

PEER REVIEW HISTORY

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ARTICLE DETAILS

TITLE (PROVISIONAL)	Kids in Action: The protocol of a Youth Participatory Action Research project to promote physical activity and dietary behaviour
AUTHORS	Anselma, Manou; Altenburg, T; Chinapaw, Mai

VERSION 1 - REVIEW

REVIEWER	Erica Hinckson Auckland University of Technology, Faculty of Health and Environmental Sciences
REVIEW RETURNED	25-Sep-2018

GENERAL COMMENTS	This is a study protocol where researchers collaborate with children from a deprived neighbourhood in Amsterdam in developing, implementing and evaluating interventions targeting PA and nutrition behaviours using Youth Participatory Action Research. The protocol looks robust along with measurement tools and direction of the study. Accept as is.
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REVIEWER	Dr Josie N. Booth University of Edinburgh, Scotland.
REVIEW RETURNED	19-Dec-2018

GENERAL COMMENTS	<p>This protocol paper describes a youth participatory action research project which is a novel approach to developing interventions for physical activity and dietary behaviour in children. The methods described are interesting and appropriate and the forthcoming findings will surely be of interest to a wide range of readers. A few comments concerning the manuscript:</p> <p>- The introduction is clearly written however could have a stronger link to the aims at present. The aim of the research focusses on interventions for physical activity and dietary behaviour. The outcome measurements also directly relate to these aims as expected (accelerometry and self-report diet). However the introduction and rationale is focussed on obesity with no discussion of the link between this and physical activity and diet (which is complex in the population in question). While I understand and appreciate the author's choice of literature and focus, I think there needs to be inclusion of some literature discussing obesity prevention strategies and physical activity levels.</p>
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	<ul style="list-style-type: none"> - The statement about medical ethics on page 5 is unclear as it suggests no ethical approval was required. This seems strange given the collection of accelerometry data (amongst others). On page 7 the authors describe the process of gaining consent so it is clear that ethical processes have been followed. This could be more clearly communicated in the method section. - A general comment – the use of different tenses in the paper is slightly confused and should be revisited. For example, in section 2.2. it would make sense to use the past tense as this has already been done. - It would be useful to include discussion of how children in the Action teams were selected. I appreciate this may differ by school but more information than what is included is required and a brief acknowledgment of what bias this may introduce in itself is needed. - On page 8 the authors discuss the intervention development. If meetings were not held in school then they were held out of school and included a sports session. I wonder if sports sessions were included at any point if meetings were held in schools and whether the authors think this may have an impact? - on page 9, line 13 – please be clear who the interventions are implemented by. - The authors are using Actigraph accelerometers to assess sedentary time and describe their method and data reduction to some extent. Please also include details about what cut-points will be applied and how non-wear time will be determined. - The authors describe useful sample size calculations but do not mention if the clustering and confounder analysis which is planned for in analysis was taken into account when powering the study. Please include this information.
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REVIEWER	Camille Perchoux Luxembourg Institute of Socio-Economic Research
REVIEW RETURNED	08-Jan-2019

GENERAL COMMENTS	<p>The manuscript presents the study design of a participatory action research project focusing on physical activity and diet among youth. The participatory approach among youth is relevant and the control trial design of the study are key strength of the protocol. However, I believe that the manuscript would benefit from additional clarification regarding major's aspect of the protocol.</p> <ul style="list-style-type: none"> - The “Youth Participatory Action Research” and the “systematic intervention mapping” are key concept of the study. However, the intervention mapping is not defined nor referenced. Please, at the end of the introduction, explain in detail what is meant by intervention mapping. - In the phase 1 of the procedure, please explain how you expect to combine intervention mapping and the participatory action research.
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	<ul style="list-style-type: none"> - It would be of great interest for the reader to further develop on the past and current evidence on the effect of intervention using participatory approach among youth and intervention mapping. - Regarding the design of the control school, please precise if the school are location in a different neighborhood from the intervention school. - The reader has to read two third of the manuscript (section 2.5.1) before understanding the timeframe of the study, the starting date, end date, and number of years. Please provide this information earlier in the manuscript. - The efficacy of the intervention seems to rely on the role played by “champions”. Please detail how the champions will be recruited, and the type of actor targeted by “champions” (i.e. teachers, head master, parents, local politicians, other types of actors....). Are there any restriction criteria? - Unclear to me: how many action team will be formed? - While I fully understand the participatory aspect of the intervention, which prevent here to give full details of the intervention to be undertaken, it would be very useful for the reader to have more insight of the type/nature of intervention aimed by the project (i.e. environmental changes, organizational changes, educational approach, etc..) - The description of primary outcomes of the study and planned statistical analyses is too broad. I would suggest to link outcomes and planned analyses to objectives and hypothesis to be tested in the project.
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VERSION 1 – AUTHOR RESPONSE

Reviewer(s)' Comments to Author:

Reviewer: 1

Reviewer Name: Erica Hinckson

Institution and Country: AUT

Please state any competing interests or state 'None declared': None declared

Please leave your comments for the authors below:

This is a study protocol where researchers collaborate with children from a deprived neighbourhood in Amsterdam in developing, implementing and evaluating interventions targeting PA and nutrition behaviours using Youth Participatory Action Research. The protocol looks robust along with measurement tools and direction of the study. Accept as is.

We thank the reviewer for her positive recommendation.

Reviewer: 2

Reviewer Name: Dr Josie N. Booth

Institution and Country: University of Edinburgh, Scotland.

Please state any competing interests or state 'None declared': None declared.

Please leave your comments for the authors below:

This protocol paper describes a youth participatory action research project which is a novel approach to developing interventions for physical activity and dietary behaviour in children. The methods described are interesting and appropriate and the forthcoming findings will surely be of interest to a wide range of readers. A few comments concerning the manuscript:

- The introduction is clearly written however could have a stronger link to the aims at present. The aim of the research focusses on interventions for physical activity and dietary behaviour. The outcome measurements also directly relate to these aims as expected (accelerometry and self-report diet). However the introduction and rationale is focussed on obesity with no discussion of the link between this and physical activity and diet (which is complex in the population in question). While I understand and appreciate the author's choice of literature and focus, I think there needs to be inclusion of some literature discussing obesity prevention strategies and physical activity levels.

We thank the reviewer for the suggestion to make clearer links in the introduction to present aims. We added the following sentence in the last paragraph in the introduction with references [page 3].

"Pivotal in childhood obesity prevention is improving dietary behaviour, physical activity and sedentary behaviour 15 16, but this is challenging 17-19".

- The statement about medical ethics on page 5 is unclear as it suggests no ethical approval was required. This seems strange given the collection of accelerometry data (amongst others). On page 7 the authors describe the process of gaining consent so it is clear that ethical processes have been followed. This could be more clearly communicated in the method section.

To prevent confusion we have omitted the second part of this sentence which now reads [page 5]:

"The Medical Ethics Committee of the VU University Medical Center approved the study protocol".

- A general comment – the use of different tenses in the paper is slightly confused and should be revisited. For example, in section 2.2. it would make sense to use the past tense as this has already been done.

We thank the reviewer for pointing this out. Though indeed some parts of the study already have been done, we decided to use the present tense throughout our protocol paper to limit confusion. We have checked the paper to make sure the present tense is consistent throughout the paper.

- It would be useful to include discussion of how children in the Action teams were selected. I appreciate this may differ by school but more information than what is included is required and a brief acknowledgment of what bias this may introduce in itself is needed.

We apologize for the limited information about the selection procedure of the Action Teams. We have added the following [page 7]:

"All interested 9-12-year-old children can sign up for the Action Teams. This approach may lead to bias as only children interested in health may sign up, but limits bias that would occur if teachers select the children for the Action Teams (i.e. only the high-performers might be selected)."

- On page 8 the authors discuss the intervention development. If meetings were not held in school then they were held out of school and included a sports session. I wonder if sports sessions were included at any point if meetings were held in schools and whether the authors think this may have an impact?

When meetings were held during school hours, children were allowed to leave class to work on the project. Therefore, the meetings were dedicated to the project and never included a sports session. For the meetings outside school hours, we felt we needed to offer the children an extra incentive to motivate them to participate in the project. Therefore, we organized a sports session after the children worked on the project. Although for some children the sports session was their primary motivation to participate, all children worked with dedication on the project.

- on page 9, line 13 – please be clear who the interventions are implemented by.

We thank the reviewer for this suggestion. We have added the following in 2.4 phase 4 [page 8]:

“In order to offer sustainable interventions we looked for partners within the community whose job description aligns with providing the intervention. Depending on the type of intervention, implementers could be dieticians, sports coaches or supermarkets in the community.”

- The authors are using Actigraph accelerometers to assess sedentary time and describe their method and data reduction to some extent. Please also include details about what cut-points will be applied and how non-wear time will be determined.

We have added these details on page 11:

“We select a cut point of 100 counts per minute (cpm) for sedentary behaviour 41 42 and a cut point of 3000 cpm for MVPA 43. Non-wear time is defined as a period of ≥ 60 minutes of consecutive zeros 44.”

- The authors describe useful sample size calculations but do not mention if the clustering and confounder analysis which is planned for in analysis was taken into account when powering the study. Please include this information.

We apologize for not clearly describing the sample calculation. We have revised this section as follows [page 14]:

“Using a significance level of 0.05 and a power of 0.80, 180 children per group are needed to detect a difference of 0.15SD in the primary outcome variables. Taking into account dropout and clustering of data within schools we aim to include 240 children per group.”

Reviewer: 3

Reviewer Name: Camille Perchoux

Institution and Country: Luxembourg Institute of Socio-Economic Research Please state any competing interests or state 'None declared': None declared

Please leave your comments for the authors below:

The manuscript presents the study design of a participatory action research project focusing on physical activity and diet among youth. The participatory approach among youth is relevant and the control trial design of the study are key strength of the protocol. However, I believe that the manuscript would benefit from additional clarification regarding major's aspect of the protocol.

We thank the reviewer for her positive remarks and recommendations for our paper.

- The “Youth Participatory Action Research” and the “systematic intervention mapping” are key concept of the study. However, the intervention mapping is not defined nor referenced. Please, at the end of the introduction, explain in detail what is meant by intervention mapping.

We have taken the reviewer's suggestion and ended the introduction as follows [page 4]:

"To structure this process, the systematic Intervention Mapping (IM) methodology is applied alongside YPAR. Through six iterative steps the IM protocol guides health promoters in the development of evidence-based interventions to change behaviour 21 22. Combining IM and YPAR ensures that the co-created interventions are appropriate to the interests and needs of the children, but also build on existing evidence. The application of IM alongside YPAR is a novel approach which we iteratively shape during this study."

- In the phase 1 of the procedure, please explain how you expect to combine intervention mapping and the participatory action research.

Intervention Mapping and Youth-led Participatory Action Research have not been combined before; this is also part of our study. To make this clear we have added the following at the end of the introduction [page 4]:

"The application of IM alongside YPAR is a novel approach which we iteratively shaped during this study."

- It would be of great interest for the reader to further develop on the past and current evidence on the effect of intervention using participatory approach among youth and intervention mapping.

We totally agree with the reviewer that this would be interesting. However, combining these methods is a novel approach that has not been conducted before nor published on.

- Regarding the design of the control school, please precise if the school are location in a different neighborhood from the intervention school.

This is now more clearly described in section 2.3 [page 6]:

"Potential control schools are selected from different neighbourhoods but with similar characteristics regarding overweight/obesity rates, household income and cultural background."

- The reader has to read two third of the manuscript (section 2.5.1) before understanding the timeframe of the study, the starting date, end date, and number of years. Please provide this information earlier in the manuscript.

We thank the reviewer for this suggestion. We have added the study duration in section 1.1 [page 4]:

"The overall aim of the 'Kids in Action' study (April 2016-November 2019) is to develop, implement and evaluate interventions that stimulate a healthy lifestyle to reduce health inequalities in children from a low SES neighbourhood in collaboration with the children themselves."

For a more detailed outline of the study we refer to Figure 1 in section 2.4.

- The efficacy of the intervention seems to rely on the role played by "champions". Please detail how the champions will be recruited, and the type of actor targeted by "champions" (i.e. teachers, head master, parents, local politicians, other types of actors....). Are there any restriction criteria?

We have included the following on page 8:

"A champion is a well-known community member such as a teacher, sports coach or family member. Children discuss who they think is suitable to assist them with a specific intervention and subsequently ask the champions to fulfil this task."

- Unclear to me: how many action team will be formed?

We apologize that this was not clear. We have added the following in section 2.3.1. [page 6]:

“At each of the four intervention schools one Action Team is formed.”

- While I fully understand the participatory aspect of the intervention, which prevent here to give full details of the intervention to be undertaken, it would be very useful for the reader to have more insight of the type/nature of intervention aimed by the project (i.e. environmental changes, organizational changes, educational approach, etc..)

We have not put any limits on the type of interventions so in theory all types of interventions are possible. Of course both the children and facilitators will also take the feasibility into account. To clarify this, we have added the following on page 7:

“In the rest of the meetings (approximately 10 per year) we develop interventions together with the children targeting children’s physical activity and healthy dietary habits. The type of the interventions (e.g. environmental changes, organisational changes, or educational approaches) is dependent on this collaborative process.”

- The description of primary outcomes of the study and planned statistical analyses is too broad. I would suggest to link outcomes and planned analyses to objectives and hypothesis to be tested in the project.

We thank the reviewer for this suggestion. We have added specifications on page 9 as follows:

“The primary outcomes of this study include measures of dietary behaviour (consumption of snacks and sugar-sweetened beverages), physical activity (total MVPA time, time spent playing outside, time spent participating in sports), sedentary behaviour (total sedentary time and screen time), self-rated health, and physical fitness.”

VERSION 2 – REVIEW

REVIEWER	Josie N. Booth University of Edinburgh, Scotland.
REVIEW RETURNED	20-Feb-2019

GENERAL COMMENTS	Thank you for responding to my comments. I have no further suggestions.
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