Reviewer's report

Title: Audio computer-assisted self-interviewing (ACASI) may avert socially desirable responses about infant feeding in the context of HIV

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Reviewer: Marek Brabec

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General

Since the paper was evaluated for its subject-matter content, I will focus on statistical model and design aspects as well as on interpretation of the statistical results only. The authors should be really applauded not only for producing interesting study, for the hard work and ingenuity (as acknowledged by the previous interviewer), but also for clear and decent statement of the results (and their possible limitations) without trying to draw too-far-reaching conclusions or to over-interpret statistical results. Such an approach is by far not as common as it should be.

The study uses rather standard statistical tools and from what can be seen from the text, it uses them properly for the repeated measures comparisons (ACASI-FTF, FTF-ACASI). This includes proper acknowledgement of intra-personal correlation between repeated measurements of the same subject both for continuous and categorical data (as described in Methods and Results and in the author’s response to the interviewer) which is definitely in the center of the paper’s focus. Details of the use of tests for independent samples are not completely clear from the paper, however. E.g. on page 7, the authors state: “… test for … independent samples when comparing samples grouped by an independent variable, e.g. education.”. This use might or might not be correct, depending on whether the data are pooled across two measurement occasions (which are not independent) to have one education group, or whether only one measurement per person is used in such a test (which seems to be more likely – nevertheless the details should be provided).

While the statistical analysis of the data seems to be fine, the design of the study is far from being ideal. The authors acknowledge this fact and state it properly as one of the limitations. More details should be provided on the nonrandom ACASI-FTF, FTF-ACASI sequence assignments (why and how they were nonrandom). Huge imbalance between ACASI-FTF/ FTF-ACASI sequences can be understood in the context of the fact that the study seems to be really the first in the comparable settings, but it is really something that should be avoided in future studies. Previous reviewer’s concerns about possible carry-over effects are perfectly reasonable. Carry-over can be studied in detail in a future study when using more balanced cross-over design and when supplementing the design by “homogeneous” sequences ACASI-ACASI, FTF-FTF, followed by appropriate (more sophisticated) statistical model in which carry-over effects can be estimated and tested.

It is very nice observation that the authors made on page 10 (“…aim was not to validate any of the methods of interviewing, any of the two methods could have yielded the more correct answers.”). The validation can be a goal of the next interesting study. Besides, agreement between the two methods can be studied more thoroughly in future (see e.g. Carsten’s paper in Biostatistics, 5, 3, 399-413 and the references therein).

Another issue that can be studied in a future study is the variability. The sentence “With ACASI, the interview is standardised hence avoiding interview variations that would occur in many research settings …” on page 4 gives a testable hypothesis that can be checked against the data (although the heteroscedasticity is not entirely easy to check in the repeated measures context).
Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

Discretionary Revisions (which the author can choose to ignore)