baseline Study commissioned by Mercy Corps

- → Mixed-methods study
- → Quantitative analysis based on a) baseline survey data (now) and b) endline survey data (later)
- → Two key objectives of the baseline study:
  1. Valid and meaningful baseline for an impact evaluation that assesses the causal impacts of the program
  2. Maximize learning about child nutrition, health and learning, including first insights into program impacts
- → Focus: 2019 cohort

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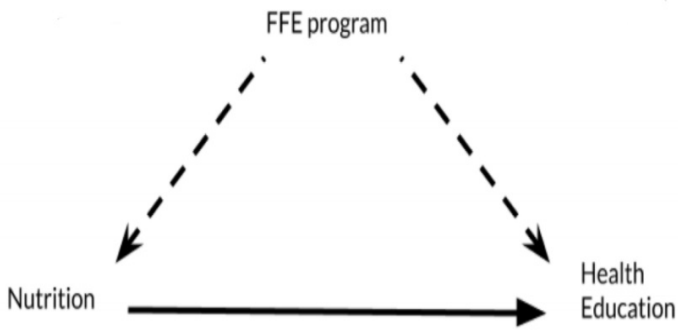
Research Questions



→ RQ1: What is the status of nutrition in Kyrgyz households with primary grade children?

→ RQ2: What is the impact of nutrition on child health and education?

→ RQ3: What is the impact of the FFE program on nutrition as well as on health and education?

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Contributions

→ Impact pathways from nutritional assistance programs to learning outcomes

→ The role of children's/parents' nutritional knowledge in creating impact

→ The added value of social and behavioural change interventions (in addition to school feeding)

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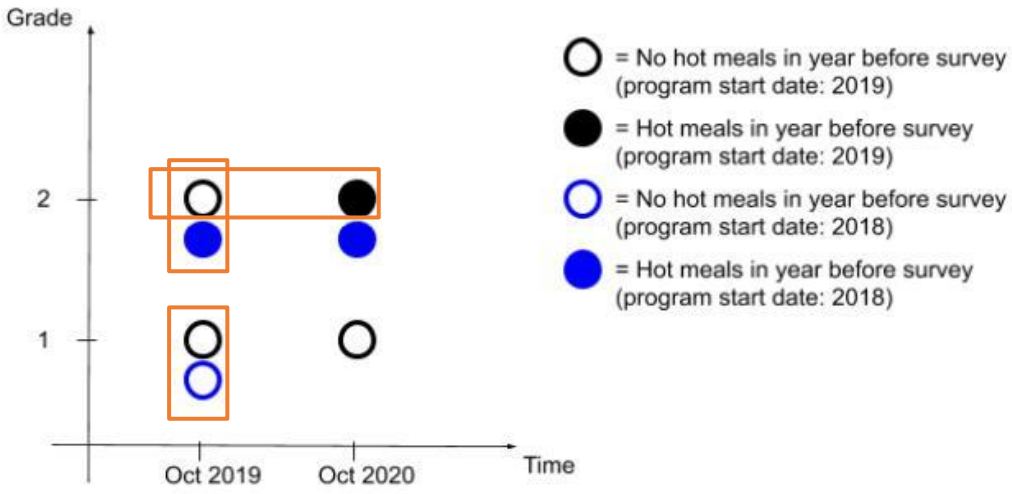
Study design for impact evaluation



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Sample

	Mean	S.D.	Min.	Max.
Child age	7.14	0.76	3	10
Child is a girl	0.50	0.50	0	1
Household size	5.94	1.71	2	15
Main language at home is Kyrgyz	0.83	0.38	0	1
Main language at home is Russian	0.08	0.27	0	1
Main language at home is Uzbek	0.08	0.27	0	1
Grade 1	0.50	0.50	0	1
Grade 2	0.50	0.50	0	1
Oblast				
Batken	0.07	0.26	0	1
Chuy	0.34	0.47	0	1
Issyk-Kul	0.05	0.22	0	1
Jalal-Abad	0.26	0.44	0	1
Naryn	0.06	0.24	0	1
Osh	0.19	0.39	0	1
Talas	0.03	0.16	0	1

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Sample (2)

	Mean	S.D.	Min.	Max.
FFE program indicators: child				
FFE cohort 2019	0.50	0.50	0	1
FFE cohort 2018	0.50	0.50	0	1
Usually finishes hot meal at school	0.84	0.37	0	1
FFE 2018 program indicators: caregiver				
Ever tried a school meal	0.33	0.47	0	1
Ever participated in SBC training on nutrition	0.27	0.45	0	1
Total number of nutrition topics trained on	1.13	1.97	0	5
Ever participated in SBC training on hygiene and sanitation	0.24	0.43	0	1
Ever saw SBC message on TV	0.68	0.47	0	1
N	3035			

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Results

"…The results suggest that many children have fairly good nutrition knowledge and fairly healthy general food preferences, but also eat many snacks which are often unhealthy."

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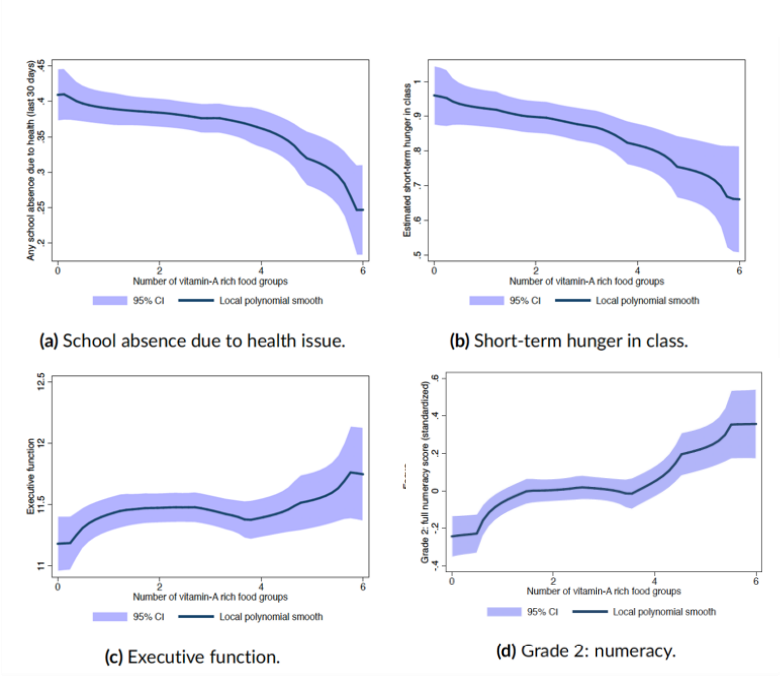
Results

Impact of nutrition on health and educational outcomes.

→ Several nutritional impacts on health and learning, especially for vitamin A



(a) School absence due to health issue.

(b) Short-term hunger in class.

(c) Executive function.

(d) Grade 2: numeracy.

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Results

Impact of the FFE programme among grade 2 students.

→ Positive impact on numeracy scores and executive functions

→ FFE led to improved nutritional practices at home

	Full	FFE	No FFE	Diff	p
Nutrition: child level					
Did not eat unhealthy snack	0.36	0.40	0.32	0.07***	0.00
Food preference score	0.03	-0.00	0.07	-0.07	0.72
Has healthy food preferences	0.52	0.51	0.53	-0.02	0.40
Knows that sweets are not good for health	0.75	0.78	0.72	0.06**	0.01
Nutrition at home					
Household dietary diversity	8.20	8.39	8.02	0.37***	0.00
Number of vitamin A-rich food groups	2.42	2.58	2.26	0.33***	0.00
Good knowledge about vitamin A-rich foods	0.60	0.60	0.60	-0.01	0.84
Caregiver's food preference score	2.32	2.38	2.27	0.10	0.54
Health and foundations of learning					
School absence due to health issue	0.35	0.37	0.34	0.03	0.25
Estimated short-term hunger in class	0.85	0.85	0.84	0.01	0.83
Executive function	11.84	12.07	11.61	0.47***	0.00
Focus	8.57	8.65	8.49	0.16	0.17
School days missed last 30 days (non-health related)	0.34	0.36	0.32	0.04	0.41
Learning					
Grade 2: full literacy score (standardized)	0.00	-0.00	0.01	-0.01	0.81
Grade 2: full numeracy score (standardized)	0.00	0.14	-0.13	0.26***	0.00

Significance levels: * p < 0.1, ** p < 0.05, *** p < 0.01.

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Results

Impact of the FFE programme among grade 1 students.

→ FFE led to similar effects for grade 1 students

→ Spill over effects?

	Full	FFE	No FFE	Diff	p
Nutrition: child level					
Did not eat unhealthy snack	0.33	0.35	0.31	0.04*	0.07
Food preference score	-0.23	-0.28	-0.18	-0.10	0.64
Has healthy food preferences	0.48	0.47	0.48	-0.01	0.61
Knows that sweets are not good for health	0.70	0.73	0.66	0.07***	0.00
Nutrition at home					
Household dietary diversity	8.16	8.32	8.00	0.32***	0.00
Number of vitamin A-rich food groups	2.41	2.54	2.28	0.26***	0.00
Good knowledge about vitamin A-rich foods	0.61	0.60	0.63	-0.03	0.27
Caregiver's food preference score	2.38	2.46	2.30	0.16	0.37
Health and foundations of learning					
School absence due to health issue	0.39	0.38	0.41	-0.03	0.22
Estimated short-term hunger in class	0.91	0.89	0.92	-0.03	0.60
Executive function	11.06	11.27	10.84	0.43***	0.01
Focus	8.12	8.17	8.07	0.10	0.45
School days missed last 30 days (non-health related)	0.34	0.33	0.35	-0.02	0.69
Learning					
Grade 1: full literacy score (standardized)	0.01	0.06	-0.05	0.11**	0.03
Grade 1: full numeracy score (standardized)	-0.00	0.05	-0.05	0.09*	0.07

Significance levels: * p < 0.1, ** p < 0.05, *** p < 0.01.

RQ3 13

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Social and Behavioural Change (SBC) intervention

→ Community agents provide deliver workshops to community / parents

→ Topics:

- → Breastfeeding
- → Complementary feeding
- → Dietary diversity
- → Anemia
- → Junk Food

RQ3 14

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Results

Impact of the SBC component for grade 2 students.

→ Significantly more diverse diets at home

→ SBC underpin the impact on nutrition practices of caregivers

	Full	SBC	No SBC	Diff	*p*
Nutrition: child level					
Did not eat unhealthy snack	0.40	0.38	0.40	-0.02	0.70
Food preference score	-0.00	0.58	-0.25	0.83***	0.01
Has healthy food preferences	0.51	0.54	0.49	0.04	0.28
Knows that sweets are not good for health	0.78	0.82	0.77	0.05	0.11
Nutrition at home					
Household dietary diversity	8.39	8.56	8.31	0.25**	0.02
Number of vitamin A-rich food groups	2.58	2.67	2.55	0.12	0.25
Caregiver knows vitamin A-rich foods	0.60	0.59	0.60	-0.00	0.93
Caregiver's food preference score	2.38	2.69	2.24	0.45*	0.08
Health and foundations of learning					
School absence due to health issue	0.37	0.42	0.35	0.07*	0.06
Estimated short-term hunger in class	0.85	0.77	0.89	-0.12	0.16
Executive function	12.07	12.07	12.08	-0.00	0.98
Focus	8.65	8.79	8.59	0.21	0.22
School days missed last 30 days (non-health related)	0.36	0.30	0.39	-0.09	0.27
Learning					
Grade 2: full literacy score (standardized)	-0.00	0.04	-0.02	0.06	0.40
Grade 2: full numeracy score (standardized)	0.14	0.23	0.10	0.14*	0.08

Significance levels: * p < 0.1, ** p < 0.05, *** p < 0.01.

RQ3

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Conclusion

→ Children have good nutritional knowledge healthy food preferences

→ Better child nutrition is associated with higher executive functions and numeracy scores

→ Nutritional assistance programmes can improve child nutrition and learning outcomes

→ SBC can complement school feeding via improving parental knowledge and nutrition at home

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Conclusion

→ The study contributes information on nutritional impact pathways and the role of knowledge and SBC intervention in creating that impact.

→ Endline data would be desirable to further explore causal effects of the programme

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