

Promotion of Fruit and Vegetable Consumption among Schoolchildren - 'PROGREENS' Bulgaria

Title in original language:

Промоция консумация на плодове и зеленчуци при ученици, PROGREENS

Which 'life stage' for CVDs prevention targets the intervention?

Infancy and childhood. The intervention described focuses on 11- to 12-year old children.

Short description of the intervention:

The aim of the Intervention was to educate children for the positive change in eating behaviour. The intervention was developed within the European Union's 7th Framework Programme, funded by the European Commission and included 11 Member States. Its objective was to develop, pilot and evaluate an intervention, which aimed to increase fruit and vegetable consumption. The intervention in Bulgaria took place in the period of 2008 – 2011, targeting 6-grade students (11-12-year olds) in Sofia. In 2009, the design of the intervention was prepared, followed by the organization and conduction of a survey within 13 schools in Sofia, involving 1300 children and their parents. The survey aimed to assess dietary intake, eating behaviour and knowledge related to fruits and vegetables, as well as the school environment conditions. Developed, published and provided were educational materials for students, information brochure and guidelines for teachers, a shop visit brochure, informational materials for parents, poster project and organized was also an explanatory seminar for teachers.

Was the design of the intervention appropriate and built upon relevant data, theory, context, evidence, previous practice including pilot studies?

Yes, the intervention was fully built on theory and relevant data on fruit and vegetable consumption among students and was implemented into the context of an overall healthy diet by guiding students on how to strengthen and protect their health.

Did the design thoroughly describe the practice in terms of purpose, SMART objectives, methods?

Yes, the intervention used the experience of the countries within the programme and was described thoroughly in terms of location, concrete activities, timeframe, etc.

To which type of interventions does your example of good practice belong to?

European or international project (i.e. implemented in several countries). The intervention was developed within the European Union's 7th Framework Programme, funded by the European Commission and included 11 Member States.

How is this example of good practice funded?

National/regional/local government; Institution of education, public health and/or research; and Private sector company/organization. The intervention was a project under the VII Framework Programme of the European Commission, and the leading financing body was the European Commission as well as the National Centre for Public Health Protection (now NCPHA). The intervention was also financially supported by private sector companies as their active contribution (financial, human resources) generally improves the healthy choice on the population.

What is/was the level of implementation of your example of good practice?

Local (municipality level). The intervention in Bulgaria took place in the period of 2008 – 2011, targeting 6-grade students (11-12-year olds) in Sofia.

What are the main aim and the main objectives of your example of good practice?

The main objective of our example was to increase consumption of fruits and vegetables among 11-12-year old children with the aim to strengthen, promote and protect health in the context of an overall healthy diet, which will result in reduced risk of NCDs, as adequate fruits and vegetables consumption plays a significant role in NCDs prevention. Following the positive results of the project, currently the intervention serves as a model for implementation.

Please give a description of the problem the good practice example wants to tackle:

In the second half of the 20th century significant changes were observed in nutrition and lifestyle that contribute for the epidemics of non-communicable chronic diseases such as cardiovascular diseases (coronary heart disease, hypertension), cancer, diabetes type 2, obesity, etc. One of the main unfavourable trends and characteristics of the nutrition of the Bulgarian population included low consumption of fresh fruits and vegetables. Furthermore, surveys across Europe have demonstrated that eating habits and diets of children in different countries are unbalanced, and do not contain enough fruit and vegetables. Based on numerous research evidence, school fruit and vegetable scheme was considered an effective approach that is beneficial for both public health and agriculture. Thus, the programme 2008-2011 served as stable and promising basis to improve fruit and vegetable consumption among children.

Is your example of good practice embedded in a broader national/regional/ local policy or action plan?

Yes, the intervention contributed to the “Food and Nutrition Action Plan 2005-2010”, which aimed to increase public awareness and to reduce salt, fat and sugar content in different foods.

Implementation of your example of good practice is/was:

Single - from 2008 to 2011.

During implementation, did specific actions were taken to address the equity dimensions?

The intervention included 1300 children, 11- to 12-year old children and parents in Sofia, aiming to increase the availability of fruit and vegetables in schools.

In design, did relevant dimensions of equity were adequately taken into consideration and targeted?

The intervention was a school-based one, involving children and their parents within of different socio-economic status. The project investigated the determinants of fruit and vegetable intake from gender, cultural, educational and socio-economical perspective and investigated effective communication and promotion strategies.

Did the intervention have a comprehensive approach to health promotion addressing all relevant determinants, and using different strategies?

Yes. The main approach of the intervention was directed to health education of children, teachers and parents to increase fruit and vegetable consumption with the aim to reduce the influence of risk factors related to NCDs. Moreover, it used different strategies to raise awareness among the targeted population and also to build capacity.

Was an effective partnership in place?

The intervention was characterized by a highly effective partnership, including international organization, school representatives, healthcare professionals and contacts with branch organizations of producers.

Was the intervention aligned with a policy plan at the local, national, institutional and international level?

Yes, the intervention was supported by the government and fully supported (and led) by the National Centre of Public Health and Analyses, a governmental structure, and the European Commission.

Were the intervention's objectives and strategy transparent to the target population and stakeholders involved?

Yes. The objectives were transparent to the target population as well as to the stakeholders; moreover, there was active use of mass media sources to promote the objectives of the intervention.

Did the evaluation results achieve the stated goals and objectives?

The intervention provided data on consumption of fruits and vegetables, a platform for collaboration with retailers and producers and a basis for design school health policies. It achieved its objectives to assess the level of consumption of fruit and vegetables in children before and after a school-based intervention and to develop and test effective strategies to promote fruit and vegetable consumption among school children.

Did the intervention have a defined and appropriate evaluation framework assessing structure, processes and outcomes?

Yes. To monitor the process of implementation of the program, standardized procedures described in particular PRO GREENS documents were included.

Did the intervention have any information /monitoring systems in place to regularly deliver data aligned with evaluation and reporting needs?

The intervention had monitoring system in place, which was in accordance with the described procedures in PRO GREENS. Monitoring has been conducted to evaluate the process of change and technical and financial reports were identified and hand in according to the PRO GREENS Grant Agreement rules.

Who did the evaluation?

Both – internal and external parties.

Specifically, what has been measured / evaluated?

The level of consumption of fruit and vegetables in children before and after a school-based intervention. The evaluation of the implementation of the intervention was carried out on the basis of data collection and data analyses.

What are the main results/conclusions/recommendations from the evaluation?

General recommendations based on the work of all EU Member States encompass:

- Recommendation on training curricula of teachers and pupils
- Recommendations on best practice for fruit and vegetable promotion in school: a manual targeted to public health nutritionists
- Recommendations for formulating and using school health policies to promote fruit and vegetable consumption
- Recommendations for using public private partnerships to promote fruit and vegetable intake through schools
- Recommendations for food based dietary guidelines on European school children's intake of vegetables, fruits and berries* based on their knowledge and needs
- Recommendations for how to evaluate vegetable, fruit and berries* intake of children aged 6-14 years.

Is the evaluation report available, preferably in English or at least an English summary?

Yes. Available at: <http://www.progreens.org/results.html>

Who implemented the intervention?

The intervention was part of a project within 11 European countries, forming a team of different institutions. Considering the implementation of the intervention in Bulgaria, it was guided by the National Centre of Public Health and Analyses (previously National Centre of Public Health Protection), led by a team of healthcare professionals.

What core activities are/have been implemented?

- Development of a design of the intervention and study protocol;
- Meetings with representatives of the Regional Health Inspectorates, school principals;
- Training sessions;
- Publishing different materials; distribution of leaflets;
- Organizing and conducting two-day workshop with partner countries;
- Organizing and conducting a contest for a picture;
- Poster presentation in the Second World Congress on Public Health.

Was the intervention designed and implemented in consultation with the target population?

Yes, the intervention was designed in accordance with the needs of the target population.

Did the intervention achieve meaningful participation among the intended target population?

Yes, the targeted populations as well as the stakeholders were actively involved in the activities within the program.

Did the intervention develop strengths, resources and autonomy in the target population(s)?

Yes, the intervention had positive impact in terms of raising awareness of the health benefits of increased fruit and vegetables consumption, which was also expanded by the provided guidelines and education materials.

Was the engagement of intermediaries/multipliers used to promote the meaningful participation of the target population?

Yes. With the objective to increase the consumption of fruits and vegetables in 11-12-year old children, the design of the intervention also included their parents, teachers within their school environment as well as popular branch companies that could easily promote health benefits through other mass media sources.

Is the continuation of the intervention ensured through institutional ownership that guarantees funding and human resources and/or mainstreamed?

Yes. The intervention was funded by the EC, the government, together with branch companies. Being an intervention within a European-supported project, the team was fully supported by other associated and collaborative partners, exchanging best practices and intervention implementation strategies in fruit and vegetable promotion.

Is there a broad support for the intervention amongst those who implement it?

Yes. The intervention activities were carried out with the support of different institutions and organizations, both at local level, governmental and European level.

Is there a broad support for the intervention amongst the intended target populations?

Yes. The targeted population actively participated in the intervention activities.

Did the intervention include an adequate estimation of the human resources, material and budget requirements in clear relation with committed tasks?

Yes. A team within each country's institution was established to plan, organize and report on both human and financial resources necessary for the activities implementation.

Were sources of funding specified in regards to stability and commitment?

Yes. The intervention relied on funding, ensured by the government and the EC. Other sources of funding were also used provided by private sector companies.

Were organizational structures clearly defined and described?

Yes, the intervention followed strict plan in terms of responsibilities, information dissemination, capacity and partnership building activities. The intervention activities were monitored by NCPHA and the leaders of the project.

Are there specific knowledge transfer strategies in place (evidence into practice)?

Different methods and approaches to increase the knowledge of the population were applied, using good practices examples from countries participating in the program.

What were, in your opinion, the pre-conditions for success? Were there any facilitating factors?

The intervention was successful as it tackled the described problem taking into account important psychosocial and socio-demographic determinants of fruit and vegetable consumption among school children, including behaviour characteristics, theory, environmental changes, developmentally appropriate strategies, family involvement and teacher training. A set of different evidence-based strategies were applied, which ensured not only accountability, but also the ability to share best practices, surveillance and monitoring.

What were, in your opinion, the main lessons to be learned?

The main lessons to be learned are related with the potential to promote fruit and vegetable consumption in the school environment through the development of school health policies and strengthening the public-private partnership to ensure a more multi-sectoral approach in increasing fruit and vegetable consumption.

Web page related to the intervention

European webpage of the project PRO GREENS: <http://www.progreens.org/index.html>

References to the most important articles or reports on the intervention

- <http://www.progreens.org/index.html>
- Eva Roos, Tuuli Pajunen, Carola Ray, Christel Lynch, A' sa Gudrun, Kristiansdottir4, Thorhallur I Halldorsson, Inga Thorsdottir, Saskia J te Velde, Michael Krawinkel, Isabel Behrendt, Maria Daniel Vaz de Almeida, Bela Franchini, Angeliki Papadaki, Joanna Moschandreas, Cirila Hlastan Ribic, Stefka Petrova, Vesselka Duleva, Irena Simc'ic, Agneta Yngve. Does eating family meals and having the television on during dinner correlate with overweight? A sub-study of the PRO GREENS project, looking at children from nine European countries, doi:10.1017/S1368980013002954 Public Health Nutrition 03/2014:1-9
- Lehto E, Ray C, te Velde SJ, Petrova Stefka, Duleva V, Krawinkel M, Behrendt I, Papadaki A, Kristjansdottir A, Thorsdottir I, Yngve A,12, Lien N, Vaz de Almeida MD, Hlastan Ribic C, Simc'ic, Lynch C, Ehrenblad B, Roos E. Mediation of parental educational level on fruit and vegetable intake among schoolchildren in ten European countries". 2013, Public Health Nutrition doi:10.1017/S136898001300339X Public Health Nutrition 01/2014

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