Reviewer’s report

**Title:** Individualized support for informal caregivers of people with dementia - Effectiveness of the German Adaptation of REACH II

**Version:** 0  **Date:** 05 May 2017

**Reviewer:** Henriëtte van der Roest

**Reviewer's report:**

In itself the study is interesting, but I feel the manuscript can benefit by some more explanation and clarification on different points. My remarks are given below.

The order and choice of wording in the first paragraph is a bit odd. The fact that carers of people with dementia experience a higher level of burden should be followed for the reasons for this higher level of experienced burden and subsequently the consequences of this.

P3L16: format for carer interventions nowadays are next to face-to-face interventions, of phone interventions, also online interventions for carers. These should also be mentioned addressed.

P4L20: The references used here are not recent, more recent reviews would be more appropriate.

P4L1-10: While reading it is not clear how the different components of the intervention address the secondary objective and subjective indicators, and the question rises whether these are addressed at all in the intervention. Some more information on this would be welcome. In addition the theoretical framework should be described a bit clearer, using consistent formulations for concepts.

P4L30: table 1 is not in the correct place. It should be placed at the description of DE-REACH and not of REACH, it might cause confusion since it contains the structure of DE-REACH.

P4L54: Is the Medical book aimed at maintenance of the informal carer, or also, or exclusively of the pwd. This is not clear from the description, since it confuses me that an example is given on annual physical examinations, this seems more likely for the pwd.

Aims: why is the focus on burden since REACH II found effects for depression and HRQoL? What are the requirements of the German health care system the intervention needs to meet?

Design: The control group receives care as usual. Is care use collected to get insight in whether controls received any carer specific intervention? Can the authors report on this f.i. in table 3?

Participants, eligibility criteria. Sharing cooking facilities with the pwd as an inclusion criterion is rather unusual. Why was chosen for this criterion?

P6 L5: typo procedure s

Intervention: One of the main aims of the study is the adaptation of the intervention. The procedure of the adaptation is not well described. From the description the methodology used seems not very sound, as is the translation process. A better description of the used methodology, including how the team dealt with cultural adaptations and why not was chosen for a translation-backtranslation procedure. In general the team adapted and limited the intervention considerably in terms of amount of intervention time received. A serious point of consideration is that the results found could also be attributed to the fact that participants in the intervention group were allowed to visit local support groups. This should be addressed more clearly.

P7L26: Follow up is three months after completion of the intervention? Here is reported after six. A separate procedure paragraph describing the procedures followed during the assessments would make the text clearer. And who performed the assessments? Where did the interviews take place.

Results: No effects found for social support and depression (for which REACH-II was effective). Could this be attributed to parts of the intervention that were not included or not correctly adapted from the
original intervention? The authors state that approximately 70% of the intervention could be implemented. But it is not clear whether these components were not included in the intervention due to the alterations, or because they were left out because these did not address the main problem areas indicated by the informal carers. Furthermore it would give more insight into the execution of the intervention if the authors could mention which problem areas were most frequently addressed. This could also give an explanation for results. P10L5: typo carers Discussion: The discussion is rather flat. In this section the authors label the fact that burden did not decrease much in the intervention group and very strongly increased in the controls 'remarkable'. With this they underestimate the burden caused by caring for someone with dementia. Burden is expected to increase over time and is one of the main causes for admittance of the person with dementia to a long term care facility. Furthermore the authors put too much emphasis on the nocebo effect to explain the study results, instead of linking the results to the content of the intervention. The authors state that the reduction of the effect on burden at follow up is to be attributed to ineffective use/implementation of coping strategies for challenging behaviors, but the results contradict this. There are other explanations for the reduction of burden at follow up that may have to do with limits of the intervention (e.g. not addressing importance of social networks, or failure to reduce anxiety and depression). The manuscript could elaborate on more elaboration on this, as to a reflection of results found in comparable studies. What do the authors mean exactly with intervention change process. It is multi interpretable. With regard to the cost effectiveness of the study, this certainly deserves attention first, before continuing any further research efforts, since the intervention is rather intensive and requires one-on-one contact. Therefore it might not be cost-effective and therefore not implementable in the German health care system. The term socio-political-material needs more explanation. It is interesting that the authors use the view of Purkis and Ceci, but I do miss the link with the last sentence on the stabilizing effect, with the first part of the paragraph. The authors should make this clearer.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No

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