Author's response to reviews

Title: Using intervention mapping (IM) to develop a self-management program for employees with a chronic disease in the Netherlands

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Version: 7 Date: 25 February 2010

Author's response to reviews: see over
Dear Editor and Reviewers,

We thank you for the opportunity to resubmit our manuscript “Using intervention mapping (IM) to develop a self-management program for employees with a chronic disease in the Netherlands”. We would like to thank the editor and all the reviewers for their valuable comments.

We are looking forward to your reaction.

Sincerely yours,

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Reviewer’s report (1)

Title: Using intervention mapping (IM) to develop a self-management program for employees with a chronic disease in the Netherlands

Version: 6 Date: 27 January 2010
Reviewer: Marie José Durand
Reviewer’s report:
Major compulsory revisions:

Background
The background is too long and should be more concise. The background should start with the importance of chronic somatic diseases, their impact of work disability, the CDSMP program, and conclude with the objective of the study. Currently, the objective is found on page 5 before the definition of self-management. Also, information on risk factors (e.g. last paragraph on page 4) could be cut to the bare minimum.

We agree with the comments of the reviewer that the background is too long and should be more concise. We have rearranged the background according to the suggestions of the reviewer. We have replaced reference #1 (by Dupré and Karjalainen 2003) by a reference that only includes the prevalence of chronic diseases in the working age population (Tu and Cohen, 2009). We have included the objective of the study in the abstract and specified the objective of the study in the background.

Method
More details are needed on the method to help the readers understand how the program was developed. In step 2, it is not clear who and how the program was defined. The second paragraph on step 2 (page 7) would be more appropriate in the results section.

We agree that more information is needed for the readers to understand how the program was developed. At the end of step 1 we have included information about why we have decided to use the CDSMP en how we decided to adjust the program.

In step 3, the authors wrote “the planner”. To whom it refers to?

The word “planner” might indeed be confusing. The planner is a term that is used in health
promotion for the person who develops the intervention. We have deleted the word planner.

In step 4, we questioned if the previous steps were useful since the original CDSMP seemed to be used in full without adaptation, besides from the addition of 2 chapters on work disability (“the facilitator manual of the participants was translated in Dutch and two chapters with work-related information were added”, page 8).

The previous steps were useful as through the needs assessment (focus group study and literature review) we found out which themes are important for employees with a chronic disease. In the needs assessment we have screened the content of the original CDSMP and compared this to the themes obtained from the needs assessment.

In step 5, although we understand that a large scale implementation plan was not developed, the authors should add some information on how the program was implemented for the purpose of their study (in-house implementation). For example, besides from training of the master trainer and the recruitment of two moderators, the authors could add information on how the personnel were mobilized, the marketing strategies used to recruit subjects (information on page 18), etc. Also, were there agreements needed with employers to offer the training during work hours?

In step 5 we included more information about the implementation of the course. In this stage we have not made plans for the large scale implementation of the course. We have answered the questions of the reviewers as fully as possible and arranged the information as much as possible according to the comments of the reviewer.

Finally, in step 6, more information of how the evaluation plan was developed is needed.

In step 6 we have included more information about the outcomes we are going to evaluate in the evaluation study. The outcomes are related to step 2 and step 4. We agree that the information about the evaluation plan is limited. Nevertheless we have chosen for this approach as we want to focus in this article on the development and content of the program (step 1 to step 4). The implementation of the course and evaluation of the evaluation study will be described in a different article.

**Results**

In step 1 (page 10), the results should include more information on the participants recruited. For example, how many subjects participated in each focus group? How were they recruited? Did they come from a same workplace? What type of work did they do? Which health professionals participated (i.e. physicians, occupational therapists, nurses, physiotherapists, …)? Why have they chosen employees with RA, diabetes and hearing loss to explore prerequisites for employees? Also, they obtained different results for each patient group. How were the results combined in this study?

We agree with the comments of the reviewer that the information about the focus group is limited, for this reason we have now included the number of participants and the background of the health professionals who participated in the focus group interviews. We also refer to three previous articles for more information about the method used.

In step 5 (page 18), the authors should focus more on what was done to implement their program in the setting. Information on the participants’ selection (2nd paragraph of step 5, page 18 and 4th paragraph of step 5, page 19) would be more appropriate in step 6.
Step 5 describes information about the implementation plan and not of the actual implementation. We have included the information about the participant’s selection in step 5 as the selection is based on the content of the course. Some demands of the course (for example to make and effectuate action plans on work related topics) can only be effectuated if participants are related to their workplace and have not been totally absent from work for a long time. We have also chosen to only include chronic somatic diseases as one part of the course deals with symptoms for predominantly chronic somatic diseases (for example pain, fatigue and breathlessness).

As proposed by the previous evaluator, more information is needed in step 6 (page 19) to include details of the methods of the RCT and the process evaluation. Who were recruited (information from step 5)?, what were the sample sizes?, how were the outcomes measured?, were subjects followed up after the program?, what was offered in the control group?, etc.

We agree that the information about the methods of the evaluation study is limited. Nevertheless we have chosen for this approach as we want to focus in this article on the development and content of the program through the method of intervention mapping (step 1 to step 4). The implementation of the course and evaluation will be described when available in a different article.

**Discussion**

The objective of this paper was to present the development and content of a program. Currently, the discussion focuses more on the intervention mapping approach and the methods used. It should also discuss the impact of their program on work disability and what is innovative about their program (besides from having used a rigorous method).

We agree with the comments of the reviewer that the discussion only focuses on the intervention mapping approach. At this moment we can not address or discuss the impact of our program because the program has not been fully implemented and evaluated.

Another point of discussion is the definition of work disability used by the authors (“misfit between work-related demands and the individual capability”, page 3). This is a limited view of work disability. In the work disability literature, the evidence goes beyond the misfit between demands and capacity. It suggests adopting a person-environment model and a work disability paradigm that recognized that work disability results from a complex interaction of biological, psychological and social factors and involves various actors (i.e. employer, employee, health care providers and insurers).

We agree with the comments of the reviewer that the definition on page 3 of work disability, a “misfit between work-related demands and the individual capability”, is limited. This view does indeed not reflect the purpose of the course. In the course we adopt a broader vision of work disability and therefore encourage participants to communicate with their family, health care providers, colleagues and employers. We have therefore changed our definition of work disability in the background of the article.

**Conclusion**

Again, the objective of this paper was to present the development and content of a program, not to test the feasibility of the intervention mapping approach. The authors cannot conclude that they have proven that intervention mapping is feasible, since they did not study this issue. The conclusion should be reviewed.

We agree with the comments of the reviewer that the conclusion is misleading. We can
indeed only state that the method is feasible until the intervention has been implemented and evaluated. We have therefore reviewed the conclusion.

**Minor essential revisions**
In the background, all sentences related with reference #1 (by Dupré and Karjalainen 2003) seem to include health problems and disability other than chronic diseases. Its relevance this with the topic of this paper is questionable.

We agree with the comments of the reviewer that reference #1 might include other health problems than chronic diseases. We have reviewed the reference and indeed the reference does not include a definition of “long term disabilities” and is therefore questionable. We have now replaced the reference by another reference that only includes the prevalence of chronic diseases in the working age population.

On page 5 (1st paragraph starting with “In this study, the method of intervention mapping....”), the sentence of intervention mapping should be moved in the method section. English should be edited. For example, on page 3 (1st paragraph), some sentence should be checked (e.g. “Prognostic studies preview an increase in the next twenty years...”, the authors might have meant “predict” instead of “preview”; “Unhealthy lifestyles causing e.g. obesitas add to... “, might use “such as obesity” instead of “e.g. obesitas”). On page 4 (1st paragraph, last sentence, “to learn them how to do it”), did the authors meant “to teach them how to do it”? Workplace (not work place) should be written in one word (pages 5 and 6). Some citations should be in the same parenthesis: “(25) (47)” --> (25, 47) (page 7); “(42-44) (48-50)” --> (42-44, 48-50) (page 10); “(25) (57-58)” -->(25, 57-58) (page 15).

We have edited the text conform the corrections of the reviewer and adjusted the citations.
Reviewer's report (2)
Title: Using intervention mapping (IM) to develop a self-management program for employees with a chronic disease in the Netherlands
Version: 6 Date: 25 January 2010
Reviewer: Fehmidah Munir
Reviewer's report:

Minor Essential Revisions
1) It is not clear from the article that this is an outline of steps taken to design the intervention with no actual hard results. I suggest making this clearer in the abstract and at the end of the introduction that what the authors are actually presenting is a description and results of the design of the intervention only, and not any actual results of the intervention itself.

We agree with the comments of the reviewer that the objective of the article is misleading. We have specified the objective of the article in the abstract and background. The objective of the study is to present the development and content of the program (step 1 to step 4 of intervention mapping) and not the design of the evaluation study.

2) The authors should state the purpose of presenting the steps taken to design the intervention and why it is useful to the readers to have this information.
3) On page 18, the authors outline the criteria for participants to be included. What is the sample size? What is the power calculation for it?

We agree that the information about the method of the evaluation study is limited. Nevertheless we have chosen for this approach as we want to focus in this article on the development and content of the program (step 1 to step 4). The implementation of the course and evaluation will be described elsewhere when available. We have explained this in the revised version of the article.

Discretionary revisions
1) It would be useful to state at the end of the results section whether the authors' intervention has been completed and if not, at what stage it is at. e.g. how many have completed the full intervention, how many have just been recruited etc

In the results section we have included information about the actual implementation of the course. The implementation has not been completed at this moment, we have just started to implement the program.
Reviewer’s report:
I and three of our senior analysts reviewed this manuscript. The authors state in the early background section that, “The objective of the article is to present the development and content of this program.” We found the manuscript very difficult to understand especially since the manuscript focused primarily on the literature review throughout. We found it hard to determine if the objective was a literature review, a concept paper, a description of a program or description of some preliminary results. We assumed that this is considered a research study to demonstrate the use of Intervention Mapping for the development and content of a self-management program but we cannot determine when and where any research was conducted.

We agree with the comments of the reviewer that the description of the objective of the article can be improved. We have specified the objective of the article in the abstract and background. The objective of the study is to present the development and content of the program (step 1 to step 4 of intervention mapping) and not the design of the evaluation study. The previous research we have conducted (literature review and focus group study) was effectuated for the needs assessment (step 1 and 2 of intervention mapping).

Seven pages were spent on an explanation of the IM technique and CDSMP. Much of the manuscript reads like a literature and an academic review. But we could have read about those directly from their source material (references 25 and 26). The methods are simply a more detailed explanation of the IM process. The six steps are expounded upon and we were still waiting to understand where and how this process was applied in research. There is nothing mentioned about a setting, the population or the analysis techniques.

We agree with the comments of the reviewer that the information in the background and method is too extensive. We have therefore reduced the information in the background and method and have explained more clearly how we have used the steps of intervention mapping for our study.

The objective of the study is to present the development and content of the program (step 1 to step 4 of intervention mapping) and not the design of the implementation and evaluation of the intervention. The previous research we have conducted (literature review and focus group study) was effectuated for the needs assessment (step 1 and 2 of intervention mapping).

The results continue the literature review as far as we can tell from four people reading the manuscript. Page 10 says that qualitative research was conducted for the needs assessment but we did not see any information about that.

We agree with the comments of the reviewer that the information about the focus group is limited, for this reason we have now included the number of participants and the background of the health professionals who participated in the focus group interviews. We also refer to three previous articles for more information about the method of the focus group study.

Then many more pages are spent writing about the development of the intervention. The authors laid out each of the 6 steps but never actually explained their findings.
The objective of the study is to present the development and content of the program (step 1 to step 4 of intervention mapping) and not the design of the implementation and evaluation of the intervention. The previous research we have conducted (literature review and focus group study) was effectuated for the needs assessment (step 1 and 2 of intervention mapping).

We were not sure what information they gathered from their literature review and what they gathered from their focus groups. We also found it odd that they used focus groups to access what employees needed on a large scale - when the actual steps called for individualized evaluation and treatment. Instead of following the steps - they assessed what the employees thought of the steps - but it appears that they never actually tried the steps or they just did not include those results in this manuscript.

The objective of the study is to present the development and content of the program (step 1 to step 4 of intervention mapping) and not the design of the implementation and evaluation of the intervention. The previous research we have conducted (literature review and focus group study) was effectuated for the needs assessment (step 1 and 2 of intervention mapping).

Finally on page 18 it appears that they had a plan for implementing the intervention. It mentions participant recruitment briefly and then at the bottom of page 19 it says more details about the evaluation of the intervention and results will be presented in a separate article. That is the article we would like to read.

At this moment we can not address or discuss the impact of our program because the program has not yet been fully implemented and evaluated.

The authors then moved to a brief discussion about the merits of IM. The conclusion states that "it has been proven that it is feasible to apply IM for the development and the tailoring of prevention interventions in occupational health care." We see no basis for this conclusion in the paper they submitted.

We agree with the comments of the reviewer that the conclusion can be improved. We can indeed only state that the method is feasible until the intervention has been implemented and evaluated. We have therefore reviewed the conclusion.

We agree with the comments of the reviewer that the discussion only focuses on the intervention mapping approach. At this moment we can not address or discuss the impact of our program because the program has not yet been fully implemented and evaluated.

The description of the six steps suggests that the work is going to require several years of study. The authors may want to condense this manuscript into a purely concept paper and then select several research project in a logical order to develop the evidence. The papers they write at that time should allow them to focus on their own methods and results rather than such a lengthy explanation of IM.
Reviewer's report (4)

Title: Using intervention mapping (IM) to develop a self-management program for employees with a chronic disease in the Netherlands

Version: 6 Date: 25 January 2010
Reviewer: Ludovic van Amelsvoort
Reviewer's report:

Major Compulsory Revisions
I have one major issue regarding the manuscript and the described protocol, which concerns the mismatch between the overall goals of the study as described in the introduction and the abstract and the outcome measures, as described in the evaluation plan. That is, the abstract and introduction indicate that IM and self-management program is aimed at preventing sick leave and work disability (see abstract, background and results, main text: background, page 3 and 4). However, in the evaluation plan, the primary outcomes that are described are self-efficacy at work, intention to communicate etc. This mismatch between the objectives and the primary outcomes of the evaluation should be addressed because increased self-efficacy at work, intentions to communicate etc. might potentially also lead to an increased risk for sick leave or unemployment.

We agree with the comments of the reviewer that there seems to be a mismatch between the overall goals of the study (to prevent permanent work disability) and the outcomes of the intervention (improve self-efficacy, intention to communicate etc.). An effect of the course might indeed be that sick leave increases because of the training and we will take this in consideration when we evaluate the effects of the training. Nevertheless we have chosen for outcomes measures which are directly related to the content of the course (behaviour and intention of the participants). One main reason for this is that the outcome measures sick leave and work disability are also influenced by external factors (course of the disease, economic crisis, new social policies etc.). Another reason is that to be able to measure the effects on work disability and sick leave, the intervention must be followed for at least 2 years given the regulatory (legal) context in the Netherlands. Within the scope of our study it is not possible to follow the effects of the intervention for more than 12 months.

Discretionary Revisions
The conclusion (page 21) is in my view to firm. As the manuscript did not provide any date on the feasibility of tailoring of preventive interventions in occupational health care, only the feasibility to apply the IM approach for the development of interventions. From the manuscript it does not become clear whether the tailoring is successful.

We agree with the comments of the reviewer that the conclusion can be improved. We can indeed only state that the method is feasible until the intervention has been implemented and evaluated. We have therefore reviewed the conclusion accordingly.

Neither whether the described approach can be applied in occupational health care as the application as described is not applied in an occupational health care setting but in companies and family doctors.

In step 5 we have included in the implementation plan that we will (also) recruit through occupational health professionals. We can indeed only state that the method is feasible until the intervention has been implemented and evaluated. We have therefore reviewed the step 5 and the conclusion.

• I would recommend a thorough check of the language by a native speaker as there are several small language errors.
• Also a more consequent use of terminology is needed. For example: Terms like “Illness”, “Disease” are mixed up several times throughout the manuscript.

We have screened the article on the words illness/disease. The term “illness” has been replaced by the term “disease”.

• The paragraph at the end of page 3, start of page 4, starts with work disability and its determinants but later on it continues with determinants of maintaining employment or job loss. Although related, these two processes are not similar and have, at least partially, different determinants, especially in relationship with workers with a chronic disease.

We agree with the comments of the reviewer that different outcomes have been mentioned work disability, maintaining employment. We agree with the comments of the reviewer that the prognostic factors for work(dis)ability might be different from the prognostic factors for maintaining employment. For our review (Detaille et al, 2009) we have unfortunately not found enough evidence (high quality articles) on the outcome maintaining employment. Most articles are related to the outcome work (dis)ability or return to work. Nevertheless we have found evidence that the prognostic factors for work disability in employees with a chronic disease (Detaille et al, 2009) are the same as the prognostic factors for work ability in employees with a chronic disease (Slebus et al, 2007). This might of course not apply for all chronic diseases.