

2018



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 774210



## D7.7: Questionnaire measuring readiness for action and attitudes towards actions to prevent obesity

University of Oslo  
31.10.2018



<b>Deliverable administration and summary</b>			
<b>Due date</b>	31.10.2018		
<b>Submission date</b>	31.10.2018		
<b>Deliverable type</b>	Demonstrator		
<b>Contributors:</b>	<b>Name</b>	<b>Organisation</b>	<b>Role / Title</b>
Deliverable Leader	Nanna Lien	UiO	WP7 leader
Contributing Author(s)	Helene Holbæk	UiO	Research assistant
Reviewer(s)	Deanna Hoelscher	UTHealth	Professor
Final review and approval	Nanna Lien	UiO	WP7 leader

<b>Document change history</b>				
<b>Version</b>	<b>Release date</b>	<b>Reason for Change</b>	<b>Status (Draft/In-review/Submitted)</b>	<b>Distribution</b>

<b>Dissemination level</b>	
PU	Public

## Executive Summary

A questionnaire will be used to evaluate the changes in attitudes towards obesity prevention and readiness for action by having the participants (youth) fill in the questionnaire before any activities for youth alliances commence and again at regular intervals (WP5) and a few months after the last youth alliance activity (WP6). A similar questionnaire will be used to evaluate the same factors in stakeholders participating in the project (WP6) before the dialogue forum, right after and a few months thereafter.

The questionnaires have been developed based on De Vet et. al's (2011) 6 step method for developing questionnaires, including defining and elaborating the constructs intended to be measured, choice of measurement method, selecting and formulating items, scoring issues, pilot-testing, and field-testing. Since this study includes participants from 5 different countries the questionnaires will be translated from English to Norwegian, Dutch, Portuguese, and Polish following De vet et. al's (2011) 6 task method for translating questionnaires. This includes translation, synthesis of translated questionnaires, back translation, the making of a pre-final version, pre-testing, and making of the final version. To ensure that the questionnaires have the same validity after the translation, and cultural issues are taken into account, a cross-cultural validation will be conducted.

## Table of content

Executive Summary .....	3
List of acronyms / abbreviations .....	5
Introduction.....	6
Deliverable description .....	6
Objective of deliverable .....	6
1. The questionnaire draft.....	6
1.1. The development process .....	6
2. Translating and cross-cultural validation protocol.....	12
2.1. Phase A (November and December 2018) .....	13
2.2. Phase B (Spring 2019).....	15
3. The data collection .....	17
3.1. When, how often and how the data will be collected .....	17
Youth questionnaire.....	17
Stakeholder questionnaire .....	18
3.2. Information given to participants and written consents .....	18
3.3. How the data will be processed and data security .....	19
References.....	19
Appendix.....	23



## List of acronyms / abbreviations

GDPR – General Data Privacy Regulation

T1+2 – The synthesised version (translator 1 and translator 2) of the translated questionnaire

UiB – University of Bergen

UiO – University of Oslo

WP – Work Package



## Introduction

This document includes a description of the final draft questionnaires, with a general outline of the development process and a protocol on how to translate and cross-cultural validate the questionnaires from English to Norwegian, Dutch, Portuguese and Polish to get the questionnaires that will be used in the data collection as outlined in the last part of this document.

### Deliverable description

*A questionnaire for measuring attitudes/readiness for action towards policy measures to combat childhood obesity will be prepared as part of the evaluation work. The questionnaire will be pretested with the target groups in each case country before implementation.*

### Objective of deliverable

*Process evaluation data will be collected on the youth and other stakeholders involved in the activities of WP5-6 to track changes in attitudes towards obesity prevention and readiness for action.*

*To evaluate the experiences/changes of the youth involved in the project (WP5) and to evaluate the experience of the participants in the forums (WP6).*

## 1. The questionnaire draft

A short online questionnaire-based survey (about 10-15 minutes) for youth who are involved in WP5-6 and a separate one for stakeholders (about 10-15 minutes) who take part in the dialogue forums (WP6) will be conducted. The questionnaires will be used to evaluate the changes in attitudes towards actions to prevent obesity and readiness for action by having the participants (youth) fill in the questionnaire before any activities commence and again at regular intervals (youth alliances - WP5) and 3 months after the last alliance activity after the dialogue forum (WP6). The stakeholder questionnaire will be used to evaluate the same two factors in stakeholders participating in the project (WP6) before the dialogue forum, right after and 3 months thereafter. This section includes a detailed description of the development process.

Please find the final draft questionnaires in a separate file.

### 1.1. The development process

Developing new questionnaires is an extensive process and is recommended to be avoided when possible. Often that is not an option and a new questionnaire has to be developed. For this project De Vet et al.'s method for developing questionnaires has been used (de Vet, 2011). The method consists of 6 steps:

## 1. Definition and elaboration of the construct intended to be measured

Aim: Measure readiness to action and changes in attitudes towards actions to prevent obesity in youth and stakeholders.

Target group: Youth (age 16-18) and stakeholders involved in Co-Create (WP5-6).

Underlying assumptions (from engagement protocol, WP5):

- *The political view and participation of young people in tackling the issue of obesity needs to be further developed*
- *The increase of political participation of youth in addressing the problem of obesity includes shifting the thinking of the issue from the lens of individual responsibility to a political one.*
- *Capacity building that allows young people to learn more about an issue, in this case about obesity, is an integral aspect to increase their readiness for action, in this case in coming up with new policy ideas to address obesity*
- *Experience-based learning is an effective capacity building tool for youth as it allows easier transition from knowledge acquisition to action as learning and activities are intertwined throughout the process*
- *Group learning and group feedback provides an environment for youth to get used to thinking of and addressing the issue of obesity through a collective lens*
- *Local context and local knowledge influence political participation and empowerment of young people*

## 2. Measurement method

Method: Multi item online questionnaire-based surveys (baseline + follow-ups) suitable for PCs and tablets for youth and stakeholders.

There was agreement in the group (all case countries) about using an online rather than paper-based survey method in Co-Create. Access to PC, tablet and/or smart phone among youth is common in all case countries.

A big part of the questions are formulated in matrices (see the final draft questionnaires in a separate file) to reduce the amount of text in the questionnaire to further decrease the respondent burden. Completing a questionnaire with matrices is not optimal on smart phones. The participants will therefore be recommended to complete the questionnaires on either a PC or tablet.

Online survey service: Different online survey service options available have been investigated. Since participants from 5 different countries are part of Co-Create it was important that the online survey service is easy to manage from all case countries and that it is compatible for all case languages. SurveyXact by Ramboll met these requirements and will be applied in this project (SurveyXact by Ramboll). This tool was chosen partly because it is Scandinavia's leading questionnaire-based survey tool and partly because there was already access to a license within the project.

### 3. Selecting and formulating items

Consortium members were asked for questionnaires they knew of and searches were made for relevant literature and surveys used in previous studies on either readiness to action or attitudes towards obesity prevention (de Vet, 2011). Relevant questions and scales for this project were collected in an excel document. Questions originally developed in other surveys and scales that were used have been modified to better fit the aim for this project and drafts have been made and revised.

Articles that were found relevant for developing questions measuring readiness for action and changes in attitudes towards actions to prevent obesity have been listed below. See table 1 for an overview of which references were actually used (questions unchanged or adjusted from the original questionnaire for Co-Create) in the questionnaires.

#### Relevant articles for measuring readiness for action:

- (Ross, Dearing, & Rollins, 2015)
- (Ozer & Schotland, 2011)
- (King et al., 2015)
- (Millstein, Woodruff, Linton, Edwards, & Sallis, 2016)
- (Holden, Evans, Hinnant, & Messeri, 2005)
- (Kasmel & Tanggaard, 2011)
- (Reininger et al., 2003)
- (Constance A. Flanagan, 2007)
- (Frerichs, Sjolie, Curtis, Peterson, & Huang, 2015)
- (Larson, Neumark-Sztainer, Story, van den Berg, & Hannan, 2011)
- (Wright et al., 2015)
- (Peterson, Peterson, Agre, Christens, & Morton, 2011)
- (Zimmerman & Zahniser, 1991)
- (Israel, Checkoway, Schulz, & Zimmerman, 1994)
- (McConaughy, Diclemente, Prochaska, Velicer, & Freedheim, 1989)
- (OECD Development centre, 2017)

#### Relevant articles for measuring changes in attitudes towards actions to prevent obesity:

- (NHS Health Scotland, 2017)
- (T. Tompson, 2012)
- (European Association for the Study of Obesity, 2014)
- (Deanna M Hoelscher, 2013)
- (Nykiforuk, 2014)
- (Sikorski et al., 2012)
- (Wilson, 2007)
- (Bobek, Zaff, Li, & Lerner, 2009)
- (Hilbert, Rief, & Braehler, 2007)
- (Chaney, Wallen, & Birch, 2011)
- (The Associated Press - NORC Center for Public Affairs Research, 2016)

The baseline questionnaires include background questions about each participant (date of birth, gender, ethnicity, body measures, socioeconomic status, physical activity habits, and eating habits) (table 1). The purpose of these questions is to provide information to describe and evaluate the diversity of the participants in Co-Create, both youth and stakeholders. These parameters will also provide descriptive information about people dropping out, if relevant.

To make the follow-up questionnaire as short as possible, background questions are not included with the only exception of the questions about date of birth and gender. This is to be able to cross check that we are linking all responses from each individual with the correct individual.

The majority of questions in the youth and stakeholder questionnaires are included both in the baseline and the follow-up questionnaires. There are questions about engagement in terms of memberships in other political or societal groups and political participation (youth questionnaire) to get an overview of how many youth who have experience from engagement from before and if this changes during the project period. Correspondingly, there are questions about youth involvement (stakeholder questionnaire) to get overview of whom, if any, have had experience with youth involvement prior to the project and if this changes after taking part in the dialogue forums.

With the questions measuring “readiness to action” we aim to assess youth’s readiness to be involved and engaged in dealing with societal issues before, during and after attending activities in Co-Create, and stakeholders’ readiness to include youth in core activities before and after being part of dialogue forums (WP6). The questions have been divided into different concepts based on the literature, but because of the inconsistency of dividing questions to different concept in the different articles, placing questions to a concept have been challenging. Some articles have categorised questions in specific concepts, others have used broader concepts, and some have even used different concepts for the same questions. To make sure the questions included in the youth and stakeholder questionnaires are grouped into the right concept we will need to do an explorative factor analysis of the baseline data.

The other main category “attitudes towards actions to prevent obesity” includes questions covering 2 concepts; responsibility and drivers of lifestyle choices (table 1). With these questions we aim to track changes of the participants’ attitudes regarding who they think should be responsible for trying to reduce the number of people in their country who are overweight or obese and if they believe there are factors internal or external to the individual that are drivers of lifestyle choices.

In addition, the follow-up questionnaires include questions to evaluate the process of being involved in Co-Create. The youth questionnaire includes questions about attendance, recruitment of peers, roles and participation, advocacy outcome efficacy and personal advocacy activities since starting in Co-Create (table 1). They will also get the opportunity to give feedback in open ended questions at the very end of the questionnaire about what they liked/disliked about being part of the project and if they have suggestions for improvements. In the stakeholder questionnaire there are questions about advocacy outcome efficacy and impact since attending dialogue forums to evaluate the process of attending dialogue forums (table 1).

**Table 1. Overview of concepts covered in the questionnaire**

Category	Concepts	Reference
Descriptive	<ul style="list-style-type: none"> <li>- Date of birth</li> <li>- Gender</li> <li>- Ethnicity <sup>a</sup></li> <li>- Body measures <sup>a</sup></li> </ul>	<ul style="list-style-type: none"> <li>- YEAH! (Millstein et al., 2016)</li> <li>- YEAH! (Millstein et al., 2016)</li> <li>- HBSC – personal communication</li> <li>- (HBSC, 2016)</li> </ul>
Socio-economic status	<ul style="list-style-type: none"> <li>- Family Affluence Scale <sup>a, c</sup></li> <li>- Education level <sup>d</sup></li> </ul>	<ul style="list-style-type: none"> <li>- HBSC (Currie et al., 2008)</li> <li>- (Galobardes, Shaw, Lawlor, Lynch, &amp; Davey Smith, 2006)</li> </ul>
Behaviour	<ul style="list-style-type: none"> <li>- Physical activity habits <sup>a</sup></li> <li>- Eating habits <sup>a</sup></li> </ul>	<ul style="list-style-type: none"> <li>- (HBSC, 2016)</li> <li>- (HBSC, 2016)</li> </ul>
Engagement	<ul style="list-style-type: none"> <li>- Member in political/youth organizations <sup>c</sup></li> <li>- Political participation <sup>c</sup></li> </ul>	<ul style="list-style-type: none"> <li>- (Ana, Matt, &amp; Mark, 2018)</li> <li>- (The Associated Press - NORC Center for Public Affairs Research, 2016)</li> </ul>
Youth involvement	<ul style="list-style-type: none"> <li>- Involvement <sup>d</sup></li> </ul>	<ul style="list-style-type: none"> <li>- (Family Health International, 2005)</li> </ul>
Readiness to action	<ul style="list-style-type: none"> <li>- Self-efficacy/participatory behaviour/ research and action self-efficacy</li> <li>- Ways of expressing political voice <sup>c</sup></li> <li>- Perceived socio-political control (active participation/optimism for change)</li> <li>- Knowledge of resources</li> <li>- Intention to advocate</li> <li>- Competence for civic action</li> <li>- Advocacy outcome efficacy</li> <li>- Readiness to action for stakeholders <sup>d</sup></li> </ul>	<ul style="list-style-type: none"> <li>- (Constance A. Flanagan, 2007; Ozer &amp; Schotland, 2011; Ross et al., 2015)</li> <li>- (Constance A. Flanagan, 2007)</li> <li>- (Constance A. Flanagan, 2007; Ozer &amp; Schotland, 2011; Ross et al., 2015)</li> <li>- (Constance A. Flanagan, 2007; Ozer &amp; Schotland, 2011)</li> <li>- (King et al., 2015)</li> <li>- (Constance A. Flanagan, 2007; King et al., 2015)</li> <li>- (Constance A. Flanagan, 2007; Ozer &amp; Schotland, 2011)</li> <li>- (OECD Development centre, 2017)</li> </ul>
Changes in attitudes towards actions to prevent obesity	<ul style="list-style-type: none"> <li>- Responsibility</li> <li>- Drivers of lifestyle choices</li> </ul>	<ul style="list-style-type: none"> <li>- (Deanna M Hoelscher, 2013; NHS Health Scotland, 2017; The Associated Press - NORC Center for Public Affairs Research, 2016)</li> <li>- (European Association for the Study of Obesity, 2014; The Associated Press - NORC Center for Public Affairs Research, 2016)</li> </ul>
Process	<ul style="list-style-type: none"> <li>- Attendance <sup>b, c</sup></li> <li>- Recruitment of peers <sup>b, c</sup></li> <li>- Roles and participation <sup>b, c</sup></li> <li>- Personal advocacy activities since starting Co-Create <sup>b, c</sup></li> <li>- Advocacy outcome efficacy <sup>b</sup></li> <li>- Feedback <sup>b</sup></li> <li>- Impact since attending dialogue forums <sup>b, d</sup></li> </ul>	<ul style="list-style-type: none"> <li>- Developed for Co-Create</li> <li>- (Marr-Lyon, Young, &amp; Quintero, 2008)</li> <li>- YEAH! (Millstein et al., 2016)</li> <li>- YEAH! (Millstein et al., 2016)</li> <li>- YEAH! (Millstein et al., 2016)</li> <li>- Developed for Co-Create</li> <li>- (University of Winsconsin-Extension, 1998)</li> </ul>

<sup>a</sup> Concept only covered in baseline questionnaire, <sup>b</sup> Concept only covered in follow-up questionnaire,

<sup>c</sup> Concept only covered in youth questionnaire, <sup>d</sup> concept only covered in stakeholder questionnaire

Final draft questionnaires (youth and stakeholder questionnaire) have been developed, discussed across work packages and revised based on comments and feedback.

#### 4. Scoring issues

Scoring scales have been developed to assess participants' readiness to action and attitudes towards actions to prevent obesity at baseline and to track changes after attending youth alliances (WP5) and dialogue forum (WP6) (see appendix 1).

There are 18 questions measuring readiness to action in the youth questionnaire. A score from 1 to 5 will be given on each question depending on whether the participant strongly agree (5 points) or strongly disagree (1 point) with the statements. For questions measuring the same concept the scores will be summed to make up a subscale score for the concept. The subscale scores will be summed to create a "readiness to action" index score (Millstein et al., 2016).

In the stakeholder questionnaire there are 15 questions measuring readiness to action. There will be given a score from 1 to 5 on 7 questions depending on whether the participant strongly agree (5 points) or strongly disagree (1 point) with the statements. For another 7 questions, there will be a score from 0 ("no") to 2 ("yes") and for the last question there will be a score from 0 to 5 depending on the stated frequency from never/seldom (0 points) and weekly (5 points). As in the youth questionnaire, for questions measuring the same concept the scores will be summed to make up a subscale score for the concept. The subscale scores will be summed to create a "readiness to action" index score.

The 31 questions measuring attitudes towards actions to prevent obesity are the same in both the youth and stakeholder questionnaires and will therefore be scored in the same way in both questionnaires. These questions are divided into two concepts; responsibility (17 questions) and drivers of lifestyle choices (14 questions). Questions measuring responsibility are further divided into individual (5 questions) or collective (12 questions) responsibility which will make up two subscale scores. There will be given a score from 1 to 3 ("No"=1 "I don't know"=2, and "Yes"=3) on each question which will be summed to create an individual and a collective responsibility subscale score. Questions measuring drivers of lifestyle choices are also further divided into two subscales; internal (8 questions) or external (6 questions) drivers. A score from 1 to 5 will be given on each of these questions depending on whether the participant strongly agree (5 points) or strongly disagree (1 point) with the statement. The scores will be summed to create an internal and an external drivers subscale score. Dividing the questions in the four subscale scores makes it possible to track whether the participants think it is an individual or a collective responsibility to reduce the number of people who are overweight or obese and if they think unhealthy lifestyle choices are dependent on internal or external drivers. It will furthermore be possible to see if it changes during participation in the project. Therefore, evaluation of the participants' attitudes towards actions to prevent obesity will be based on the results in each of the four subscales rather than one index score for the category in whole.

Questions describing background characteristics will only be measured to describe the participants. The participants' body mass index (BMI) will be estimated, they will be divided into low, middle and high socio-economic status based on the family affluence scale, and they will be given a score on their physical activity and eating habits. The questions measuring the process will also be assessed without giving a score.

### **5. Pilot-testing**

The questionnaires will be pilot-tested in each case country while the questionnaires are translated and cross-cultural validated. The translating and cross-cultural validation protocol is described in detail below in section two.

### **6. Field-testing**

Extensive field testing beyond the translation and cross-cultural validation will not be feasible in all five countries, but Norway will try to do a test-retest.

## **2. Translating and cross-cultural validation protocol**

According to De vet et al. the translation process of questionnaires consists of six tasks; translation, synthesis, back translation, making a pre-final version, pretesting and making the final version (de Vet, 2011). This process will in Co-Create be divided in two phases, phase A (task 1-4) and phase B (task 5-6).

All items will first be written in English, then translated into Norwegian, Dutch, Polish and Portuguese and back-translated to English. To ensure that the questionnaires have the same validity after the translation, and cultural issues are taken into account, a cross-cultural validation must be conducted (de Vet, 2011). Cross-cultural validity is defined by Mokkink (2010) as *“the degree to which the performance of the items on a translated or culturally adopted instrument are an adequate reflection of the performance of items in the original version of the instrument”* (Mokkink et al., 2010).

The cross-cultural validation will consist of a content validation of the translated questionnaires and will be carried out during the translation process. Translators and the developers of the original questionnaires will examine thoroughly whether the translated questionnaires are an adequate reflection of the construct (Mokkink et al., 2010), whether the meaning of the items are the same after translation and whether the items are relevant. The assessment of the questionnaires' content validity will be based on dialogue between translators and developers, written reports from the translation process and cognitive interview with target group (see tasks 1-6 below for further explanation).

The development of the original questionnaires was done by the University of Oslo with input from WP5 staff to ensure relevance for the engagement protocol and the staff from the other case countries for general comments. In addition, the local partner group will be responsible for the translation and the pre-testing of the questionnaire in each of the five case countries. The overall coordination and administration will be carried out by the original developers.

This protocol aims to guarantee that all partners follow the same tasks and procedures when translating and conducting cross-cultural validation of the questionnaires from English to Norwegian, Dutch, Polish, and Portuguese. An overview of the expected timeline and people who needs to be involved in the translation and validation process is presented in table 2 and 3.

**Table 2. Overview of people involved in translating and cross-cultural validation of the questionnaire and due dates.**

<b>People who are suggested needed to be involved in the translation process</b>	Translator 1 <sup>a</sup> (from project) Translator 2 (mother tongue: Norwegian/Dutch/Polish/Portuguese, language expert: English) Translator 3 <sup>a</sup> (from project)  Sample of target group (n=15-30 youth) (e.g. a school class) Researcher conducting a cognitive interview with target group (n=5-8) Research assistant
<b>Due dates</b>	Questionnaires for youth and stakeholders (English draft): October 2018 (deliverable D7.7)  Phase A (task 1-4): November - December 2018 Pre-test English questionnaire(s): 2018/spring 2019 Ethic approval to conduct pre-test submitted: November 2018 Ethic approval to conduct pre-test: January/February 2019 Phase B (task 5-6), translated questionnaires: February/March 2019

<sup>a</sup> Translator 1 and 3 should preferably be two different persons

## 2.1. Phase A (November and December 2018)

### Task 1: Translation

The questionnaires (both youth and stakeholders) will be translated from English to Norwegian/Dutch/Polish/Portuguese separately by two persons in each country. Translator 1 is suggested to be the one responsible for the translation and should preferably be part of Co-Create, while translator 2 should preferably not be part of the project. They should both be bilingual with target language (Norwegian/Dutch/Polish/Portuguese) as mother tongue.

When translating the questionnaires all translators have to be careful choosing appropriate words and phrasings suitable for youth's reading level. In the US it is common to measure readability with

Flesch-Kincaid readability test (Calderón, Morales, Liu, & Hays, 2006; Rudolf Flesch). When developing surveys targeted for youth the reading level is often recommended to be set to 6<sup>th</sup> or 8<sup>th</sup> grade level. Such tools evaluating readability should be used by translators when available in case countries.

The translation will be performed in an Excel file to avoid shifts and changes in the layout of the questionnaire. During the translation process each translator will make a written report (in English) documenting challenging phrases, uncertainties, and considerations for their decisions.

### **Task 2: Synthesis**

Translator 1 will combine the results of both translations, and based on the reports from task 1, make a synthesised version of both the youth and stakeholder questionnaire (T1+2). Translator 2 will be asked to read through the questionnaires (T1+2) to agree on/approve decisions made. Translator 1 will write a report in English documenting choices made and how they have resolved discrepancies and challenges.

### **Task 3: Back translation**

The synthesised questionnaire drafts (T1+2) will then be translated back from Norwegian/Dutch/Polish/Portuguese into English by translator 3. Translator 3 should preferably be from the project and can manage both English and case language well. Translator 3 should be different from translator 1 and will be blinded from the original version.

The back-translation will also be performed in a separate Excel file for each questionnaire to avoid shifts and changes in the layout of the questionnaires. This file should only include the combined (T1+2) questionnaires, and exclude the original questionnaires. During the back-translation process translator 3 will make a written report (in English) documenting challenging phrases, uncertainties, and considerations for decisions made.

### **Task 4: Making a pre-final version**

After the back translation, translator 1 from each country will have meetings with developers of the original questionnaires and representatives from the UK case to discuss the differences in the questionnaires between the original version and the translated version and whether there are cultural challenges. They will have to cross check and compare all translations (Norwegian, Dutch, Polish, and Portuguese) and discuss whether the cultural differences/challenges are similar or not across the countries. They will also have to decide if challenging questions will be deleted from the questionnaire or adjusted to fit the meaning of the question. A report will be written in English.

A pre-final version of the questionnaires will be made based on all translations, reports made this far and meetings with original developers. This is carried out by translator 1. A report will be written in English.

Each country has to apply for ethical approval while the translation and adjustment of the pre-final version of the questionnaires is developed before the pre-test can be carried out.

## 2.2. Phase B (Spring 2019)

### **Task 5: Pre-testing**

The baseline questionnaire for youth will be pilot tested in a small sample of the target group in each country (n=15-30) to check if the pre-final questionnaire is comprehensible. This could be a school class with youth aged 16-18 years – preferably from a lower socio-economic area. Translator 1 is suggested to be responsible for recruiting a pre-test sample including ensuring the necessary ethical approvals and consents from youth and parents.

#### Pre-testing:

Translator 1 and an assistant will visit the school that accepts to be part of the pre-testing to conduct the pre-test of the questionnaire. A paper version of the questionnaire will be handed out in the classroom under the supervision of translator 1 and the assistant. The youth will be told to fill in the questionnaire and mark questions/words/sentences they do not understand or want to comment. When they have completed the questionnaire they will give a sign to translator 1/assistant who will note the time it took to complete the questionnaire and a mean duration time will be calculated to evaluate if the aim of 10-15 minutes completion time can be reached. The very last question in the questionnaire, which only will be included in the pre-testing, will be an open box where they can comment and evaluate the questionnaire and what they felt about completing it. They will also get time to go back and comment specifically on questions they marked as difficult. When the youth are done translator 1/assistant will collect completed questionnaires from youth that are not taking part in the cognitive interview.

#### Cognitive interview:

Right after the students have completed the pre-test of the questionnaire, a cognitive interview will be conducted among 5-8 youth in each country (Singh et al., 2011). The teacher will be responsible for picking out the students. Participation in the cognitive interview will be completely voluntary.

The main aim of the cognitive interview is to understand in detail the youth's experiences of filling in the questionnaire. The interview will be conducted by translator 1 and an assistant. There will be a standardized interview guide/question routine (will be developed in English) with questions about the youth's opinion about the questionnaire, the comprehensibility, and the feasibility of the questionnaire and its relevance (van Stralen et al., 2011). The assistant will take notes during the interview and translator 1 will write a report with thoughts and experiences from the interview.

Based on the results from the pre-testing and the cognitive interview translator 1 will do adjustments in the translated questionnaire. A report (in English) on suggested revisions will be written.

Recruitment (Singh et al., 2011):

- Call schools (a script will be developed in English before ethical approval), explain shortly study aim, and ask if they are interested in participating.
- Schools that show interest in participating will get an e-mail with more information on the background, goals, and methodology (will be developed in English before ethical approval).
- When a week has passed, make a new phone call to the schools for more information about their interest in participating. When a school is interested in participating make the school select one class of youth aged 16/17 (n=15-30) (de Vet, 2011) and scheduled a day to conduct the pre-testing and the cognitive interview. The teacher in that class will be asked to select 5-8 youths (diversity recruitment in terms of male/female, ethnicity, socio-economic status) to take part in cognitive focus group interview after they have filled in the questionnaire. This should be voluntary.
- The person responsible for conducting the cognitive interview in each case country will send an e-mail confirming the school's participation, the date and the youths that will take part in the cognitive interview.

The baseline questionnaire for stakeholders will be pre-tested with regards to readability and content validity by a few people (n=3-5) not involved in the project. This will be conducted in co-operation with WP6 and the development of the dialogue forums.

**Task 6: Making a final version**

All translations and written reports will be sent to the original developers of the questionnaires. They will do a process audit from all translations in each country and discuss them in a meeting with all countries involved as with the translation/back-translation process. After the approval, the translated questionnaires are ready.

**Table 3. Translating and cross-cultural validation timeline**

Month	What	Who
<b>October 31<sup>st</sup> 2018</b>	Questionnaire draft (English)	Original developers
<b>November 2018</b>	Application to ethics (England, Norway, Netherlands, Poland, Portugal)	Original developers, translator 1
	Translation of questionnaires (Norwegian, Dutch, Polish, Portuguese) (task 1 +2)	Translator 1 + 2, Original developers
	School recruitment (England)	Translator 1
<b>December 2018</b>	Back-translation and pre-final version (Norwegian, Dutch, Polish, Portuguese) (task 3-4)	Translator 3 + 4/1, Original developers
<b>January 2019</b>	Pre-test + cognitive interview (England)	Translator 1 + assistant

<b>February 2019</b>	School recruitment (Norway, Netherlands, Poland, Portugal)	Translator 1
	Pre-test + cognitive interview (Norway, Netherlands, Poland, Portugal)	Translator 1 + assistant
<b>March 2019</b>	Making final version (together during the week in Oxford)	Original developers, translator 1
<b>April 2019</b>	Making final version online	Original developers, translator 1
	Informal test of online questionnaires (England, Norway, Netherlands, Poland, Portugal)	Translator 1
<b>May 2019</b>	Delivery of final questionnaires (England, Norway, Netherlands, Poland, Portugal)	Original developers

### 3. The data collection

#### 3.1. When, how often and how the data will be collected

##### Youth questionnaire

To be able to follow any changes in youth attitudes and readiness for action, the participants will have to complete the questionnaire multiple times, one at baseline, several follow-ups (on monthly bases) and around 3 months after the last alliance meeting. The baseline questionnaire will be given to everyone who is participating in the youth alliance (WP5) and/or dialogue forums (WP6) before their first meeting/involvement with the alliances, regardless of whether they are joining from the start of the project or are recruited later on. Protocols describing how to make sure that youth recruited later on in the project get to complete the baseline questionnaire prior to their first alliance meeting will be developed.

Since not all youth from the alliances are taking part in the dialogue forums there will not be questionnaires prior or right after this activity. Youth involved in a dialogue forum will be noted and written down manually in the dataset in a column providing information about whether the participants have attended a dialogue forum or not to see if it affects the answers in the questionnaires.

There will be a group of youth attending the dialogue forums that will not be part of the youth alliances in WP5. They will be asked to fill in the baseline questionnaires prior to the dialogue forum, right after and 3 months thereafter.

The questionnaires (baseline and follow-ups) will be sent to the participants by email. The participants' email addresses will be collected when they agree to participate in the project. Youth who do not have an active email address will get information about how to easily create an email address. The questionnaires will be sent to the participants at one specific day each month irrespective of any alliance activities. Advantages of this approach include all will get the opportunity

to respond regardless of attending the alliance meeting or not, the project will not need to buy pc's or tablets, and it is easy to make sure everybody gets the questionnaire. Disadvantages are that the youth will be dependent on access to a pc or tablet at home or school, they might feel less obliged to complete the questionnaire, they will not get help if they have questions or they might fill it in together with a friend.

A reminder will be sent to youth who do not complete the questionnaires within the deadline (one week after it was sent) giving them another week to complete the questionnaire. If the questionnaires are not completed within the second deadline this will be coded as missing and the participant will have to wait for the next month. At any alliances meetings during these two weeks after the questionnaire is sent out, youth will be reminded and strongly encouraged to complete the questionnaires. Group leaders will also be responsible to register who and how many youth that attend each alliance meeting.

A matched control group of 60 youth will be recruited in each country and they will receive the questionnaires at the same time as the participants.

### **Stakeholder questionnaire**

Stakeholders will be asked to fill in the questionnaire prior to the dialogue forum (baseline questionnaire), right after (follow-up questionnaire within a week after) and 3 months thereafter (follow-up questionnaire). The questionnaires will be sent to the participants by email. Stakeholders' contact information (e.g. email address) will be collected when they agree to participate in the dialogue forum. At each measurement point there will be sent out a reminder to stakeholders who have not completed the questionnaires within the deadline.

### **The distributor of the questionnaires**

A postdoctoral researcher at UiO in Norway will be responsible for distributing the questionnaires to all participants at the correct time during the project. Group leaders in each youth alliance will be responsible to communicate and update about new participants. The post doc will also provide any open ended feedback on the alliances to the countries involved, anonymized, for suggestions on improvements. Having one person responsible for distributing the questionnaires will make it less vulnerable for mistakes related to sending out the questionnaires and the reminders at the right time.

## **3.2. Information given to participants and written consents**

Youth will be informed about the questionnaires in the information letter and consent they have to sign before they decide to participate in the project (WP5). Stakeholders – and any youth recruited directly to the dialogue forums – will get information about the questionnaires before they agree to participate in the dialogue forums (WP6).

### 3.3. How the data will be processed and data security

The postdoctoral researcher at UiO will get access to the data through a two factor authentication procedure and be the one responsible for de-identifying the collected data during autumn 2020. This person will not look at individual answers while the youth alliances have regular meetings.

The General Data Privacy Regulation (GDPR) was a regulation in EU law that came into force May 25<sup>th</sup> 2018. This placed strong demands on companies collecting and treating personal data. SurveyXact is GDPR approved.

## References

- Ana, P., Matt, H., & Mark, D. G. (2018). Towards a Conceptualization of Young People's Political Engagement: A Qualitative Focus Group Study. *Societies*, 8(1), 17. doi:10.3390/soc8010017
- Bobek, D., Zaff, J., Li, Y., & Lerner, R. M. (2009). Cognitive, Emotional, and Behavioral Components of Civic Action: Towards an Integrated Measure of Civic Engagement. *Journal of Applied Developmental Psychology*, 30(5), 615-627. doi:10.1016/j.appdev.2009.07.005
- Calderón, J. L., Morales, L. S., Liu, H., & Hays, R. D. (2006). Variation in the Readability of Items Within Surveys. *American Journal of Medical Quality*, 21(1), 49-56. doi:10.1177/1062860605283572
- Chaney, B., Wallen, M., & Birch, D. (2011). The Development of an Instrument to Assess Advocacy Intentions for School Health Education. *American Journal of Health Education*, 42(5), 286-295. doi:10.1080/19325037.2011.10599199
- Constance A. Flanagan, A. K. S., and Michael D. Stout. (2007). *Civic Measurement Models: Tapping Adolescents' Civic Engagement*. Circle Working Paper 55. (55). Retrieved from <http://www.civicyouth.org/PopUps/WorkingPapers/WP55Flannagan.pdf>
- Currie, C., Molcho, M., Boyce, W., Holstein, B., Torsheim, T., & Richter, M. (2008). Researching health inequalities in adolescents: The development of the Health Behaviour in School-Aged Children (HBSC) Family Affluence Scale. *Social Science & Medicine*, 66(6), 1429-1436. doi:10.1016/j.socscimed.2007.11.024
- de Vet, H. C. W. (2011). *Measurement in medicine : a practical guide*. Cambridge: Cambridge University Press.
- Deanna M Hoelscher, D. D., Donna Nichols, Heather Atteberry, Tiffni Menendez, Whitney Chlon, Michelle Hashemi, Christina Ly, Jeanie Donovan. (2013). *2013 Texas Health Perception Survey*. Retrieved from [https://sph.uth.edu/content/uploads/2014/03/2013-Texas-Health-Perception-Survey\\_Report.pdf](https://sph.uth.edu/content/uploads/2014/03/2013-Texas-Health-Perception-Survey_Report.pdf)
- European Association for the Study of Obesity. (2014). *Obesity. Perception and policy. Multi-country review and survey of policymakers 2014*. Retrieved from [https://www.seedo.es/images/site/C3\\_EASO\\_Survey\\_A4\\_Web-FINAL.pdf](https://www.seedo.es/images/site/C3_EASO_Survey_A4_Web-FINAL.pdf)
- Family Health International. (2005). *Youth Participation Guide: Assessment, Planning, and Implementation. Section III: The Institutional Assessment and Planning Tool (IAPT)*. Retrieved from [https://www.advocatesforyouth.org/storage/advfy/documents/youth\\_participation\\_guide/sectioniiiinyt.pdf](https://www.advocatesforyouth.org/storage/advfy/documents/youth_participation_guide/sectioniiiinyt.pdf)

- Frerichs, L., Sjolie, S., Curtis, M., Peterson, M., & Huang, T. (2015). Process and Outcomes From a Youth-Led Campaign to Address Healthy Eating in an Urban High School. *The Journal of Primary Prevention, 36*(6), 433-438. doi:10.1007/s10935-015-0409-0
- Galobardes, B., Shaw, M., Lawlor, D. A., Lynch, J. W., & Davey Smith, G. (2006). Indicators of socioeconomic position (part 1). *Journal of Epidemiology and Community Health, 60*(1), 7. doi:10.1136/jech.2004.023531
- HBSC. (2016). *HBSC-2005/06, ed.1.0, Study Documentation*. Retrieved from [https://www.uib.no/sites/w3.uib.no/files/attachments/hbsc-2005\\_06\\_ed.1.0.pdf](https://www.uib.no/sites/w3.uib.no/files/attachments/hbsc-2005_06_ed.1.0.pdf)
- Hilbert, A., Rief, W., & Braehler, E. (2007). What determines public support of obesity prevention? *Journal of Epidemiology and Community Health, 61*(7), 585. doi:10.1136/jech.2006.050906
- Holden, D. J., Evans, W. D., Hinnant, L. W., & Messeri, P. (2005). Modeling Psychological Empowerment among Youth Involved in Local Tobacco Control Efforts. *Health Education & Behavior, 32*(2), 264-278. doi:10.1177/1090198104272336
- Israel, B. A., Checkoway, B., Schulz, A., & Zimmerman, M. (1994). Health Education and Community Empowerment: Conceptualizing and Measuring Perceptions of Individual, Organizational, and Community Control. *Health Education & Behavior, 21*(2), 149-170. doi:10.1177/109019819402100203
- Kasmel, A., & Tanggaard, P. (2011). Evaluation of Changes in Individual Community-Related Empowerment in Community Health Promotion Interventions in Estonia. *International Journal of Environmental Research and Public Health, 8*(6), 1772-1791. doi:10.3390/ijerph8061772
- King, K. M., Rice, J. A., Steinbock, S., Reno-Weber, B., Okpokho, I., Pile, A., & Carrico, K. (2015). Kentucky Teen Institute: Results of a 1-Year, Health Advocacy Training Intervention for Youth. *Health Promotion Practice, 16*(6), 885-896. doi:10.1177/1524839915588294
- Larson, N., Neumark-Sztainer, D., Story, M., van den Berg, P., & Hannan, P. J. (2011). Identifying correlates of young adults' weight behavior: survey development. *Am J Health Behav, 35*(6), 712-725.
- Marr-Lyon, L., Young, K., & Quintero, G. (2008). An Evaluation of Youth Empowerment Tobacco Prevention Programs in the Southwest. *Journal of Drug Education, 38*(1), 39-53. doi:10.2190/DE.38.1.d
- McConaughy, E. A., Diclemente, C. C., Prochaska, J. O., Velicer, W. F., & Freedheim, D. K. (1989). STAGES OF CHANGE IN PSYCHOTHERAPY: A FOLLOW-UP REPORT. *Psychotherapy: Theory, Research, Practice, Training, 26*(4), 494-503. doi:10.1037/h0085468
- Millstein, R., Woodruff, S., Linton, L., Edwards, C., & Sallis, J. (2016). Development of measures to evaluate youth advocacy for obesity prevention. *International Journal of Behavioral Nutrition and Physical Activity, 13*(1). doi:10.1186/s12966-016-0410-x
- Mokkink, L. B., Terwee, C. B., Patrick, D. L., Alonso, J., Stratford, P. W., Knol, D. L., . . . de Vet, H. C. W. (2010). The COSMIN study reached international consensus on taxonomy, terminology, and definitions of measurement properties for health-related patient-reported outcomes. *Journal of Clinical Epidemiology, 63*(7), 737-745. doi:10.1016/j.jclinepi.2010.02.006
- NHS Health Scotland. (2017). *Public attitudes to reducing levels of overweight and obesity*. Retrieved from <http://www.healthscotland.scot/media/1705/public-attitudes-to-reducing-obesity-in-scotland.pdf>
- Nykiforuk, C. I. J., Atkey, K.L., Nieuwendyk, L.M., Raine, K.D., Reed, S., & Kyle, K. (2014). *Policy Readiness Tool: Understanding Readiness for Policy Change and Strategies for Taking Action*.

- Retrieved from Edmonton, AB: School of Public Health: <https://policyreadinesstool.com/wp-content/uploads/2016/05/PolicyReadinessTool-April2016FINAL.pdf>
- OECD Development centre. (2017). *Evidence-based Policy Making for Youth Well-being: A Toolkit, OECD Development Policy Tools*. OECD Publishing, Paris Retrieved from <https://www.oecd-ilibrary.org/docserver/9789264283923-en.pdf?expires=1538656077&id=id&accname=id20501&checksum=520B9C7C5D33A9E82C54776544602EEA>
- Ozer, E. J., & Schotland, M. (2011). Psychological empowerment among urban youth: measure development and relationship to psychosocial functioning. *Health Educ Behav*, 38(4), 348-356. doi:10.1177/1090198110373734
- Peterson, N. A., Peterson, C. H., Agre, L., Christens, B. D., & Morton, C. M. (2011). Measuring Youth Empowerment: Validation of a Sociopolitical Control Scale for Youth in an Urban Community Context. *Journal of Community Psychology*, 39(5), 592-605. doi:10.1002/jcop.20456
- Reininger, B., Evans, A. E., Griffin, S., Valois, R., Vincent, M., Parra-Medina, D., . . . Zullig, K. (2003). Development of a youth survey to measure risk behaviors, attitudes and assets: examining multiple influences. *Health Educ. Res.*, 18(4), 461-476. doi:10.1093/her/cyf046
- Ross, H. M., Dearing, J. A., & Rollins, A. L. (2015). Oklahoma's Youth-Driven Tobacco Policy Campaigns. *American Journal of Preventive Medicine*, 48(1), S36-S43.
- Rudolf Flesch. How to Write Plain English. Chapter 2: Let's Start With the Formula. Retrieved from <https://web.archive.org/web/20160712094308/http://www.mang.canterbury.ac.nz/writing/guide/writing/flesch.shtml>
- Sikorski, C., Luppá, M., Schomerus, G., Werner, P., Konig, H.-H., & Riedel-Heller, S. G. (2012). Public Attitudes towards Prevention of Obesity.(Research Article). *PLoS ONE*, 7(6), e39325. doi:10.1371/journal.pone.0039325
- Singh, A. S., Vik, F. N., Chinapaw, M. J. M., Uijtdewilligen, L., Verloigne, M., Fernández-Alvira, J. M., . . . Brug, J. (2011). Test-retest reliability and construct validity of the ENERGY-child questionnaire on energy balance-related behaviours and their potential determinants: the ENERGY-project. *The International Journal of Behavioral Nutrition and Physical Activity*, 8(1), 136-136. doi:10.1186/1479-5868-8-136
- SurveyXact by Ramboll. Retrieved from <https://www.surveyxact.com/>
- T. Tompson, J. B., J. Agiesta, K.H. Brewer, L. Bye, R. Reiner, D. Junius. (2012). Obesity in the United States: Public Perceptions.
- The Associated Press - NORC Center for Public Affairs Research. (2016). *American Teens are Politically Engaged but Pessimistic about Country's Direction*. Retrieved from [http://www.apnorc.org/PDFs/Teen%20Politics/American\\_Teens\\_Pol\\_Topline\\_FINAL.pdf](http://www.apnorc.org/PDFs/Teen%20Politics/American_Teens_Pol_Topline_FINAL.pdf)
- University of Wiconsin-Extension. (1998). *Community Group Member Survey: Using the Results*. (G3658-9). Retrieved from <https://learningstore.uwex.edu/Assets/pdfs/G3658-09.pdf>
- van Stralen, M., Te Velde, S., Singh, A., De Bourdeaudhuij, I., Martens, M., van Der Sluis, M., . . . Brug, J. (2011). European Energy balance Research to prevent excessive weight Gain among Youth (ENERGY) project: Design and methodology of the ENERGY cross-sectional survey. *BMC Public Health*, 11(1), 65. doi:10.1186/1471-2458-11-65
- Wilson, L. F. (2007). Adolescents' Attitudes About Obesity and What They Want in Obesity Prevention Programs. *The Journal of School Nursing*, 23(4), 229-238. doi:10.1177/10598405070230040801

Wright, J. A., Whiteley, J. A., Laforge, R. G., Adams, W. G., Berry, D., & Friedman, R. H. (2015). Validation of 5 Stage-of-Change Measures for Parental Support of Healthy Eating and Activity. *Journal of Nutrition Education and Behavior*, 47(2), 134-142.e131.

doi:10.1016/j.jneb.2014.11.003

Zimmerman, M. A., & Zahniser, J. (1991). REFINEMENTS OF SPHERE-SPECIFIC MEASURES OF PERCEIVED CONTROL - DEVELOPMENT OF A SOCIOPOLITICAL CONTROL SCALE. *J. Community Psychol.*, 19(2), 189-204. doi:10.1002/1520-6629(199104)19:2<189::AID-JCOP2290190210>3.0.CO

2-6

## Appendix

Please find the final draft questionnaire in a separate file.



### Appendix 1: Scoring

#### Scoring – questionnaire for youth

An overview of questions that will give background characteristics

Category	Concept	Question	Scoring for each question	Scoring for concept	Total
<b>Descriptive</b>	Body measure	How much do you weigh without clothes?	Kg/m <sup>2</sup>	Underweight = <18,5; Normal weight = 18,5-24,9; Overweight = 25-20,9; Obesity = >30	Underweight Normal weight Overweight Obesity
		How tall are you without shoes?			
<b>Socio-economic status</b>	Family Affluence Scale	Does your family own a car, van or truck?	No=0, Yes, one=1, Yes, two or more=2	HBSC 0-13	Low: Middle: High:
		Do you have your own bedroom for yourself?	No=0, Yes=1		
		How many computers do your family own? (including laptops and tablets, not including game consoles and smartphones)	None=0, One=1, Two=2, More than two=3		
		How many bathrooms (room with a bath/shower or both) are in your home?	None=0, One=1, Two=2, More than two=3		
		Does your family have a dishwasher at home?	No=0, Yes=1		
		How many times did you and your family travel out of (country) for a holiday/vacation last year?	Not at all=0, Once=1, Twice=2, More than twice=3		
<b>Behaviour</b>	Physical activity habits	Over the past 7 days, on how many days were you physically active for a total of at least 60 minutes per day?	0 days, 1 day, 2 days, 3 days, 4 days, 5 days, 6 days, 7 days	HBSC	
	Eating habits	How many times a week do you usually eat or drink: fruits	Never, less than once a week, once a week, 2-4 days a week, 5-6 days a week, once a day		



			every day, every day more than once		
		How many times a week do you usually eat or drink: vegetables	Never, less than once a week, once a week, 2-4 days a week, 5-6 days a week, once a day every day, every day more than once		
		How many times a week do you usually eat or drink: sweets	Never, less than once a week, once a week, 2-4 days a week, 5-6 days a week, once a day every day, every day more than once		
		How many times a week do you usually eat or drink: soft drinks	Never, less than once a week, once a week, 2-4 days a week, 5-6 days a week, once a day every day, every day more than once		
		How often do you usually have breakfast (more than a glass of milk or fruit juice)? Please tick one box for weekdays and on box for weekend. <b>WEEKDAYS</b>	I never have breakfast during the week, one day, two days, three days, four days, five days		
		How often do you usually have breakfast (more than a glass of milk or fruit juice)? Please tick one box for weekdays and on box for weekend. <b>WEEKEND</b>	I never have breakfast during weekend, I usually have breakfast on only one day of the weekend (Saturday OR Sunday), I usually have breakfast on both weekend days (Saturday AND Sunday)		
<b>Engagement</b>	Member in political/youth organizations	Are you an active member in a political or non-political organisation? (e.g. political party, youth parliament, youth council)	Yes; no; not right now, but I have been		



	Political participation	Over the past month, how many times have you.... cooperated with others to try to solve a problem affecting your school, city or neighbourhood?	Never, 1-3 times, 4-6 times, 7-9 times, 10 times or more		
		Over the past month, how many times have you.... expressed concerns about social issues online? (e.g. Facebook, Twitter, Instagram, Pinterest, Snapchat etc)	Never, 1-3 times, 4-6 times, 7-9 times, 10 times or more		

### An overview of the scoring of questions measuring readiness to action and attitudes towards actions to prevent obesity

Category	Concept	Question	Scoring for each question	Scoring for concept	Total
Readiness to action	Self-efficacy/ participatory behavior/ research and action self-efficacy	holding a presentation to a group of people I don't know	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1		Develop a total score on readiness to action + a score for each concept.  (Will need to make an explorative factor analysis to group questions into different concepts)
	Ways of expressing political voice	expressing my views in front of a group of people	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1		
	Intention to advocate	using social networking platforms (facebook, twitter, instagram, pinterest, snapchat etc) to voice societal issues	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1		
	Intention to advocate/ participatory behavior/ research and action self-efficacy	making an interview of adults to learn their perspectives about a societal issue I am concerned about	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1		
calling someone on the phone that I have not met before to get their help with an societal issue I am concerned about		Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1			
sending an e-mail to a community leader about a societal issue I am concerned about		Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1			



	Competence for civic action	doing an interview on radio, TV or websites about a societal issue I am concerned about	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1		
	Competence for civic action	write an opinion letter to a local newspaper	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1	5-25	
		organize a petition	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1		
		organize and run a meeting	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1		
		plan and carry out a campaign to get my community to pass a new policy or law	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1		
		create a plan on societal level to address the high prevalence of overweight and obesity	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1		
	Advocacy outcome efficacy	I feel like I have a pretty good understanding of the important issues which confront my community	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1	2-10	
		I believe I can make a difference in my community	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1		
	Knowledge of resources	I know how to identify individuals or groups who can help working on preventing overweight and obesity	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1	5-25	
		I know where to find new and reliable information about overweight and obesity	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1		

		I know how to identify individuals or groups who can help working on promoting a healthy diet	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1		
		I know how to identify individuals or groups who can help working on promoting physical activity	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1		
		I know how my community rules and how policies are made	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1		
<b>Changes in attitudes towards actions to prevent obesity</b>	Responsibility (individuals)	Each individual (individual)	Yes=3, I don't know=2, No=1	Individual: 5-15	
		Health care professionals (e.g. doctors, nurses) (individual)	Yes=3, I don't know=2, No=1		
		Family and friends (individual)	Yes=3, I don't know=2, No=1		
		Employers (individual)	Yes=3, I don't know=2, No=1		
		Farmers (individual)	Yes=3, I don't know=2, No=1		
	Responsibility (collective)	Food and drink manufactures (collective)	Yes=3, I don't know=2, No=1	Collective: 12-36	
		Schools (collective)	Yes=3, I don't know=2, No=1		
		Supermarkets (collective)	Yes=3, I don't know=2, No=1		
		Restaurants (collective)	Yes=3, I don't know=2, No=1		
		The media (collective)	Yes=3, I don't know=2, No=1		
		Gyms/leisure centres (collective)	Yes=3, I don't know=2, No=1		
		Companies that help people diet (collective)	Yes=3, I don't know=2, No=1		
		The Government (national) (collective)	Yes=3, I don't know=2, No=1		
		The government (regional) (collective)	Yes=3, I don't know=2, No=1		
The government (local) (collective)		Yes=3, I don't know=2, No=1			
	Architects (built environments) (collective)	Yes=3, I don't know=2, No=1			
	Transportation (collective)	Yes=3, I don't know=2, No=1			
Drivers of lifestyle choices	Insufficient exercise (Internal)	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1	Internal: 8-40 External: 6-30	Individual and collective responsibility/	



	Insufficient personal motivation (Internal)	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1	Treated separately	internal and external will be treated separately.  Hypothesis: Individual responsibility and internal drivers will be high at baseline  Collective responsibility and external drivers will be lower at baseline and will increase after attending alliances
	Poor personal choices on the risk of obesity (Internal)	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1		
	Physiological and genetic factors (Internal)	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1		
	Lack of time to lead a healthy lifestyle (Internal)	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1		
	Lack of understanding of the risk associated with obesity (Internal)	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1		
	Being overweight is the new normal (Internal)	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1		
	Less active transportation (Internal)	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1		
	Limited access to healthy food (External)	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1		
	Access to unhealthy food (External)	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1		
	Unhealthy food marketing (External)	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1		



	Limited access to physical activity opportunities (External)	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1	
	The lack of policies on preventing overweight and obesity (External)	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1	
	Limited financial resources (External)	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1	

**An overview of questions that will give information on the process of being part of the project**

Category	Concept	Question	Scoring for each question	Scoring for concept	Total
Process	Attendance	How many times have you attended group meetings/activities with your youth alliance the last month?	None=0, 1-2 times=1, 3-4 times=2, 5 times or more=3	0-3	
	Recruitment of peers	Have you recruited other youth to participate in this project the last month?	None=0, 1-2 youth=1, 3-4 youth=2, 5 youth or more=3	0-3	
	Roles and participation	I took part in discussions when I attended meetings the last month	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1	4-20	
		I learn new scientific facts about overweight and obesity	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1		
		This project enable me to come up with suggestions for policy recommendations	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1		



		I feel ownership of the alliance	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1		
Personal advocacy activities since starting Co-Create		Since you started this project, how often have you tried to engage (discuss, ask questions etc) the following to think more about eating healthy or being physical active: <b>FAMILY</b>	Never/seldom=0, 1-3 days a month=1, once a week=2, 2-4 days a week=3, 5-6 days a week=4, every day=5	0-15	
		Since you started this project, how often have you tried to engage (discuss, ask questions etc) the following to think more about eating healthy or being physical active: <b>FRIENDS</b>	Never/seldom=0, 1-3 days a month=1, once a week=2, 2-4 days a week=3, 5-6 days a week=4, every day=5		
		Since you started this project, how often have you tried to engage (discuss, ask questions etc) the following to think more about eating healthy or being physical active: <b>OTHER ADULTS</b>	Never/seldom=0, 1-3 days a month=1, once a week=2, 2-4 days a week=3, 5-6 days a week=4, every day=5		
Advocacy outcome efficacy		This project can make a difference in making our community a better place for being physically active	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1	4-20	
		This project can make a difference in making our community a better place for eating healthy	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1		
		This group can influence how people feel about being physical active	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1		
		This group can influence how people feel about eating healthy	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1		

Grant Agreement number 774210 – CO-CRE





## Scoring – questionnaire for stakeholders

### An overview of questions that will give background characteristics

Category	Concept	Question	Scoring for each question	Scoring for concept	Total
<b>Descriptive</b>	Body measure	How much do you weigh without clothes?	Kg/m <sup>2</sup>	Underweight = <18,5; Normal weight = 18,5-24,9; Overweight = 25-20,9; Obesity = >30	Underweight, Normal weight, Overweight, Obesity
		How tall are you without shoes?			
<b>Socio-economic status</b>	Education level	What is the highest level of education you have completed?	8th grade or less; some high school, but did not graduate; graduated high school or GED; some college or 2 year degree, four year college degree, more than four year college degree		
<b>Behaviour</b>	Physical activity habits	Over the past 7 days, on how many days were you physically active for a total of at least 60 minutes per day?	0 days, 1 day, 2 days, 3 days, 4 days, 5 days, 6 days, 7 days	HBSC	
	Eating habits	How many times a week do you usually eat or drink: fruits	Never, less than once a week, once a week, 2-4 days a week, 5-6 days a week, once a day every day, every day more than once	HBSC	
		How many times a week do you usually eat or drink: vegetables	Never, less than once a week, once a week, 2-4 days a week, 5-6 days a week, once a day every day, every day more than once		
		How many times a week do you usually eat or drink: sweets	Never, less than once a week, once a week, 2-4 days a week, 5-6 days a week, once a day		



			every day, every day more than once		
		How many times a week do you usually eat or drink: soft drinks	Never, less than once a week, once a week, 2-4 days a week, 5-6 days a week, once a day every day, every day more than once		
		How often do you usually have breakfast (more than a glass of milk or fruit juice)? Please tick one box for weekdays and on box for weekend. <b>WEEKDAYS</b>	I never have breakfast during the week, one day, two days, three days, four days, five days		
		How often do you usually have breakfast (more than a glass of milk or fruit juice)? Please tick one box for weekdays and on box for weekend. <b>WEEKEND</b>	I never have breakfast during weekend, I usually have breakfast on only one day of the weekend (Saturday OR Sunday), I usually have breakfast on both weekend days (Saturday AND Sunday)		
<b>Youth involvement</b>	Involvement	Youth currently play a role in my institution	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1	2-10	
		My institution want to involve youth in its work to further its goals	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1		



**An overview of the scoring of questions measuring readiness to action and attitudes towards actions to prevent obesity**

Category	Concept	Question	Scoring for each question	Scoring for concept	Total
<b>Readiness to action</b>	Self-efficacy	co-operating together with youth as part of a team	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1		Develop a total score on readiness to action + a score for each concept.
	Perceived sociopolitical control- Active participation	asking youth to help work on societal issues you are concerned about	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1		
		Working with youth on policy initiatives	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1		(Will need to make an explorative factor analysis to group questions into different concepts)
	Advocacy outcome efficacy	I feel like I have a pretty good understanding of the important issues which confront my community	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1		
		I believe I can make a difference in my community	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1		
	Knowledge of resources	I know how to identify individuals or groups who can help working on preventing overweight and obesity	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1		
		I know where to find new and reliable information about overweight and obesity	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1		
		I know how to identify individuals or groups who can help working on promoting a healthy diet	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1		
		I know how to identify individuals or groups who can help working on promoting physical activity	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1		

	Competence for civic action	I know how to create a plan on societal level to address the high prevalence of overweight and obesity	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1		
		My organization involves youth actively in our core activities	Yes=2, no=0, I don't know=1		
		How many times in the last year have you involved youth actively in your core activities?	Never/seldom=0, 1-2 times per year=1, 3-4 times per year=2, bimonthly=3, monthly=4, weekly=5		
		The organization is trained in working with young people (e.g. using language easily understood by young people)	Yes=2, no=0, I don't know=1		
		We provide youth with training and/or resources to be able to participate in our core activities	Yes=2, no=0, I don't know=1		
		The organization has allocated budget and staff to ensure, oversee, develop and sustain youth participation	Yes=2, no=0, I don't know=1		
		I believe my organization recognize youth participation as a long-term commitment	Yes=2, no=0, I don't know=1		
		My organization values having youth participating in policy processes	Yes=2, no=0, I don't know=1		
		I believe my organization is prepared to build in changes long term (not just as a one-off undertaking)	Yes=2, no=0, I don't know=1		
<b>Changes in attitudes towards actions to prevent obesity</b>	Responsibility (individuals)	Each individual (individual)	Yes=3, I don't know=2, No=1	Individual: 5-15	
		Health care professionals (e.g. doctors, nurses) (individual)	Yes=3, I don't know=2, No=1		
		Family and friends (individual)	Yes=3, I don't know=2, No=1		
		Employers (individual)	Yes=3, I don't know=2, No=1		
		Farmers (individual)	Yes=3, I don't know=2, No=1		
Responsibility (collective)	Food and drink manufactures (collective)	Food and drink manufactures (collective)	Yes=3, I don't know=2, No=1	Collective: 12-36	
		Schools (collective)	Yes=3, I don't know=2, No=1		
		Supermarkets (collective)	Yes=3, I don't know=2, No=1		
		Restaurants (collective)	Yes=3, I don't know=2, No=1		



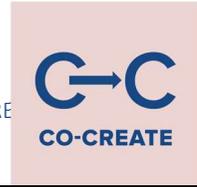
		The media (collective)	Yes=3, I don't know=2, No=1		There will not be calculated a total score on attitudes.
		Gyms/leisure centres (collective)	Yes=3, I don't know=2, No=1		
		Companies that help people diet (collective)	Yes=3, I don't know=2, No=1		
		The Government (national) (collective)	Yes=3, I don't know=2, No=1		
		The government (regional) (collective)	Yes=3, I don't know=2, No=1		
		The government (local) (collective)	Yes=3, I don't know=2, No=1		
		Architects (built environments) (collective)	Yes=3, I don't know=2, No=1		
		Transportation (collective)	Yes=3, I don't know=2, No=1		
	Drivers of lifestyle choices	Insufficient exercise (Internal)	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1	Internal: 8-40 External: 6-30	Individual and collective responsibility/ internal and external will be treated separately.  Hypothesis: Individual responsibility and internal drivers will be high at baseline  Collective responsibility and external drivers will be lower at baseline and
		Insufficient personal motivation (Internal)	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1		
		Poor personal choices on the risk of obesity (Internal)	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1		
		Physiological and genetic factors (Internal)	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1		
		Lack of time to lead a healthy lifestyle (Internal)	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1		
		Lack of understanding of the risk associated with obesity (Internal)	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1		
		Being overweight is the new normal (Internal)	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1		



	Less active transportation (Internal)	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1		will increase after attending alliances
	Limited access to healthy food (External)	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1		
	Access to unhealthy food (External)	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1		
	Unhealthy food marketing (External)	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1		
	Limited access to physical activity opportunities (External)	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1		
	The lack of policies on preventing overweight and obesity (External)	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1		
	Limited financial resources (External)	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1		

**An overview of questions that will give information on the process of being part of the project**

Category	Concept	Question	Scoring for each question	Scoring for concept	Total
Process	Impact	<i>To what extent did the dialogue forum have an impact on you?</i> Understanding of community/regional/state needs and assets	1 (no impact), 5 (high impact)	8-40	
		Knowledge of ways to respond to community/regional/state issues	1 (no impact), 5 (high impact)		



	Knowledge of resources available in the community/regional/state	1 (no impact), 5 (high impact)		
	Understanding of others' (youth) perspectives	1 (no impact), 5 (high impact)		
	Ability to work effectively with youth	1 (no impact), 5 (high impact)		
	Ability to design and implement action plans	1 (no impact), 5 (high impact)		
	Ability to communicate effectively in a group of youth	1 (no impact), 5 (high impact)		
	Understanding obesity-prevention policies that youth would consider effective	1 (no impact), 5 (high impact)		
Advocacy outcome efficacy	This project can make a difference in making our community a better place for being physically active	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1	4-20	
	This project can make a difference in making our community a better place for eating healthy	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1		
	This group can influence how people feel about being physical active	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1		
	This group can influence how people feel about eating healthy	Strongly agree=5, agree=4, neither agree or disagree=3, disagree=2, strongly disagree=1		
	Have you done any actions based on the discussions in the dialogue forums	Yes=1, no=0	0-1	



→ The **CO-CREATE project** has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 774210. The products of the research are the responsibility of the authors: the European Commission is not responsible for any use that may be made of them.

