Developing and implementing a community-based intervention to create a more supportive social and physical environment for lifestyle changes to prevent diabetes in vulnerable families across Europe

Reporting

Project Information

Feel4Diabetes
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Coordinated by
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Periodic Reporting for period 3 - Feel4Diabetes
(Developing and implementing a community-based...
Worldwide, the prevalence of type 2 diabetes has increased, with the highest rates observed among low- and middle-income countries and certain ethnic groups and low socioeconomic groups in high-income countries. Family, school and community environment have been shown to play an important role in determining lifestyle habits, behaviours and health indices of all family members. Therefore, any initiative aiming to promote healthy and active lifestyle for the prevention of type 2 diabetes needs to address these aforementioned three components.

A multidisciplinary team of researchers has joined forces to develop, implement and evaluate the Feel4Diabetes-intervention, a school- and community-based intervention for the prevention of type 2 diabetes targeting families in low- and middle- income countries (Bulgaria and Hungary) and in vulnerable populations in high-income countries (Belgium, Finland, Greece and Spain) in Europe over the academic years 2016-2017 and 2017-2018. More specifically, Feel4Diabetes’ objectives are to:

- Identify the behaviours and their determinants related to risk factors for type 2 diabetes in low/middle-income countries and in vulnerable populations in high-income countries
- Develop a low-cost, low-resource and tailored-made school and community-based intervention, aiming to create a supportive social and physical environment and promote healthy lifestyle changes for children and their families
- Identify high-risk families for type 2 diabetes, implement and evaluate the impact, outcome, process, cost-effectiveness and scalability of a 2-years intervention by providing counselling sessions during the 1st year and motivation/support via a mobile application during the 2nd year
- Disseminate the results of the study and develop recommendations for health policy makers, aiming at embedding the learnings derived from the project into policies and practices on a local, national and international level

The outcomes of the Feel4Diabetes-study are periodically uploaded on the project website (http://feel4diabetes-study.eu/)

During the first period of the project, the following studies and tasks were completed by the Feel4Diabetes partners:

1. Two systematic literature reviews were conducted to identify which are the vulnerable groups with regard to type 2 diabetes development and the most important (sub-)behaviours related to risk factors for type 2 diabetes development in vulnerable families
2. Focus groups with parents, grandparents, teachers and health promotion professionals were executed in the six intervention countries participating in Feel4diabetes to identify the key barriers and
facilitators from the social and physical environment related to risk factors for type 2 diabetes development in vulnerable families

3. Two literature reviews were conducted to identify school-based programs aiming to promote healthy eating and physical activity, with emphasis on socioeconomic position and vulnerable groups and research programs focusing on the identification of adults at high risk for type 2 diabetes and on interventions for the prevention of type 2 diabetes in those high-risk population groups

4. A local and national Stakeholder Advisory Board was established in the six intervention countries, along with an international Stakeholder Advisory Board, consisting of international and national policy makers

5. Two surveys to identify the existing guidelines and policies, as well as the current practices and availability of human resources and infrastructure for the prevention of type 2 diabetes, were conducted in the six intervention countries

6. The questionnaires to be used for the impact and outcome evaluation of the Feel4Diabetes-intervention were developed, along with the relevant databases. Moreover, studies to assess the validity and reliability of the questionnaires and the intra- and inter- observer reliability of the measurements performed by the researchers from the six countries, were conducted

7. The municipalities/areas in the six intervention countries where the Feel4Diabetes-intervention would take place were identified. Approvals from the relevant local authorities were taken. The recruitment and baseline measurements with the families started, using common protocols, tools and procedures across the six countries

8. The tools that would be used to assess the cost-effectiveness of the Feel4Diabetes-intervention were developed

9. A communication and dissemination plan was set for disseminating Feel4Diabetes-study’s main outcomes to stakeholders and target groups

During the second period of the project, the following tasks were completed by the Feel4Diabetes partners:
1. The intervention material was finalised in English and further translated and adapted to the local needs of each of the six intervention countries
2. The baseline measurements were completed
3. The 1st year of the Feel4Diabetes-intervention was completed
4. A process evaluation plan and relevant tools, along with their databases, were developed to assess whether the Feel4Diabetes-intervention was implemented as planned
5. The 1st follow up measurements were completed
6. All data retrieved were entered in the relevant databases

During the third period of the project, the following tasks were completed by the Feel4Diabetes partners:
1. The 2nd year of the Feel4Diabetes-intervention was completed
2. The 2nd follow up measurements were completed
3. All data were entered in the relevant databases and analyzed to assess the impact and outcome of the intervention

The key findings of the studies conducted during the first, second and third period of the project were disseminated in two international meetings
Progress beyond the state of the art and expected potential impact (including the socio-economic impact and the wider societal implications of the project so far)

During the first, second and third period of its implementation, the Feel4Diabetes project made the following progress beyond the state of the art:

• The PRECEDE-PROCEED Model was followed to provide the systematic evidence-based approach needed for the project
• A screening procedure to identify families at high risk for type 2 diabetes was created
• Behaviours and their determinants associated with type 2 diabetes risk factors in vulnerable groups were identified via executed systematic reviews and focus groups
• Identification of effective methods used in previous and ongoing research programs in the field of type 2 diabetes prevention in order to build on them and expand existing knowledge
• Record of European and national guidelines relevant to the prevention and treatment of type 2 diabetes and available personnel/infrastructure that could be potentially used in the Feel4Diabetes intervention programme
• Identification of local, national and international stakeholders: local/national and international stakeholder advisory boards (SAB) were established in the six participating intervention countries to ensure information flowing. These stakeholders were actively involved in the development and the implementation of an innovative community-based intervention program: The Feel4Diabetes-project developed an intervention targeting the overall population, as well as high-risk for type 2 diabetes families. Mobile technology and face-to-face sessions were used as a part of the intervention
• Evaluation of the effectiveness and cost-effectiveness, affordability and scalability of the intervention guiding the formulation of recommendations to potentially embed the project into policy and practice

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