

FAN – promoting nutrition and physical activity to parents and their children, in Ticino Switzerland

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Registration date 07/12/2017	Overall study status Completed	<input type="checkbox"/> Protocol
Last Edited 18/01/2023	Condition category Nutritional, Metabolic, Endocrine	<input type="checkbox"/> Statistical analysis plan
		<input checked="" type="checkbox"/> Results
		<input type="checkbox"/> Individual participant data

Plain English summary of protocol

Background and study aims

There is low adherence to nutritional guidelines in both adults and children in Switzerland. Among the adult population, only 19% of men and women consume the recommended five portions of fruit and vegetables each day, and the average meat consumption (780 grams per week per person) far exceeds the recommended amount of 240 grams per week. A study conducted in Canton Ticino, one of the 26 States in Switzerland, showed that less than 50% of the children were adherent to the national dietary guidelines. As dietary habits acquired during childhood persist into adult life, and are leading factors for many health issues, it is important to promote a healthy diet to children. Social Marketing is a framework that integrates Marketing principles with other approaches to promote healthy behaviors, with the final aim of benefiting society. Social Marketing focuses on behavior and integrates best practice, theory, research, and a deep population analysis to develop effective behavior change interventions. Social Marketing is the approach that is recommended by the World Health Organization to promote healthy nutrition and other lifestyle behaviors related to risks for non-communicable diseases. The Web-based Social Marketing program called FAN “Famiglia, Attività fisica, Nutrizione” was designed to promote a healthy food consumption and regular physical activity among families living in Ticino, Switzerland. The aim of this study is to examine the impact of the FAN program on children’s diets.

Who can participate?

Families living in Ticino, Switzerland who have a child in primary school

What does the study involve?

Parents are invited by the FAN team through a brochure and information letter distributed to children in school. Families are randomly allocated to one of three groups. Those in the first group receive the program through the internet. Those in the second group receive it through the internet and by email reminders. Those in the third group receive it through the internet and through text messages. During the intervention children and their parents received tailored information regarding ways to improve and maintain healthy nutrition and physical activity behaviors. All parents are asked to complete baseline and follow-up surveys, collecting data over

a 1-week period, and all children are asked to complete a food and physical activity log pre- and immediate post-intervention.

What are the possible benefits and risks of participating?

There were possible health benefits of eating healthy and practicing physical activity, and no direct risks linked to the intervention.

Where is the study run from?

This study is being run by the BeCHANGE Research group, ICP, Università della Svizzera Italiana (Switzerland)

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

June 2010-December 2012

Who is funding the study?

1. Ticino Department of Health and Social Affairs (Switzerland)
2. Health Promotion Switzerland (Switzerland)
3. Swiss National Science Foundation (Switzerland)

Who is the main contact?

1. Professor L.Suzanne Suggs (Scientific)
2. Dr Natalie Rangelov (Scientific)

Contact information

Type(s)

Scientific

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Additional identifiers

Protocol serial number

CR1313_156385 / 1

Study information

Scientific Title

FAN – Famiglia, Attività fisica, Nutrizione: Ticino Switzerland's campaign for healthy weight

Acronym

FAN

Study objectives

1. Children would eat a healthier diet when at home with their parents
2. Healthy food consumption would increase in all groups after the intervention
3. Unhealthy food consumption would decrease in all groups after the intervention
4. The e-mail group would show greater improvement than the Web-only group after the intervention
5. The SMS group would show greater improvement than the Web-only group after the intervention
6. A higher engagement with the program would be associated with more positive outcomes
7. There would be a high satisfaction with the program

Ethics approval required

Old ethics approval format

Ethics approval(s)

Study procedures were reviewed by the Canton Ticino Ethics Committee and deemed exempt in accordance with Swiss law. In accordance with the recommendations of the Helsinki Declaration, both children and parents provided informed consent and voluntarily provided their data.

Study design

Pre-post experimental study testing a social marketing/health promotion/lifestyle intervention on eating and physical activity behaviors of children and their parents

Primary study design

Interventional

Study type(s)

Prevention

Health condition(s) or problem(s) studied

Nutrition and physical activity

Interventions

The intervention lasts eight weeks, during which children and their parents receive tailored information regarding nutrition and physical activity behaviors. Families are randomly allocated to one of three groups using Excel random draw command. Parents in group 1 receive the intervention by the Web (G1); parents in group 2 received the intervention by Web + e-mail (G2); and parents in group 3 by Web + SMS (G3). Children in all groups receive tailored print letters by post. All parents and all children are asked to complete a baseline, immediate post-intervention, and three month follow-up surveys. At baseline, parents complete a survey and children complete both a survey and a food consumption log of what they ate, with whom they ate and where for each meal occasion (breakfast, snack, lunch, snack, dinner, snack) and a physical activity log (what physical activity they did, for how long, where and with whom) each for 7 days. Immediately post intervention, this same procedure is followed (one survey for parents, one survey for children and two behavior logs (food intake and physical activity record). A follow up survey for parents and for children is offered three months post intervention completion. The post intervention and follow up surveys include satisfaction measures as well as self report behavior change and behavior change determinants.

Group 1: access to Website for parents. Print letters for children.

Group 2: access to Website and e-mail prompts for parents. Print letters for children.

Group 3: access to Website and SMS prompts for parents. Print letters for children.

The intervention consists of information, advice, and strategies about the importance of and ways in which to improve eating behaviors and physical activity levels of children. This included ways parents could help and could serve as role models.

The Website, which targeted parents, is updated every Tuesday morning with a new theme related to nutrition. For example, the first week, titled "You are off to a good start and that is half the battle!" provided information about the recommendations for a healthy diet, while in the fifth week, theme called "Lunch and snacks with imagination", suggestions on how to cope with the lack of time to cook at lunch time and ideas for quick and healthy lunches and snacks were presented. Beyond providing information about the importance of healthy nutrition, the Website provided practical advice including recipes and tips on how to eat better, how to introduce healthier food to the family, and how to deal with concerns. Content was shown in form of short text, pictures, and videos. A web forum was also available so that parents could talk with other parents and a dietician about concerns, challenges and offer advice.

The e-mails and SMS were used as weekly reminders to prompt parents in group 2 and group 3 to visit the Website. In addition to providing a link to the Website, the e-mail provided a short summary of the weekly theme. Emails included an image at the top followed by the text and links to different pages on the Website. For example, the text of the e-mail in the fifth week stated: "Dear Ms. <insert last name>, Welcome back to FAN! This week we would like to show you some alternatives for a healthy lunch. [...] Has it ever happened that you ate a sandwich or a hamburger, because it was easier, because you did not have time or because you did not find another healthier alternative? [...] We suggest a healthy recipe that is easy to prepare. The ingredients are: salad, tuna fish, olive oil, and... find the rest on the Website [link]! [...]"

The SMS also included a link to the Website, along with a message aimed to stimulate motivation or provide support (e.g. "You do not have much time to cook over lunch time, but you'd like that your children eat healthy? Visit the FAN Website!"). These were sent every Tuesday morning, after the Website was updated.

The letters to children arrived at their home by post each Tuesday morning. They included information about healthy eating and physical activity in form of text, images and games, as well as suggestions for activities related to these two behaviors.

Intervention Type

Behavioural

Primary outcome(s)

1. Eating behavior of children is measured using food diaries at baseline and immediate follow-up and through two items in the immediate post- and 3 months post-intervention surveys
2. Physical activity of children is measured using physical activity diaries at baseline and immediate follow-up and through two items in the immediate post- and 3 months post-intervention surveys
3. Eating behavior of parents is measured using an online survey with questions related to their fruit and vegetable, fiber, sugar and fat consumption at baseline, immediate post-intervention and 3 months post-intervention
4. Physical activity behavior of parents is measured using an online survey with questions related to their moderate and vigorous physical activity at baseline, immediate post-intervention and 3 months post-intervention

Key secondary outcome(s)

1. Satisfaction is measured using survey data collected at immediate post-intervention and 3 months post-intervention
2. Level of engagement is measured using Website log data collected during the 8-week intervention
3. Influence of people and places measured using food diaries, and collected at baseline and immediate post-intervention

Completion date

20/12/2012

Eligibility

Key inclusion criteria

1. Families had to live in Ticino
2. Able to complete surveys in Italian
3. Have Internet access, an e-mail address, and a mobile phone
4. Have a child attending primary school, or first two grades of secondary school

Participant type(s)

Healthy volunteer

Healthy volunteers allowed

No

Age group

Mixed

Sex

All

Key exclusion criteria

1. Do not live in Ticino
2. Not able to complete surveys in Italian
3. Do not have Internet access, an e-mail address, and a mobile phone
4. Do not have a child attending primary school, or first two grades of secondary school

Date of first enrolment

15/06/2010

Date of final enrolment

28/02/2012

Locations

Countries of recruitment

Switzerland

Study participating centre

BeCHANGE Research group, ICP, Università della Svizzera Italiana

Lugano

Switzerland

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Sponsor information

Organisation

Ticino Department of Health and Social Affairs

Organisation

Health Promotion Switzerland

Funder(s)

Funder type

Government

Funder Name

Ticino Department of Health and Social Affairs

Funder Name

Health Promotion Switzerland

Funder Name

Schweizerischer Nationalfonds zur Förderung der Wissenschaftlichen Forschung

Alternative Name(s)

Schweizerischer Nationalfonds, Swiss National Science Foundation, Fonds National Suisse de la Recherche Scientifique, Fondo Nazionale Svizzero per la Ricerca Scientifica, Fonds National Suisse, Fondo Nazionale Svizzero, Schweizerische Nationalfonds, The Swiss National Science Foundation (SNSF), SNF, SNSF, FNS

Funding Body Type

Private sector organisation

Funding Body Subtype

Trusts, charities, foundations (both public and private)

Location

Switzerland

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:

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IPD sharing plan summary

Available on request

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article	results	08/03/2016		Yes	No
Results article	results	01/02/2018		Yes	No
Results article		16/02/2018	18/01/2023	Yes	No
Participant information sheet		12/12/2017	01/04/2019	No	Yes
Study website	Study website	11/11/2025	11/11/2025	No	Yes