

ToyBox Intervention Greece

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

Infancy & childhood: Specifically, the ToyBox-study targets preschool children aged 3.5-5.5 at baseline and their families.

Short description of the intervention

The ToyBox-intervention is a multicomponent, kindergarten-based, family-involved intervention, focusing on the promotion of water consumption, healthy snacking, physical activity and the reduction/ breaking up of sedentary time in preschool children and their families (four EBRBs). The intervention was implemented during the academic year 2012–2013 in six European countries: Belgium, Bulgaria, Germany, Greece, Poland and Spain. Standardized protocols, methods, tools and material were used in all countries for the implementation of the intervention, as well as for the process, impact, outcome evaluation and the assessment of its cost-effectiveness. A total sample of 7,056 preschool children and their parents/caregivers participated in the intervention.

The implementation of the ToyBox-intervention was conducted at four levels. More specifically: *Level 1.* Teachers conducted permanent environmental changes in the classroom/kindergarten, in order to create a supportive environment (i.e. installations of water stations and the 'magic snack plate' to assist water and healthy snack consumption and rearrangements of the classroom/kindergarten to create some free space to assist children's movement). *Level 2.* Teachers promoted the four targeted EBRBs on regular basis and predefined time within each day (i.e. reminding every day children to drink water regularly and do short movement breaks twice in the morning and twice in the afternoon, arranging a daily break for the whole class to eat healthy snacks and performing two physical education sessions per week with a duration of 45 min each). *Level 3.* Teachers implemented interactive classroom activities, minimum for 1 h per week (e.g. children's participation in experiments, kangaroo stories with children following the movements described in the stories, etc.). Teachers were also instructed to use the kangaroo and puppet and perform these four EBRBs themselves, so as to enhance the effects of the intervention via role modelling. *Level 4.* Parents/caregivers were encouraged and advised via simple and friendly to read material (nine newsletters and eight tip cards, as well as four posters which were coloured by their child) to apply relevant environmental changes at home, act as role models and implement these lifestyle behaviours together with their children. All material used during the intervention was the same across participating countries, allowing for some small cultural adaptations at a local level.

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

The development of the ToyBox-intervention was based on the outcomes of the preliminary phase of the ToyBox-study (systematic literature reviews, pooled analyses and focus groups research), aiming to identify young children's key behaviours and their determinants related to early childhood obesity. The development of the intervention material was based on the intervention mapping protocol and the PRECEDE-PROCEED model.

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

European or international project (i.e. implemented in several countries). The ToyBox-intervention was implemented in six European countries: Belgium, Bulgaria, Germany, Greece, Poland and Spain.

How is this example of good practice funded?

European Commission (FP7)/

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

Regional and local. Kindergartens from municipalities belonging to three different socioeconomic levels.

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

Main aim: to prevent overweight/obesity in early childhood. Main objectives: to promote the four energy balance related behaviours which were found to be associated with early childhood obesity in the preliminary phases of the ToyBox-study, i.e. water consumption, healthy snacking, physical activity and the reduction/ breaking up of sedentary time in preschool children and their families.

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

The prevalence of obesity has reached epidemic proportions in adult populations showing a steep increase over the last decades while childhood and adolescent overweight and obesity has increased markedly across Europe, even though in a few countries the speed of increase seems to have levelled off. Overweight in early childhood has been shown to increase the likelihood of being obese in later childhood but also tracks to adulthood in one-third to one-half of cases, where it becomes associated with an increased prevalence of chronic disease

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

Yes. EU platform on Diet and Physical Activity and Health

Implementation of your example of good practice is/was:

Single – it lasted five years (2009-2014).

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

Both genders from three socioeconomic levels participated in the ToyBox-intervention (including ethnic minority groups and children with disabilities). The intervention material and the intervention overall can be easily implemented in other regions/municipalities/countries.

Which vulnerable social groups were targeted?

Kindergartens/teachers/parents/preschool children from low socioeconomic groups participated in the ToyBox-intervention.

Did the intervention have a comprehensive approach to health promotion addressing all relevant determinants?

During the focus groups research the determinants of the targeted energy balance related behaviours were identified separately for each of the six participating countries and were considered in the development of the ToyBox-intervention and material. Moreover, before finalizing the material, it was culturally adapted based on the feedback received from local stakeholders.

Was an effective partnership in place?

Yes, ToyBox comprised a multidisciplinary, inter-sector, multi-alliance team of 15 partners across the EU incorporating the necessary expertise on childhood behaviours, pedagogics, nutrition, physical activity, paediatrics, psychology, health economics, policy and advocacy, school-based interventions:

Harokopio University, Greece – Coordinator

Ludwig-Maximilians University of Munich, Germany

Ghent University, Belgium

VU University Medical Centre, Netherlands

Akershus University College, Norway

University of Zaragoza, Spain

Durham University, UK

State Institute of Early Childhood Research, Germany

Children's Memorial Health Institute, Poland

Medical University of Varna, Bulgaria

International Association for the Study of Obesity, UK

Netherlands Institute for Health Promotion and Disease Prevention, the Netherlands

AOK-Verlag GmbH, Germany

Roehampton University, UK

University of Luxembourg, Luxembourg

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

Yes (according to national plan for Diet and CVD prevention in Greece and other EU countries).

Was the intervention implemented equitably, i.e. proportional to needs?

Yes. Focus groups with parents from three socioeconomic groups (including low SES groups) were conducted prior to the ToyBox-intervention and guided the development both of the ToyBox-intervention and intervention material.

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

Yes, all participants were asked to sign an informed consent form explaining the purposes of the ToyBox-intervention prior to their participation in the study.

Did the evaluation results achieve the stated goals and objectives?

Yes, positive results have been observed regarding some of the targeted energy balance behaviours and their determinants both in the total sample and across the participating countries.

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

Yes, all participating countries used standardized methods, equipment and tools for the evaluation of the ToyBox-intervention. The reliability and validity of the tools was tested before they were used in the main study and was proven to be adequate for the needs of the project. Cost-effectiveness and process evaluation were also assessed via standard questionnaires. The results of the ToyBox-intervention are disseminated through scientific papers in international peer-reviewed scientific journals, presentations in international and national scientific conferences, webinars, newsletters, press releases and through the ToyBox-website (<http://www.toybox-study.eu/>).

Who did the evaluation?

An internal party (representatives of the intervention, own organisation)

Specifically, what has been measured / evaluated?

Process evaluation: To evaluate the implementation of the intervention, teachers' monthly logbooks were recorded; post-intervention questionnaires were completed by parents/caregivers and teachers; participation and attrition rates were recorded; and audit questionnaires and retrospective information on weather conditions were collected. Regarding the teachers' training sessions, the researchers who performed the trainings completed evaluation forms and documented teachers' attendance after each training and teachers completed evaluation forms after each training.

Evaluation of the impacts/effects/outcome : The following tools/measurements were conducted both at baseline and at follow-up. Impact evaluation (questionnaires available at: <http://www.toybox-study.eu/?q=en/node/124>):

- Pedometers (children's steps taken during six consecutive days, including weekend days)
- Food Frequency Questionnaire and Questionnaire regarding children's eating/snacking, drinking, physical activity and sedentary behaviour and their determinants
- Questionnaires regarding parents/caregivers' and teachers' eating/snacking, drinking, physical activity and sedentary behaviour
- Questionnaire regarding children's medical history (only at baseline)
- Audit questionnaires (regarding the school food and physical activity environment)

Outcome evaluation: Children's anthropometric indices (weight, height, waist circumference, BMI, % overweight and obesity)

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

The ToyBox-intervention resulted to favourable changes of energy balance related behaviours in the intervention group compared to the control group, i.e.:

- Higher increase of water consumption for the children in the intervention group compared to the control group.
- Lower increase of time spent in PC/video-games for the children in the intervention group compared to the control group.
- Higher decrease of sweets consumption for the children and their parents in the intervention group compared to the control group.
- Higher increase of vigorous physical activity for the parents in the intervention group compared to the control group.

Regarding process evaluation, the results showed that the intervention reached the targeted audience and that the intervention (training sessions, material, intervention overall) was appealing to the teachers, parents/caregivers and children who participated in the intervention group.

Was there a follow-up or is any follow-up evaluation planned in the future?

Yes, follow-up was conducted one year after the baseline measurements (i.e. baseline in May/June 2012 and follow-up in May/June 2013).

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

Yes, focus groups were conducted with teachers and parents of preschool children from three socioeconomic levels in all six participating countries.

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

Yes, a total sample of 7,056 preschool children and their parents/caregivers, stratified by socioeconomic level, provided data during baseline measurements and participated in the intervention.

Was the target population/s defined on the basis of needs assessment including strengths and other characteristics?

Yes, the PRECEDE-PROCEED model was used to define the needs assessment of the targeted population.

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

Yes, local stakeholders (e.g. kindergarten headmasters and teachers) were engaged in the study.

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

Yes, all costs related to the development and execution of the ToyBox-intervention was recorded and a cost-effectiveness analysis was conducted.

Were organisational structures clearly defined and described?

Yes, teachers implemented the ToyBox-intervention, whereas the researchers developed the intervention and trained the teachers on how to implement it (via three training sessions).

Is the potential impact on the population targeted assessed (if scaled up) ?

The ToyBox-intervention resulted to favourable changes of energy balance related behaviours for the children in the intervention group compared to the control group (please see above). The results of the process evaluation showed that the intervention was well-received from the targeted audience. Overall, these results seem to be promising and could potentially contribute to the prevention of overweight/obesity in early childhood if scaled up.

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

The broad variety of classroom activities, the ready-to-use material, the adaptations based on the feedback received from local stakeholders in each of the intervention countries, the training of the teachers and overall the development of the ToyBox-intervention based on insights/information gained through the focus groups with stakeholders which were conducted prior to the intervention.

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

The approach of 'one size fits all' might not be the best approach for the diversity of cultures, local systems and needs across Europe. Preventive interventions should preferably be designed with enough flexibility.

Web page related to the intervention

<http://www.toybox-study.eu/?q=en/node/1>

References to the most important articles or reports on the intervention

<http://www.toybox-study.eu/?q=node/239>

Other relevant documents

<http://www.toybox-study.eu/?q=en/image>

<http://www.toybox-study.eu/?q=public-reports>
http://www.toybox-study.eu/?q=en/news_events_full

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