Author’s response to reviews

Title: Process evaluation of a school based physical activity related injury prevention programme using the RE-AIM framework

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Author's response to reviews: see over
Comments by the editor

We addressed the comments of the reviewers in a revised manuscript. All changes made in the manuscript are highlighted. We also included a point-by-point response to the reviewers. We recommend that you copyedit the paper to improve the style of written English. To improve the style of written English, our paper was edited by a native English speaker. We feel that the language corrections improved the readability of the manuscript.

Please include a copy of the questionnaire used in your study as an additional file that accompanies your manuscript. Our questionnaire is written in Dutch and not in English. We now included a more extensive description of the questionnaire in the method section to improve clarity. Please let us know if you still want us to include a copy of the questionnaire. If so, we are pleased to have it translated.

Please confirm for us that you did intend to submit your manuscript to BMC Pediatrics, and if you did intend to submit this journal, please remove the copyright statement referring to the BMJ Publishing Group from your manuscript. We did not intend to submit the manuscript to BMC Pediatrics, so we removed the copyright statement referring to the BMJ Publishing Group. Our apologies for this misunderstanding.

Furthermore, the results and discussion section is now focusing more on the evaluation of the process rather than the effect. Finally, we clarified what data presented in the manuscript is new and what data have been presented previously.

With kind regards,
Also on behalf of all co-authors

Dorine Collard
Reviewer’s report 2

Title: Process evaluation of a school-based physical activity-related injury prevention program using the RE-AIM framework.

Version: 1 Date: 9 August 2010

Reviewer: Caroline Mulvaney

Reviewer’s report:
This paper describes the process evaluation of the iPlay program, a program aimed at preventing physical activity related injuries in primary school children. The program is evaluated using the REAIM framework. The question posed by the authors is well defined. However, questionnaire are used by authors to evaluate iPlay and there is little description of these questionnaires. The data is sound but poorly described in places; there is a lack of detail. Similarly, the discussion and conclusions section are not focused adequately on the evaluation of the process of the program. The authors acknowledge previous work upon which they are building. The title is accurate but the methods and conclusion sections of the abstract needs to focus on the process evaluation of the program.

We thank the reviewer for her time and valuable comments and believe that her suggestions have improved the clarity of our manuscript.

A more extensive description of the questionnaire is inserted in the method section. The manuscript was adapted and now focusing more on the evaluation of the process of the programme implementation. We made changes in the results, conclusion and discussion section to improve the clarity of the manuscript.

Detailed comments
Discretionary Revisions

Introduction
1st para: change “stimulated” to possibly “Encouraged”
As suggested by the reviewer we changed “stimulated” to “encouraged”. (Page 3, line 2)

Methods
iPlay-program 3rd paragraph, as before, consider using “encouraged” rather then “stimulated”:
As suggested by the reviewer we changed “stimulated” to “encouraged”. (Page 4)

Results
Implementation, 1st paragraph, 2nd and 3rd sentence, consider rewording the 2nd sentence and then swapping order of these sentences.
We do not understand to which sentences the reviewer is referring.

Major Compulsory Revisions
I feel there is a lack of information in this section i.e. “three quarters of the teachers displayed the posters” but I would be interested in knowing how many posters there were to display during the duration of the study and how many teachers displayed each poster. Was it the same teachers displaying the posters? Similarly “Most of the teachers indicated they performed the exercises most of the time”, what exactly does this mean? What does “most” mean, what percentage? “Two thirds of the teachers indicated they had adapted the exercises sometimes”, this sounds like there was quite a lot of adaption, how were the exercises adapted? Doesn’t this mean they didn’t implement the program as intended?
We have included the requested information in the second paragraph of the method section (page 4).
We inserted information about how many teachers displayed each poster and whether this were the same teachers on page 8: it now states: “Almost all of teachers (96%) indicated that they had distributed all eight newsletters. Two thirds of the teachers drew attention to the newsletters in the classroom for an average of 11 ± 5.5 minutes per newsletter. Three quarters of the teachers displayed all eight posters. Sixty-eight percent drew attention to the posters (for an average of 7.5 ± 4.5 minutes per poster). All teachers had displayed the first poster in the first month. In the following months only one or two teachers had not displayed the respective poster (not the same teachers each month). Reasons for not displaying the posters were too busy or no space for the poster. Eight teachers had not displayed the last poster because they had not reach this stage.”

The reviewer is right that a lot of teachers adapted the exercises. This indeed means that the exercises were not performed as intended. This is now discussed in the discussion section on page 11. In the discussion section we relate the amount of implementation to the effects of the program on injury incidence.

It states now: “The strength of this study is that the iPlay programme was not only evaluated on effectiveness on injury incidence, but also on translatability and feasibility. This is important because if interventions are not for example adequately adopted and sustained it is unlikely that the intervention will have a public health impact. Furthermore, the effectiveness of the iPlay programme can partly be explained by how the intervention was implemented. We found a small intervention effect of iPlay on injury incidence. This process evaluation showed for example that not all children and their parents had read the newsletters In addition a lot of teachers adapted the exercises that were given twice a week during physical education lessons. Thanks to this process evaluation it is clear that the intervention was not fully implemented as intended and this may partly explain the small intervention effects we found.”

Discussion
I think this section is weak, it needs to focus more on the authors conclusions with reference to the process evaluation and the use of REAIM.

The discussion section is now focusing more on the evaluation of the process of the programme and the use of REAIM. (see discussion section on page 11 and our reply to the previous comment)

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being published

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I declare that I have no competing interests
Reviewer’s report, reviewer 1

Title: Process evaluation of a school-based physical activity-related injury prevention program using the RE-AIM framework.

Version: 1 Date: 4 August 2010

Reviewer: Patti-Jean Naylor

Reviewer’s report:
The paper describes the process evaluation of the I-Play prevention initiative. The authors used a well established evaluation framework (Re-Aim) and the article was very focused and well written. I applaud the authors for writing up this evidence for publication as these findings are essential to setting-based research (in this case the school setting). I agree with the authors that these type of evaluations are essential if we aim to have public health impact. Many effective interventions sit on the shelf because they haven’t been developed or examined with dissemination (adoption and wide scale implementation) in mind. The evidence-base needs to be improved. The revisions are either discretionary or minor. We thank the reviewer for her time and valuable comments and believe that her suggestions have improved the clarity of our manuscript.

Method
The methods appeared appropriate although some details would be appreciated.

a) I would prefer a more specific description of the questionnaire components although the operational terms were well defined on p.5. (Minor)
A more extensive description of the questionnaire components is inserted in the method section to inform the reader (see page 5). It now states: “The teachers, children and parents completed a questionnaire at follow-up (June 2007), after the iPlay programme was completed. This questionnaire included questions designed to evaluate the potential of the intervention in terms of translation and feasibility. The questions focused on the implementation and maintenance of the iPlay programme. Teachers answered questions regarding their distribution of the newsletters and display of the posters; whether they drew attention to the newsletters and posters; how many times they performed the exercises and whether they performed the exercises as described; and whether the iPlay programme could become standard practice in their teaching routine’ Children and parents were asked whether they had read the newsletters. We asked teachers, as well as children and parents about their opinion of the newsletters, posters and the overall iPlay programme.”

b) I would also like to see (if possible from the dataset - DISCRETIONARY) a specific description related to how much intervention dose was delivered (what percentage of students received most lessons/classroom exercises in classes, used the website, read the newsletter and had parents that read the newsletter…etc.) and if there was any indication of ‘dose received’ e.g. did the questionnaires address gains in knowledge (were key messages understood?)
We have now described in more detail the delivery of the intervention in the paragraph implementation on page 8. The effect on knowledge is described in another paper we have enclosed for the interest of the reviewers.

c) I would also like to see a sentence stating the type of consent process. This consent rate is quite high. Please add whether there was passive or active consent (MINOR)
Informed consent was given by each child’s parent or guardian by means of passive informed consent. This information was inserted in the method section on page 4 to inform the readers. It states now: “Parents of the participating children received a passive informed
consent form that explained the nature and procedure of the study. If parents and/or their children did not want to participate they could withdraw.”

Results
p.7 The authors state that comparing participating and non-participating schools on other variables was impossible because information was lacking. There is often neighbourhood SES data (poverty levels, student literacy levels etc.) collected by government agencies in charge of education (in North America) as well as school size. This would be valuable information for transferability (what were the characteristics of a school that was willing to participate) – if possible please add it. DISCRETIONARY
We wrote invitation letters to all schools in a certain neighbourhood. Some schools in this neighbourhood were willing to participate while others were not. It was not the case that schools in higher SES areas were more willing to participate although we can say that a higher schools situated in less urbanised areas were more likely to participate.

Discussion and conclusions
p.12 “The i-Play program is a successful start... but further improvement [is needed]. Please add a statement related to the limited evidence of efficacy (statistically) and the trend toward positive results”– and relate this to the findings of the process evaluation. MINOR If many children and parents didn’t read the newsletter or visit the website but did participate in classroom activities – perhaps this was not enough dose to change behaviour. The process evaluation helps to provide information about mechanisms (explanations for the outcomes that were achieved) and this should be mentioned in the discussion.
We adapted the discussion and conclusion section so it now focussed more on the evaluation of the process of the programme (see page 11). “The strength of this study is that the iPlay programme was not only evaluated on effectiveness on injury incidence, but also on translatability and feasibility. This is important because if interventions are not for example adequately adopted and sustained it is unlikely that the intervention will have a public health impact. Furthermore, the effectiveness of the iPlay programme can partly be explained by how the intervention was implemented.
We found a small intervention effect of iPlay on injury incidence. This process evaluation showed for example that not all children and their parents had read the newsletters In addition a lot of teachers adapted the exercises that were given twice a week during physical education lessons. Thanks to this process evaluation it is clear that the intervention was not fully implemented as intended and this may partly explain the small intervention effects we found.”

p.10 – “schools are a good setting for injury prevention program because 100% reach can be achieved” (with such low school level adoption I think this statement is too strong). Consider amending – e.g. Schools are an important setting because the reach into the student body is high (if adoption and implementation is high).
The reviewer was right that with a low adaptation level the reach of schools is not 100%. We adapted the statement according the suggestion of the reviewer. It now states `Schools are an important setting because the reach into the student body is high. However, adoption and implementation of the programme need to be high.’

p.12 Please add some wording around “including them during the formative assessment phase to identify their specific needs and constraints DISCRETIONARY
We have changed the text based on the reviewers comments and the English editor and this sentence has been omitted.

p.11 Please add some comparison between your process evaluation results and other school-based literature (is this level of adoption, implementation, satisfaction typical in the school-based literature?, comparable to other PA studies in schools?). MINOR
The results of this study are difficult to compare because this was the first school-based intervention focusing on the physical activity-related injury prevention in children aged 10-12 years. In addition, mostly only the controlled effects of an intervention are published. Evaluations of translatability and feasibility are limited especially in the field of sports injury prevention (Finch and Donaldson, 2009, a sports setting matrix for understanding the implementation context for community sport, Br. J. Sports Med.).

This article is well written and easy to read.

p.8. Change was to were: The majority of the teachers were positive about the iPlay-newsletters and 15% were very positive (MINOR)

Changed as suggested by the reviewer (page 9). To improve the style of written English, our paper was edited by a native English speaker.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**
I declare that I have no competing interests.