ISRCTN98064772 https://doi.org/10.1186/ISRCTN98064772

A web-based program to reduce food-related fears and promote healthy dietary habits in toddlers

Submission date
18/05/2017

Recruitment status
No longer recruiting

Registration date
23/05/2017

Overall study status
Completed

Last Edited
13/10/2021

Condition category
Nutritional, Metabolic, Endocrine

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

Plain English summary of protocol

Background and study aims
A child's first years of life are crucial for cognitive (mental) development and future health. Studies show that a varied diet with a high intake of vegetables is positive for weight development, mental health and cognitive development. A low intake of vegetables is considered one of the greatest challenges in children's diets in Norway. Researchers suggest that one barrier for vegetable intake among children is food neophobia. Food neophobia is defined as a reluctance to taste and eat new foods. Food neophobia increases from the age of 2 years and decreases later in childhood. Interventions that can increase children's intake of vegetables should be introduced early in life to overcome children's neophobia. The aim of this study is to develop and measure the effect of two different interventions for one-year-old children in kindergartens to reduce food neophobia and promote healthy diets.

Who can participate?
Children born in 2016 attending kindergartens in the counties of Oppland, Telemark, Møre og Romsdal and Sør-Trøndelag in Norway

What does the study involve?
The participating kindergartens are randomly allocated to one of three groups: two different intervention groups and one control group. The first intervention group are served a warm lunch meal with a variety of vegetables on three days a week during the 3-month study period. The second intervention group are served the same meals and also give lessons and advice on meal and feeding practices. Questionnaires, information videos and recipes are included on a study web page. The control group continue their usual meal practices. To measure the effect of the interventions, parents and kindergarten staff complete questionnaires at the start of the study and after the intervention. Food neophobia, diet, food variety, vegetable liking, cognitive development, parent and kindergarten staff feeding practices, and child weight and height are all recorded. There are follow-up-questionnaires when the children are 36 and 48 months old.

What are the possible benefits and risks of participating?
The results of this study will provide new knowledge about whether or not education and a

healthy meal intervention targeting children, kindergarten staff and parents will reduce levels of food neophobia in toddlers, improve parental and kindergarten feeding practices, improve children's dietary variety, improve children's cognitive development and reduce childhood obesity. Kindergartens in the intervention groups will increase their knowledge and competence when it comes to food and meal serving. There are no risks of participating in this study.

Where is the study run from?
University of Agder (Norway)

When is the study starting and how long is it expected to run for?
August 2016 to August 2021

Who is funding the study?
1. Norske Kvinners Sanitetsforening (Norway)
2. University of Agder (Norway)

Who is the main contact?
Prof. Nina Øverby
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Contact information

Type(s)
Scientific

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Additional identifiers

Protocol serial number
N/A

Study information

Scientific Title
A cluster randomized web-based intervention trial among one-year-old-children in kindergarten to reduce food neophobia and promote healthy diets

Study objectives

A web-based intervention that gives specific pedagogical tools and instructions to serve warm meals with a variety of vegetables aimed at one-year-old children, kindergarten personnel and parents will:
1. Reduce the children's level of food neophobia
2. Increase the children's vegetable intake
3. Improve the children's cognitive development
4. Prevent future obesity
There are two different intervention groups, and the trialists hypothesize that the group with both pedagogical tools and instructions to serve warm meals will be more effective regarding the hypotheses than the intervention group with only instructions are to serve warm meals with different vegetables.

Ethics approval required
Old ethics approval format

Ethics approval(s)
Norwegian centre for research data (NSD), 21/10/2016, ref: 49951

Study design
Single-center interventional cluster randomised trial

Primary study design
Interventional

Study type(s)
Prevention

Health condition(s) or problem(s) studied
Dietary habits, food neophobia, cognitive development, child obesity and parental and kindergarten personal feeding practices

Interventions
The kindergartens will be randomly, consecutively allocated to either one of the intervention groups or control group based on a computer-generated list:
1. Intervention group 1 will be asked to serve a warm lunch meal with a variety of vegetables three days a week during the intervention period which will last for 3 months
2. Intervention group 2 will be asked to use given pedagogical tools including sensory lessons (the Sapere method) and advice on meal practice and feeding styles, in addition to serving the same meals as intervention group 1
3. The third group will be the control group and continue their usual practices

All the information given to the intervention groups, i.e. information videos, recipes and other necessary information, will be found in a study web page.

To evaluate effect of the interventions on the given outcomes, parents and kindergarten personnel will fill in questionnaires at baseline and post intervention. Questionnaires will be distributed by e-mail. There will be follow-up-questionnaires when the children are 36 and 48 months old.

Intervention Type
Behavioural

Primary outcome(s)
1. Child vegetable intake, assessed at baseline, after the intervention, and at the ages 36 and 48 months
2. Children's level of food neophobia, assessed at baseline, after the intervention, and at the ages of 36 and 48 months
3. Child dietary habits and food variety, assessed at baseline, after the intervention, and at the ages of 36 and 48 months
All primary outcomes are measured using detailed questionnaires developed for this specific study.

Key secondary outcome(s))
1. Child cognitive development, assessed with the questionnaire Ages and Stages at baseline, after the intervention, and at the ages of 36 and 48 months
2. Weight and height, assessed by self-report at baseline and at the ages of 36 and 48 months
3. Parental and kindergarten staff feeding practices and role modeling, assessed with the Comprehensive Feeding Practices Questionnaire at baseline, after the intervention, and at the ages of 36 and 48 months

Completion date
01/08/2021

Eligibility

Key inclusion criteria
Current inclusion criteria as of 24/01/2020:
Children born in the year of 2016 attending kindergartens in the counties of Oppland, Telemark, Møre og Romsdal and Sør-Trøndelag in Norway

Previous inclusion criteria:
Children born in the year of 2016 attending kindergartens in the counties of Oppland and Telemark in Norway

Participant type(s)
Mixed

Healthy volunteers allowed
No

Age group
Child

Sex
All

Total final enrolment
267

Key exclusion criteria
Children whose parents do not understand written Norwegian language

Date of first enrolment
15/08/2017

Date of final enrolment
01/11/2017

Locations

Countries of recruitment
Norway

Study participating centre
University of Agder
PO Box 422
Kristiansand
Norway
4604

Sponsor information

Organisation
University of Agder

ROR
https://ror.org/03x297z98

Funder(s)

Funder type
Charity

Funder Name
Norske Kvinners Sanitetsforening

Alternative Name(s)
Norwegian Women's Public Health Association, NKS

Funding Body Type
Private sector organisation

Funding Body Subtype
Associations and societies (private and public)

Location
Norway

Funder Name
University of Agder

Results and Publications

Individual participant data (IPD) sharing plan
The datasets generated during and/or analysed during the current study are/will be available upon request from Prof. Nina Øverby (nina.c.overby@uia.no).

IPD sharing plan summary
Available on request

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article	results	08/10/2021	13/10/2021	Yes	No
Protocol article	protocol	14/07/2018	10/05/2019	Yes	No
Other publications	baseline data on association between diet and neurodevelopmental score	21/07/2019	24/01/2020	Yes	No
Other publications	data on breastfeeding and food neophobia	14/02/2020	19/03/2020	Yes	No
Other publications	teachers' experiences	30/06/2021	05/07/2021	Yes	No
Participant information sheet	Participant information sheet	11/11/2025	11/11/2025	No	Yes