Reproducible research practices and transparency in secondary data analysis - MoBa

This form is used to evaluate assigned articles. If you encounter any issues using the form you should contact Timo Roettger (timo.b.roettger@gmail.com)

* Indicates required question

1. General information

Try to use the multiple choice options as generously as possible and avoid idiosyncratic comments in the "Other...". Only assess MoBa relevant data, scripts, and materials. Many papers are a combination of studies and datasets. We are here only concerned with MoBa-relevant secondary data analyses.

1.	1.01. Note down the exact date. *
	Example: 7 January 2019
2.	1.1. Coder Initials *
	Mark only one oval. Mark only one oval.
	☐ TR☐ TK☐ MK☐ IM
	✓ AB✓ JM
3.	1.2. Article ID * Please carefully enter the unique ID assigned to the article (e.g. 1 to 4 digit number).

4.	1.3. Please flag any of the following issues that prevent you from coding this article:	*
	Mark only one oval (if multiple apply, choose the highest one not English > no access > not full article)	
	Mark only one oval.	
	There are no issues Skip to question 5	
	Article is not in English Skip to section 10 (9. Finishing up)	
	I don't have access to the full text Skip to section 10 (9. Finishing up)	
	Not a full article (e.g. just an abstract, erratum) Skip to section 10 (9. Finishing up)	
	Not using MoBa Skip to section 10 (9. Finishing up)	
	Other:	
2	. Article characteristics	

5. 2.1. In which year was the study published? *

Coder instructions: Go to the web page and search for the string "cite". If successful, check that the search highlights something on the lines of "how to cite this article" or "cite this article". If cite section found, either extract the year from the text itself or else download the citation as text (or any other format) and extract from there. If cite section not found, go to the pdf of the paper and repeat search. If search unsuccessful in pdf, check header/footer of the paper. If still unsuccessful, go back to HTML and report date given there.

6.

7.

2	2.2. What type of study is being reported? *
e b a	Mark only one oval. Examine the title, abstract, and if necessary the methods section, to establish the study characteristics. Only consider parts of the paper that are explicitly based on secondary analysis of MoBa data. If the separation between MoBa data analysis and other parts of the study is unclear, it is up to the discretion of the coder to decide whether the coding can be done reliably. If not, tick "Unclear" and move on to Section 9.
٨	Mark only one oval.
(Secondary analysis of MoBa data
(Data synthesis - Meta-analysis.
(No empirical data (e.g., editorials, commentaries [without reanalysis], simulations, news, reviews, theoretical). (SKIP TO SECTION 8) Skip to question 27
	Unclear Skip to question 27
	Other:
Defi of th of th	Preregistration initions: "Preregistration" refers to the time-stamped registration of important aspects he study (typically hypotheses, methods, and/or analysis plan) prior to commencement he study. Ier instructions: Check specific sections where these files might be located e.g., plementary materials, appendices, author notes, methods, and results sections.
	rch for "protocol", "agreement", or "*regist".
٧	3.1 Does the article state whether or not the study (or some aspect of the study) * was preregistered? Mark only one oval.
٨	Mark only one oval.
	Yes, there is a preregistration

No, there is no preregistration. (GO TO SECTION 4) Skip to question 11

Other:

8.	3.2 Where does the article indicate the preregistration is located? Mark only one oval.
	Mark only one oval.
	Open Science Framework (<u>osf.io</u>)
	AsPredicted (<u>aspredicted.org</u>)
	Registered Report
	Agreement letter between MoBa and researchers
	Clinical Trials (<u>clinicaltrials.gov</u>)
	WHO (trialsearch.who.int)
	ISRCTN (isrctn.com)
	EU Clinical Trials Register (<u>clinicaltrialsregister.eu</u>)
	Other:
9.	3.3 Can you access and open the preregistration? Mark only one oval.
	Mark only one oval.
	Yes
	No
	Other:
10.	3.4. What aspects of the study appear to be preregistered?
	Select all that apply.
	Tick all that apply.
	Hypotheses
	Research question
	Variables
	Data processing
	✓ Model structure✓ Data analysis
	Other:
	Utilet.

4. Data sharing

Definitions: "data" refers to recorded information that supports the analyses reported in the article. For our purposes, we differentiate between different types of data. "Raw data" refers to the recorded information in its rawest, digital form, at the level of sampling units (e.g., participants, words, utterances, trials, etc). "Processed data" refers to a derived form of the data that has undergone changes from its raw state (e.g., aggregates of responses, etc.). Neither raw nor processed data from MOBA <u>are allowed</u> to be publicly shared. We infer that the only valid form of data sharing in our corpus is sharing synthesised data (e.g. Quintana 2020), although not explicitly stated, or sharing of detailed metadata or any data documentation of data from the MoBa corpus. We do not consider tables containing descriptive statistics or other forms of aggregated data as shared data.

A "data availability statement" can be as simple as a url link to a data file, or as complex as a written explanation as to why data cannot be shared.

Coder instructions: Check the article for a data availability statement/link. They are often located in the "supplementary material", "acknowledgements", "author notes", "methods", or "results" sections. Search the article for the text "availab*", "shar*", or "access". Search for links using "www" or "http".

11.	4.1. Does the article state whether or not synthesised data are available? * Multiple responses possible.
	Mark only one oval.
	Yes, the statement says that the synthesised data are available
	No, synthesised data are not available. (GO TO SECTION 4.5) Other:
12.	4.2. How does the statement indicate that the synthesised data are available?
	Mark only one oval.
	Mark only one oval.
	Upon request from the authors
	Personal or institution website
	An online, third-party repository (e.g., OSF, GitHub, FigShare etc.)
	Supplementary materials hosted by the journal
	Available from a third party
	Unclear
	Other:

13.	4.3. Can you access, download, and open the synthesised data files without an additional step such as a sign-up or a login? Mark only one oval.
	Mark only one oval.
	Yes
	No
	Other:
14.	4.4. Are the synthesised data files documented, i.e., are there meta-data that state the nature and content of individual files? Is there a data dictionary / "code book" that describes the nature of individual variables? Mark only one oval.
	Mark only one oval.
	Yes
	No
	Unclear
	Other:
4.5	
15.	4.5. Is there any other form of data shared beyond synthesised data, e.g. * detailed metadata of MoBa data, any other data documentation of MoBa data or derived data?
	Note that we do not consider tables containing descriptive statistics or other forms of aggregated data as shared data. Mark only one oval.
	Mark only one oval.
	Yes
	No (GO TO SECTION 5)
	Other:

16.	4.6. How are any of these other forms of data available?
	Mark only one oval.
	Mark only one oval.
	Upon request from the authors
	Personal or institution website
	An online, third-party repository (e.g., OSF, GitHub, FigShare etc.)
	Supplementary materials hosted by the journal
	Available from a third party
	Unclear
	Other:
17.	4.7. Can you access, download, and open the other data files without an additional step such as a sign-up or a login? Mark only one oval.
	Mark only one oval.
	Yes
	◯ No
	Other:
18.	4.8 What type of additional data is shared?
5. Analysis script sharing	

Definition: "Analysis scripts" refers to specification of data preparation and analysis steps in the form of highly detailed step-by-step instructions for using point-and-click software (e.g., SPSS), analysis code (e.g., R), or syntax (e.g., from SPSS).

Coder instructions: Check the article for an analysis script availability statement/link. They are often located in the "supplementary material", "acknowledgements", "author notes", "methods", or "results" sections. Search for the text "analysis script" and "analysis code". Search for links using "www" or "http".

For 5.4, look for respective search strings like "sensitivity", "power", or "multiverse".

19.	5.1. Are analysis scripts available? *
	Mark only one oval.
	Mark only one oval.
	Yes, analysis scripts are freely available
	Authors point to a third party
	No, analysis scripts are not available. (GO TO SECTION 5.4)
	Other:
20.	5.2. How are the analysis scripts accessible?
	Mark only one oval.
	Mark only one oval.
	Upon request from the authors
	Personal or institutional website
	An online, third-party repository (e.g. OSF, GitHub, FigShare, etc.)
	Supplementary materials hosted by the journal
	Available from a third party
	Unclear
	Other:
21.	5.3. Can you access, download, and open the analysis scripts without an additional step such as a sign-up or a login?
	Mark only one oval.
	Mark only one oval.
	wark only one oval.
	Yes
	No
	Other:

22.	5.4 Does the paper report that they have performed a sensitivity / power / multiverse analysis?
	Tick all that apply.
	No Yes, sensitivity analysis Yes, power analysis
	Yes, multiverse analysis
6.	Other materials sharing
of da	efinitions: "Other materials" refers to any study items that do not fall under our definition synthesised data or scripts. For present purposes we do not consider supplementary ta/findings (e.g., additional figures or tables) to be relevant. Links that refer to the iginal MoBa surveys/questionnaires are also not considered relevant.
oft	oder instructions: Check the article for additional availability statement/link. They are ten located in the "supplementary material", "acknowledgements", "author notes", ethods", or "results" sections. Search for links using "www" or "http".
23.	6.1. Are other materials shared that are not synthesised data or scripts? * Mark only one oval.
	Mark only one oval.
	Yes, materials are freely available
	Other materials or additional information are available through a third party
	No, other materials are not available. (GO TO SECTION 7) Skip to question 26
	Other:

24.	6.2. How are the materials or additional information about the method accessible?
	Mark only one oval. If authors point to a third party via a reference only, mark "Available from a third party".
	Mark only one oval.
	Upon request from the authors
	Personal or institutional website
	An online, third-party repository (e.g. OSF, GitHub, FigShare, etc.)
	Supplementary materials hosted by the journal
	Available from a third party
	Unclear
	Other:
25.	6.3. Can you access, download, and open the materials or additional information
	about the method without an additional step such as a sign-up or a login?
	Mark only one oval. If authors point to a third party via a reference only, mark "Available from a third party".
	Mark only one oval.
	Yes
	No
	Other:

7. Replication

Definition: "replication" refers to repetition of a previous study's methods in order to ascertain whether similar findings can be obtained with an independent sample. In the case of secondary data analysis, we consider an analysis a replication if it was explicitly stated that the analysis intends to check for the analytical robustness of a previously published study.

Coder instructions: Search the title and abstract for the phrase "replicat*" (to cover 'replication', 'replicates', etc). Confirm the authors are using the phrase with the definition provided above.

26.	7.1. Does the article claim to report a replication study in abstract or title? *
	Mark only one oval.
	The article claims to report a replication study (or studies)
	There is no clear statement that the article reports a replication study (or studies)
	Other:
8.	Conflict of interest
"Au	der instructions: Conflicts of interest are usually reported in a specific section e.g., athor information", "Conflict of interest statement", or "Acknowledgments". Search the icle for the phrases "conflict of interest" and/or "competing interest".
27.	8.1. Does the article include a statement indicating whether there were any conflicts of interest?
	Mark only one oval.
	Mark only one oval.
	Yes, the statement says that there are one or more conflicts of interest.
	Yes, the statement says that there is no conflict of interest.
	No, there is no conflict of interest statement.
	Other:
9.	Finishing up
All done! Good job. Go get yourself a cookie, you have earned it!	

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