

## Checklist for Reporting Results of Internet E-Surveys (CHERRIES)

<i>Checklist Item</i>	<i>Explanation</i>	<i>Page Number</i>
Describe survey design	Describe target population, sample frame. Is the sample a convenience sample? (In “open” surveys this is most likely.)	Page 4 (Used a respondent-driven sampling or RDS approach. RDS is described in “Recruitment and data collection” section under “Methods)
IRB approval	Mention whether the study has been approved by an IRB.	Page 5
Informed consent	Describe the informed consent process. Where were the participants told the length of time of the survey, which data were stored and where and for how long, who the investigator was, and the purpose of the study?	Page 5
Data protection	If any personal information was collected or stored, describe what mechanisms were used to protect unauthorized access.	Page 5
Development and testing	State how the survey was developed, including whether the usability and technical functionality of the electronic questionnaire had been tested before fielding the questionnaire.	Page 5
Open survey versus closed survey	An “open survey” is a survey open for each visitor of a site, while a closed survey is only open to a sample which the investigator knows (password-protected survey).	Page 5 (i.e., unique link to the online survey was assigned to each participant)
Contact mode	Indicate whether or not the initial contact with the potential participants was made on the Internet. (Investigators may also send out questionnaires by mail and allow for Web-based data entry.)	Page 5
Advertising the survey	How/where was the survey announced or advertised? Some examples are offline media (newspapers), or online (mailing lists – If yes, which ones?) or banner ads (Where were these banner ads posted and what did they look like?). It is important to know the wording of the announcement as it will heavily influence who chooses to participate. Ideally the survey announcement should be published as an appendix.	Page 4 & Appendix 2
Web/E-mail	State the type of e-survey (eg, one posted on a Web site, or one sent out through e-mail). If it is an e-mail survey, were the responses entered manually into a database, or was there an automatic method for capturing responses?	Page 5 (Qualtrics is an online survey software & database)

Context	Describe the Web site (for mailing list/newsgroup) in which the survey was posted. What is the Web site about, who is visiting it, what are visitors normally looking for? Discuss to what degree the content of the Web site could pre-select the sample or influence the results. For example, a survey about vaccination on a anti-immunization Web site will have different results from a Web survey conducted on a government Web site	N/A – not using a website
Mandatory/voluntary	Was it a mandatory survey to be filled in by every visitor who wanted to enter the Web site, or was it a voluntary survey?	N/A – not using a website
Incentives	Were any incentives offered (eg, monetary, prizes, or non-monetary incentives such as an offer to provide the survey results)?	Page 4
Time/Date	In what timeframe were the data collected?	Page 4
Randomization of items or questionnaires	To prevent biases items can be randomized or alternated.	Appendix 3 provides the full survey in the order that was presented to the participants
Adaptive questioning	Use adaptive questioning (certain items, or only conditionally displayed based on responses to other items) to reduce number and complexity of the questions.	Appendix 3 provides the full survey and describes the embedded display logics (e.g., questions 9, 23, 24)
Number of Items	What was the number of questionnaire items per page? The number of items is an important factor for the completion rate.	Appendix 3, section A
Number of screens (pages)	Over how many pages was the questionnaire distributed? The number of items is an important factor for the completion rate.	Appendix 3, section A
Completeness check	It is technically possible to do consistency or completeness checks before the questionnaire is submitted. Was this done, and if “yes”, how (usually JavaScript)? An alternative is to check for completeness after the questionnaire has been submitted (and highlight mandatory items). If this has been done, it should be reported. All items should provide a non-response option such as “not applicable” or “rather not say”, and selection of one response option should be enforced.	Appendix 3, section A
Review step	State whether respondents were able to review and change their answers (eg, through a Back button or a Review step which displays a summary of the responses and asks the respondents if they are correct).	Appendix 3, section A

Unique site visitor	If you provide view rates or participation rates, you need to define how you determined a unique visitor. There are different techniques available, based on IP addresses or cookies or both.	N/A – not using a website
View rate (Ratio of unique survey visitors/unique site visitors)	Requires counting unique visitors to the first page of the survey, divided by the number of unique site visitors (not page views!). It is not unusual to have view rates of less than 0.1 % if the survey is voluntary.	N/A – not using a website
Participation rate (Ratio of unique visitors who agreed to participate/unique first survey page visitors)	Count the unique number of people who filled in the first survey page (or agreed to participate, for example by checking a checkbox), divided by visitors who visit the first page of the survey (or the informed consents page, if present). This can also be called “recruitment” rate.	Page 7
Completion rate (Ratio of users who finished the survey/users who agreed to participate)	The number of people submitting the last questionnaire page, divided by the number of people who agreed to participate (or submitted the first survey page). This is only relevant if there is a separate “informed consent” page or if the survey goes over several pages. This is a measure for attrition. Note that “completion” can involve leaving questionnaire items blank. This is not a measure for how completely questionnaires were filled in. (If you need a measure for this, use the word “completeness rate”.)	Page 7
Cookies used	Indicate whether cookies were used to assign a unique user identifier to each client computer. If so, mention the page on which the cookie was set and read, and how long the cookie was valid. Were duplicate entries avoided by preventing users access to the survey twice; or were duplicate database entries having the same user ID eliminated before analysis? In the latter case, which entries were kept for analysis (eg, the first entry or the most recent)?	N/A - unique link was assigned to a unique participant ID (described on page 5)
IP check	Indicate whether the IP address of the client computer was used to identify potential duplicate entries from the same user. If so, mention the period of time for which no two entries from the same IP address were allowed (eg, 24 hours). Were duplicate entries avoided by preventing users with the same IP address access to the survey twice; or were duplicate database entries having the same IP address within a given period of time eliminated before analysis? If the latter, which entries were kept for analysis (eg, the first entry or the most recent)?	N/A – IP check was not conducted as unique link was used to avoid duplicate entries from the same user (described on page 5)

Log file analysis	Indicate whether other techniques to analyze the log file for identification of multiple entries were used. If so, please describe.	N/A – Log file analysis was not conducted as unique link was used to avoid duplicate entries from the same user (described on page 5)
Registration	In “closed” (non-open) surveys, users need to login first and it is easier to prevent duplicate entries from the same user. Describe how this was done. For example, was the survey never displayed a second time once the user had filled it in, or was the username stored together with the survey results and later eliminated? If the latter, which entries were kept for analysis (eg, the first entry or the most recent)?	Page 5 (Unique ID was associated with a unique link. The unique ID was linked to the participant information using a master log).
Handling of incomplete questionnaires	Were only completed questionnaires analyzed? Were questionnaires which terminated early (where, for example, users did not go through all questionnaire pages) also analyzed?	Page 6
Questionnaires submitted with an atypical timestamp	Some investigators may measure the time people needed to fill in a questionnaire and exclude questionnaires that were submitted too soon. Specify the timeframe that was used as a cut-off point, and describe how this point was determined.	N/A – time stamp was not assessed.
Statistical correction	Indicate whether any methods such as weighting of items or propensity scores have been used to adjust for the non-representative sample; if so, please describe the methods.	Page 6 (used RDS-II weights)

This checklist has been modified from Eysenbach G. Improving the quality of Web surveys: the Checklist for Reporting Results of Internet E-Surveys (CHERRIES). J Med Internet Res. 2004 Sep 29;6(3):e34 [erratum in J Med Internet Res. 2012; 14(1): e8.]. Article available at <https://www.jmir.org/2004/3/e34/>; erratum available <https://www.jmir.org/2012/1/e8/>. Copyright ©Gunther Eysenbach. Originally published in the [Journal of Medical Internet Research](#), 29.9.2004 and 04.01.2012.

## STROBE-RDS Study Reporting Checklist

Item	#	STROBE-RDS Checklist	Page number in the manuscript
<b>Title and Abstract</b>	1	(a) Indicate “respondent-driven sampling” in the title or abstract	Page 1
		(b) Provide in the abstract an informative and balanced summary of what was done and what was found	Page 2
<b>Introduction</b>			
Background/ rationale	2	Explain the scientific background and rationale for the investigation being reported	Page 3
Objectives	3	State specific objectives, including any pre-specified hypotheses	Page 3
<b>Methods</b>			
Study design	4	(a) Present key elements of study design early in the paper	Page 4
		(b) State why RDS was chosen as the sampling method	Page 4
Setting	5	a) Describe the setting, locations, and relevant dates, including periods of recruitment, and data collection	Page 4
		(b) Describe formative research findings used to inform RDS study	Page 4
Participants	6	(a) Give the eligibility criteria, and the sources and methods of selection of participants. Describe how participants were trained/ instructed to recruit others, number of coupons issued per person, any time limits for referral	Page 4
		(b) Describe methods of seed selection and state number at start of study and number added later	Page 4
		(c) State if there was any variation in study procedures during data collection (e.g., changing numbers of coupons per recruiter, interruptions in sampling, or stopping recruitment chains)	N/A
		(d) Report wording of personal network size question(s)	Page 6

Item	#	STROBE-RDS Checklist	Page number in the manuscript
		(e) Describe incentives for participation and recruitment	Page 4
Variables	7	(a) If applicable, clearly define all outcomes, correlates, predictors, potential confounders, effect modifiers, and diagnostic criteria	Page 5
		(b) State how recruiter-recruit relationship was tracked	Page 4
Data sources/ measurement	8	(a) For each variable of interest, give sources of data and details of methods of measurement. Describe comparability of measurement methods if there is more than one group	Page 5
		(b) Describe methods to assess eligibility and reduce repeat enrollment (e.g. coupon manager software, biometrics)	Page 5
Bias	9	Describe any efforts to address potential sources of bias	Page 4
Study size	10	Explain how the study size was arrived at	Page 5
Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen, and why	Page 6
Statistical methods	12	(a) Describe all statistical methods, including those to account for sampling strategy (e.g. the estimator used) and, if applicable, those used to control for confounding	Page 6
		(b) State data analysis software, version number and specific analysis settings used	Page 6
		(c) Describe any methods used to examine subgroups and interactions	N/A
		(d) Explain how missing data were addressed	Page 6
		(e) Describe any sensitivity analyses	Page 6 & Appendix 5
		(f) Report any criteria used to support statements on whether estimator conditions or assumptions were appropriate	N/A
		(g) Explain how seeds were handled in analysis	Page 7

## Results

Item	#	STROBE-RDS Checklist	Page number in the manuscript
Participants	13	a) Report the numbers of individuals at each stage of the study —e.g., numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, and analyzed	Page 7
		(b) Give reasons for non-participation at each stage (e.g., not eligible, does not consent, decline to recruit others)	N/A
		(c) Consider use of a flow diagram	N/A
		(d) Report number of coupons issued and returned	Page 4 - because of public health restrictions prohibiting in-person contact with participants, assigned unique IDs (that were only available to authorized researchers) were used to track recruitment pattern instead of physical coupons
		(e) Report number of recruits by seed and number of RDS recruitment waves for each seed. Consider showing graph of entire recruitment network	Appendices 1 and 4
Descriptive data	14	(f) Report recruitment challenges (e.g. commercial exchange of coupons, imposters, duplicate recruits) and how addressed	Page 4 and 5
		(g) Consider reporting estimated design effect for outcomes of interest	Page 5
		a) Give characteristics of study participants (e.g., demographic, clinical, social) and, if applicable, information on correlates and potential confounders. Report unweighted	Tables 1 – 3

Item	#	STROBE-RDS Checklist	Page number in the manuscript
		sample size and percentages, estimated population proportions or means with estimated precision (e.g., 95% confidence interval)	
		(b) Indicate the number of participants with missing data for each variable of interest	Tables 1 – 3
Outcome data	15	If applicable, report number of outcome events or summary measures	N/A
Main results	16	(a) Give unadjusted and study design adjusted estimates and, if applicable, confounder adjusted estimates and their precision (e.g., 95% confidence intervals). Make clear which confounders were adjusted for and why they were included	Figure 1, Tables 1-3, and last paragraph of page 14 (regression results)
		(b) Report category boundaries when continuous variables were categorised	Tables 1 & 2 (Continuous variables were described on page 6)
		(c) If adjustment of primary outcome leads to marked changes, report information on factors influencing the adjustments (e.g. personal network sizes, recruitment patterns by group, key confounders)	N/A
Other analyses	17	Report other analyses done—e.g., analyses of subgroups and interactions, sensitivity analyses, different RDS estimators and definitions of personal network size	Sensitivity analyses are presented in Appendix 5
<b>Discussion</b>			
Key results	18	Summarise key results with reference to study objectives	Page 15
Limitations	19	Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias	Page 16
Interpretation	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence	Page 15



<b>Item</b>	<b>#</b>	<b>STROBE-RDS Checklist</b>	<b>Page number in the manuscript</b>
Generalisability	21	Discuss the generalisability (external validity) of the study results	Page 15 (in Limitations)
<b>Other information</b>			
Funding	22	Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based	Page 17 (in Acknowledgements)