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Morgenmadsklubben (the breakfast club)

Submission date
01/06/2018

Recruitment status
No longer recruiting

Registration date
20/11/2018

Overall study status
Completed

Last Edited
29/11/2022

Condition category
Nutritional, Metabolic, Endocrine

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

Plain English summary of protocol

Background and study aims
Healthy eating habits are important to reduce the risk of certain lifestyle diseases. It is also well established that people with shorter education live unhealthier lifestyles than their counterparts with longer educations. One population group that belongs to people with short education is vocational students. Besides the risks they take in relation to their lifestyle, vocational students are more likely to drop out of school compared to their peers in gymnasiums. One eating habit that could change for the better is breakfast. Suited places for serving breakfast to these young people are vocational schools where students are naturally gathered. This study has three aims. The first is to assess whether wholegrain breakfast could change certain eating habits of vocational students. The second aim is to assess whether wholegrain breakfast has an effect on students' concentration ability as a prerequisite for learning. The third aim is to find out to what extent the breakfast experiment is feasible, assessed through students', teachers' and managements' perspectives on facilitators and barriers.

Who can participate?
Students aged 16 years or over at four Danish vocational schools.

What does the study involve?
Participating schools are randomly allocated to one of two groups. Two of the schools serve breakfast and the other two schools do not serve breakfast. The schools serve wholegrain breakfast as an integrated part of the first lesson of each school day for four months from March 2012. The breakfast consists of wholegrain cereals with milk and sugar. Besides this, one of the schools also serves wholegrain bread with toppings each Friday. The breakfast is free for students and is served as a buffet. Measurements are conducted three times in total. The first measurement is before the schools begin serving breakfast. The second measurement is in the middle of the experiment and the last measurement is at the end of the experiment. In each measurement students fill out a questionnaire about their breakfast and morning eating habits. It also covers other issues, like their attitude towards breakfast served at the school. Besides the questionnaire, students also take a test that assesses their ability to concentrate. It is voluntary for students to participate in measurements, as it is to eat the breakfast served. However, presence in the breakfast club is mandatory because it was a part of their school day. In order to assess facilitators and barriers of the breakfast club in schools, interviews with students, teachers and management are also conducted.

What are the possible benefits and risks of participating?
By participating in the breakfast club experiment, schools have an opportunity to encourage their students to eat wholegrain breakfast. Besides, the meal likely created a positive atmosphere where students and teachers could interact and talk about everyday issues but also course related questions in an informal manner. This might help towards a constructive atmosphere in class. Possible disadvantages for the schools include expenses for example relating to breakfast and cleaning. Besides that participation took time from lessons each day and during measurements. The Danish Whole grain Partnership granted all wholegrain breakfast products, whereas schools provided all other breakfast products.

Where is the study run from?
Four Danish vocational schools

When is the study starting and how long is it expected to run for?
March 2011 to June 2012

Who is funding the study?
1. Aalborg University
2. Danish Cancer Society
3. Danish Veterinary and Food Administration

Who is the main contact?
1. Mrs Camilla Berg Christensen
2. Prof. Bent Egberg Mikkelsen

Contact information

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Public

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Additional identifiers

Protocol serial number
id: 2018-899/10-0068

Study information

Scientific Title
The breakfast club: a quasi-experimental study in vocational schools

Study objectives
The study had three main research questions. The first was whether the provision of wholegrain breakfast could affect selected eating habits among students. The second assessed the effect of wholegrain breakfast on concentration and sustained attention among students. The final research question regarded the feasibility and asked if the breakfast club intervention was feasible assessed through facilitators and barriers in the experience of students, teachers and management.

Ethics approval required
Old ethics approval format

Ethics approval(s)
Aalborg University Contract Unit, 27/02/2018, id: 2018-899/10-0068

Primary study design
Interventional

Study design
Multicentre cluster randomised trial

Study type(s)
Other

Health condition(s) or problem(s) studied
Healthy young people in vocational schools

Interventions
Participants were randomised into either control or intervention at the school level. The intervention lasted for approximately four months (2012).

The intervention consisted of free breakfast: wholegrain cereals with milk and sugar. One school served wholegrain bread with toppings on Fridays. The breakfast session occurred during first lesson every school day for approximately four months. The breakfast was served as a buffet and eating was voluntary.

Control schools proceeded as normal but constraining from serving free breakfast to their students or having other ongoing similar health promotion projects.

Intervention Type
Other

Primary outcome(s)
1. Eating habits measured by consumption of selected breakfast items. The items included wholegrain products and other items that were considered normal breakfast in the particular population group. Both frequency and quality of breakfast intake were assessed. Measurement instrument was a food frequency questionnaire. Measured at week 0, 7 and 8 weeks after baseline, and 14 to 16 weeks after baseline.
2. Students attention and concentration measured by a concentration test called "the d2 test of attention" at week 0, 7 and 8 weeks after baseline, and 14 to 16 weeks after baseline.
3. Barriers and facilitators were established by interviews with stakeholders i.e. students, teachers and management. Interviews with participants at the two intervention schools were conducted at the end and after the intervention period.

Key secondary outcome(s)
The amount of students eating during the breakfast club was counted through observations performed at both intervention schools at approximately 7 and 8 weeks after baseline and the end of the intervention period approximately 14 to 16 weeks after baseline

Completion date
22/06/2012

Eligibility

Key inclusion criteria
Schools:
1. Within a restricted geographical range due to time constraints
2. Ability and willing to pay certain expenses connected to the breakfast club intervention e.g. sugar, milk, toppings and extra cleaning
3. Willingness to participate as control school depending on the randomisation
4. Prepared to serve wholegrain breakfast as an integrated part of the school day

Students:
1. Both genders
2. Age ≥ 15 (participants were all aged 16 years or older)
3. Vocational student attending their first basic part of their education, which is situated in the school setting (Danish vocational training and education is divided into two main parts, the first period takes place at the school and the second part consist of a apprenticeship often in companies)
4. Attending courses considered primarily masculine with a high drop-out rate: auto mechanics and electricians*
*This criterion was not eligible and was changed to also include other courses

Participant type(s)
Healthy volunteer

Healthy volunteers allowed

No

Age group
Other

Sex
All

Total final enrolment
318

Key exclusion criteria
Schools were excluded if:
1. They had ongoing health promotion activities including eating projects
2. They lacked kitchen facilities to store the breakfast products
3. They only had students attending food related courses

Date of first enrolment
01/05/2011

Date of final enrolment
01/02/2012

Locations

Countries of recruitment
Denmark

Study participating centre
EUC Lillebælt
Fredericia
Denmark
7000

Study participating centre
TEC Ballerup
Ballerup
Denmark
2750

Study participating centre
TEC Frederiksberg
Frederiksberg
Denmark
2000

Study participating centre
Mercantec
Viborg
Denmark
8800

Sponsor information

Organisation
Aalborg University Copenhagen

ROR
https://ror.org/04m5j1k67

Funder(s)

Funder type
University/education

Funder Name
Aalborg Universitet

Alternative Name(s)
Aalborg University, AAU

Funding Body Type
Private sector organisation

Funding Body Subtype
Universities (academic only)

Location
Denmark

Funder Name
Kræftens Bekæmpelse

Alternative Name(s)
Danish Cancer Society, The Danish Cancer Society, DCS

Funding Body Type
Government organisation

Funding Body Subtype
Associations and societies (private and public)

Location
Denmark

Funder Name
Danish Whole Grain Partnership

Funder Name
Danish Veterinary and Food Administration

Results and Publications

Individual participant data (IPD) sharing plan
Please contact camillabergchrstensen@gmail.com and/or bemi@learning.aau.dk for access to the datasets. The datasets consist of questionnaires including food frequency questions and selected answers from the d2 test of sustained attention. Besides interviews will be available upon request. The data will be available when the manuscript is published. Access criteria: a description of purpose and intended analysis. Content from participants was received through answering the questionnaire and the intervention conformed with the regulations on nonclinical trials by the National Committee on Health Research Ethics in Denmark. Participants' names were initially recorded and masked into anonymisation during data processing.

IPD sharing plan summary
Available on request

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article	results	03/04/2019	05/04/2019	Yes	No