PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form (http://bmjopen.bmj.com/site/about/resources/checklist.pdf) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below.

ARTICLE DETAILS

TITLE (PROVISIONAL)	A prospective mixed methods study of online and offline social
	networks and the development of sexual agency in adolescence:
	The Social Networks and Agency Project (SNAP) protocol.
AUTHORS	Lim, Megan; Cooper, Spring; Lewis, Larissa; Albury, Kath; Chung,
	Kon Shing Kenneth; Bateson, Deborah; Kang, Melissa; Skinner,
	Rachel

VERSION 1 – REVIEW

REVIEWER	Stephanie Reich
	University of California, Irvine USA
REVIEW RETURNED	13-Jun-2018

This manuscript describes the protocol for the Social Networks

GENERAL COMMENTS

and Agency (SNAP) Project, a longitudinal study of the sexual agency and relationships of adolescents (15-17) and their connection to social media and online and offline networks. The mixed method study uses self-report surveys, diaries, and interviews over 18-months to explore teens' relationships, sexual identity, sexual behavior, and sexual agency. Reviewing a protocol is new to me, as typically this information is provided via websites and other open dissemination platforms, rather than through peer-reviewed outlets. As such, I focused solely on the comprehensiveness of the project description for readers to understand what will be done and judge the rigor of the design. The aims of the study are ambitious and interesting. The measurement is well rounded and well connected to the aims of the project. In reading the description, there are more details that should be included. The analytic plan provides very little about how these data will be analyzed. This is especially true for the survey and network data. For instance, how will ego-centered data be compared across youth? Will structural patterns be the focus? Tie number and strength? The strength of ties for an ego-centered network is akin to a survey of self-reported close friends and acquaintances. Details about planned analyses of these innovative network data should be included (as clearly centrality will not apply to these types of data). It is also unclear if there are specific hypotheses that the authors will be testing and how they will deal with people nested in time and participants nested in recruitment sites. The paper would be strengthened with more detail about the quantitative analytic plan.

Social media are described as an important component of the study, but it is unclear how these will connect to the analytic plan. There will be network questions about which friends are communicated with by which platform and qualitative interview questions about social media use. It would be very helpful to see some of the analytic plans for connecting these to address the study aims - of the association of social media to sexual agency (and other covariates).

Given the longitudinal nature of the project, the authors should describe planned retention efforts.

On the whole, this is an exciting project. This submission would be strengthened by the inclusion of more details about the data and their analysis. Such detail will also help readers understand the relationship between the diverse constructs measured. Clearly, plans will evolve with the data but even the planned analysis from the grant submission would help.

VERSION 1 – AUTHOR RESPONSE

Response to Reviewer 1

Thank you for your review of our paper. We have considered your comments and have now added the following:

Reviewer: The analytic plan provides very little about how these data will be analyzed. This is especially true for the survey and network data. For instance, how will ego-centered data be compared across youth? Will structural patterns be the focus? Tie number and strength? The strength of ties for an ego-centered network is akin to a survey of self-reported close friends and acquaintances. Details about planned analyses of these innovative network data should be included (as clearly centrality will not apply to these types of data). It is also unclear if there are specific hypotheses that the authors will be testing and how they will deal with people nested in time and participants nested in recruitment sites. The paper would be strengthened with more detail about the quantitative analytic plan.

Social media are described as an important component of the study, but it is unclear how these will connect to the analytic plan. There will be network questions about which friends are communicated with by which platform and qualitative interview questions about social media use. It would be very helpful to see some of the analytic plans for connecting these to address the study aims - of the association of social media to sexual agency (and other covariates).

Response:

- There is now an added section on "Social Networks surveys and analysis" which describes
 when these social network surveys are conducted, the set of research questions these surveys
 seek to (collect data to) answer, and the egocentric nature of the data collected about friends
 and interactions.
- 2. As suggested by the reviewer, we have also added a brief section on our key hypotheses for the study. As one would appreciate that this is a protocol paper, the literature review and justification for these hypotheses form the subject of another paper elsewhere. We find that by providing description of our key hypotheses, the readability of the paper flows better allowing one to understand why and how we go about collecting our social network data.

- 3. There is now a detailed section on our analysis plan. Specifically, we point out the questions we ask to gather network data, what social network metrics we intend to use for the statistical testing of our hypotheses.
- 4. A figure has also now been added to the section "Diaries Social Networks" to illustrate and improve understanding of what the social network from the fortnightly diaries would look like.

Reviewer: Given the longitudinal nature of the project, the authors should describe planned retention efforts.