Reviewer’s report

Title: Consent to Data Linkage in a Large Online Epidemiological Survey of 18-23 Year Old Australian Women in 2012-13

Version: 0 Date: 14 Sep 2018

Reviewer: Frauke Kreuter

Reviewer's report:

The paper is well written. Opt-in consent and record linkage is an important topic.

A few caveats nevertheless: the authors claim that no prior study examined opt-in linkage requests in web surveys. This seems inconsistent with the literature cited in the conclusion and my reading of the literature. Joe Sakshaug, Public Opinion Quarterly, Vol. 78, No. 1, Spring 2014, pp. 166-176 is one example.

One weakness of the study is the absences of a probability based survey. While the methods section refers to a different paper to learn more details, it should be noted in the context of this study why the sampling scheme does not negatively affect the conclusions draw.

Also the stronger effect of a gift compared to cash-incentive is surprising, given from what we find elsewhere in the survey literature. It would be interesting to know why the authors think this might be the case.

Recruitment strategies and incentives vary quite a bit across the data analyzed here. I would recommend parsing this out to avoid any confounders if possible. Also a table or graph explaining the study design would help. Currently it is easy to get lost in the comments on earlier studies, earlier recruiting etc.

The model selection strategy is not entirely convincing. Since the authors do not have hypothesis on what effects the outcome (consent), and if those relationships are linear functions, I would suggest re-running the analysis and relying on non-parametric tree based models.

The result statement (69% consent) is a strong statement since appears as if the authors talk about a population estimate. Given the recruitment strategy, this seems not justifiable (neither do we know the probabilities of selection or the nonresponse mechanism and thus can't adjust for either).
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.

Unable to assess

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

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

Declaration of competing interests
Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?
If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

no conflict or competing interests

I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license (http://creativecommons.org/licenses/by/4.0/). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.

I agree to the open peer review policy of the journal