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Healthy Kitchens, Healthy Children: the impact of linking community kitchens to a school food program on children's diet diversity, nutritional status and school performance

Submission date
25/09/2018

Recruitment status
No longer recruiting

Registration date
22/10/2018

Overall study status
Completed

Last Edited
25/04/2022

Condition category
Other

[_] Prospectively registered
[_] Protocol
[_] Statistical analysis plan
[X] Results
[_] Individual participant data

Plain English summary of protocol
Background and study aims
Palestinian refugee children in Lebanon attend schools run by the UN Relief Works Agency for Palestine Refugees (UNRWA). Most schools have a small private food seller selling packaged foods inside the school, with products generally high in fat, sugar and salt. The aim of this study was to investigate the effect of the offering of a subsidised healthy daily school meal at these schools on diet diversity, nutritional status, school attendance and school performance of children.

Who can participate?
Children aged 6 years or older, attending one of four selected elementary schools in two Palestinian camps in Beirut. Children were asked to declare any food allergies they may have in advance of participation.

What does the study involve?
Children attending two intervention schools were offered the option of purchasing a subsidised healthy school meal on a daily basis, in addition to receiving nutrition and health education sessions. Children attending two control schools were offered nutrition and health education sessions only.

What are the possible benefits and risks of participating?
Possible benefits of participating include a potentially improved school meal, and therefore nutrition for children. There are no known risks to participants taking part in this study. Risks of food-borne illness were mitigated by ensuring rigorous food safety standards for the program. Risks of allergies were mitigated by ensuring that children declared allergies in advance.

Where is the study run from?
The study is run from the Center for Research on Population and Health at the American University of Beirut and four schools in two Palestinian camps in Lebanon will participate

When is the study starting and how long is it expected to run for?
September 2013 to December 2017

Who is funding the study?
The Nestle Foundation for the Study of Problems of Nutrition in the World (Switzerland)

Who is the main contact?
Dr Hala Ghattas
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Contact information

Type(s)
Scientific

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Additional identifiers

Protocol serial number
A 102829 -P 22047

Study information

Scientific Title
Healthy Kitchens, Healthy Children: a community-based intervention linking community kitchens to a school food program - the Healthy Children component

Acronym
Healthy Kitchens, Healthy Children- Children's study (HKHC-C)

Study objectives
This study aimed to investigate the effect of a two-pronged intervention that employed women through social enterprises (Healthy Kitchens) to deliver a subsidised healthy daily school meal to elementary schoolchildren in Palestinian camps (Healthy Children).

We hypothesised that children participating in the Healthy children component of the intervention would have improved dietary diversity, nutritional status, school absenteeism and educational achievements.

Ethics approval required
Old ethics approval format

Ethics approval(s)
1. American University of Beirut Social and Behavioral Sciences Institutional Review Board (AUB SBS IRB), 20/12/2013, ref: FHS.HG.01 / FHS.HG.02
2. University of Maryland Institutional Review Board (UMD IRB), 02/12/2013, ref: 535188-1

Primary study design
Interventional

Study design
Interventional non-randomised study

Study type(s)
Other

Health condition(s) or problem(s) studied
Children's diet diversity and nutritional status

Interventions
This study, Healthy Children, is a component of a wider study called Healthy Kitchens, Healthy Children.
The Healthy Schools component is an 8 month, non-randomised school-based intervention, where 2 schools are allocated to receive the intervention and 2 neighbouring schools are allocated to the control group. Intervention schools received a series of 4 interactive health and nutrition classes, and a daily health subsidised snack, made by the women in the Healthy Kitchens component (covering 15% of children's energy requirements and over 30% of iron, folate and Vitamin A requirements), which children purchased at a cost of 0.25 USD/day. Children in the control group received the 4 interactive health and nutrition classes only.

Intervention Type
Other

Primary outcome(s)
Schoolchildren’s diet diversity assessed using the Diet Diversity Score (DDS) at the baseline and after 8 months

Key secondary outcome(s)
The following are assessed at the baseline and after 8 months:
1. Nutritional status, assessed by measuring height and weight and recording age and calculating indices such as height-for-age Z-score and BMI-for-age Z-score
2. Haemoglobin, assessed using a Hemocue
3. School absence, assessed by the number of school days missed between the baseline and the end of the study
4. Educational outcomes, including final language and maths grades

Completion date
01/12/2017

Eligibility

Key inclusion criteria
1. Child aged over 6 years
2. Registered student in one of four specified UNRWA schools

Participant type(s)
Other

Healthy volunteers allowed
No

Age group
Child

Lower age limit
6 Years

Sex
All

Total final enrolment
1362

Key exclusion criteria
None - children were asked to declare any food allergies they might have

Date of first enrolment
04/06/2014

Date of final enrolment
31/05/2016

Locations

Countries of recruitment
Lebanon

Study participating centre
Center for Research on Population and Health
Faculty of Health Sciences
American University of Beirut
Bliss Street
Hamra
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Lebanon
1107 2020

Sponsor information

Organisation
The Nestle Foundation for the Study of Problems of Nutrition in the World

ROR
https://ror.org/021k07d19

Funder(s)

Funder type
Research organisation

Funder Name
The Nestle Foundation for the Study of Problems of Nutrition in the World

Results and Publications

Individual participant data (IPD) sharing plan
The datasets generated during and/or analysed during the current study are not expected to be made available due to the fact that studies were conducted with vulnerable refugee populations, and data transfer agreements with the collaborating organisations restrict our ability to share these data with third parties.

IPD sharing plan summary
Not expected to be made available

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article		24/11/2020	25/04/2022	Yes	No
Abstract results	results presented at 21st International Congress of Nutrition	01/01/2017		No	No
Abstract results	results presented at Experimental Biology, Chicago,	01/04/2017		No	No
Other publications	Process evaluation	22/11/2019	25/04/2022	Yes	No