Reviewer’s report

Title: Implementation of the European Health Interview Survey (EHIS) in Germany. Further development of the German Health Update (GEDA)

Version: 0 Date: 21 Apr 2017

Reviewer: Inna Walker

Reviewer’s report:

This interesting article presents methodology, modifications and issues associated with integrating EHIS wave 2 into GEDA 2014/2015, and constitutes a form of documenting the development of health interview surveys, a valuable source of public health intelligence. Minor revisions are suggested as follows.

Page 3. It is evident that the term 'interview' in the context of this paper is not used in its common meaning of a formal meeting or discussion, which involves personal interaction, whether face-to-face, over the telephone or similar. It might be worth stating that interviews in the context of health interview surveys refer to the process of collecting information by questioning about health, regardless of the mode of collection and not necessarily involving personal contact. This has been noted in relation to a previous paper by Lange et al (2014), which was written by some of the authors of this article, and was addressed very well at the time: https://static-content.springer.com/openpeerreview/art%3A10.1186%2F2049-3258-72-46/13690_2014_5065_AuthorComment_V2.pdf.

Consider mentioning that Federal Health Reporting service is in fact provided by the RKI, which otherwise is not obvious.

Page 7. 'those who refused participation in the survey by telephone, e-mail, fax or mail'. It might be better to say that the letter offered an opportunity to refuse participation by telephone, e-mail, fax or mail (if this is so), before saying that no reminders were sent to those who refused participation. This is to make it very clear that individuals were only contacted by mail, but had the opportunity to refuse by other means.

'addressees who were found to be ineligible'. Suggest specifying that this was mainly due to no longer being resident at the address from which they were recruited, if that was the case.

Is it possible to provide any indication whether involving the newspapers was effective? What proportion of those papers that were approached actually published information about the survey?

Given the considerable efforts made initially to reach potential participants with repeat mailings, were any attempts made to get consent for those questionnaires which were received without such? Some participants could have overlooked the consent form, and those individuals who submitted the SAQ-Paper in the first place may have been very willing to consent, had the
questionnaire and the form been returned with an explanatory note. If this was not done, is it something that could be considered in the future?

Page 10. 'the reference population (Microcensus 2013)'. Suggest adding a couple of words explaining what Microcensus is, as this is not conducted everywhere (also insert a reference to the Microcensus website).

In the first paragraph under 'Representativeness and weighting' it is somewhat difficult to follow which reference populations were used for which variables, and this confusion increases after looking at the busy column headings of Table 4. For example, the text suggests that the Microcensus 2013 reference population was used in relation to the age and federal state distribution, but Table 4 column heading mentions Microcensus 2013 in relation to education only. I would suggest editing this paragraph to include clear statements as to what population was used for what, e.g. 'the Federal Statistical Office (Destatis) reference population was used for…'. Also I would avoid using the name Federal Statistical Office in one place (Table 4), and Destatis in another (text), if these are the same or linked, as it gets confusing for the reader.

Page 11. Is there any reason why 'education' is given in brackets in the list of variables?

As part of the Discussion it would be prudent to explicitly acknowledge and comment on selection bias arising from the recruitment methods.

Page 14. 'European Commission issued a Grant project' is slightly confusing. Is the following meant: 'European Commission issued a grant for a project’?

Page 15. 'response rates have continuously declined over the last decades [37-40]'. Based on those references, a couple of words to suggest possible explanations for the decline would be very helpful here.

What was the reasoning behind differential incentivising with vouchers, and what was this based on?

'Tolonin et al. demonstrated'. Suggest rephrasing the sentence or possibly inserting 'previously' before 'demonstrated', otherwise it could imply that GEDA came before Tolonin's work.

Page 16. From 'The EU-wide harmonized EHIS 2 data source' onwards - this should really be part of the discussion, rather than the conclusions.

References. Please provide web addresses for all resources that were accessed online, e.g. possibly references 23, 24 or any others.

Table 2. Might be better to use Deutsche Post categories in the Table since these were the ones actually used, and give corresponding United States Postal Service categories in the footnotes.
Under which category are those individuals who returned the questionnaires without consent? 'Breakoff/Implicit Refusal'? Might be worth adding a comment about this to the footnotes, since this group is mentioned in the text.

Table 3. Suggest specifying 'n recruited', 'n responded' or similar, rather than just n.

Table 4. Supplementary information in column headings would be easier to assimilate if it was given in the footnotes. Please also see Page 10 comment above in relation to reference populations.

Figure 1 and 2. Should these include figure titles?

General recommendations. For any acronyms that are based on German names, such as GEDA, KiGGS, DEGS and BIK, it would be good practice to give their full German names not only in the list of abbreviations, but also when the acronym is used for the first time, both in the abstract and the main article, e.g. German Health Update (Gesundheit in Deutschland aktuell or GEDA). Where this would unnecessary clutter the text, such as spelling out KiGGS and DEGS both in English and German on page 3, perhaps these acronyms could be omitted until later, if they do not add vital information at that point.

There are approximately ten web addresses provided throughout the paper. Moving them all into the references would declutter the text, help improve the flow and make it easier for the reader who would like to look up further information, as they would find all the links in one place.

It may be helpful to read the article from the point of view of a colleague who is not familiar with the terms or services specific to Germany or the field, and predict potential questions that could arise. Some of the suggestions above may help address this and improve readability of this otherwise high quality article, which will be of value to those facing similar issues and decisions.

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