

Meta-Analytic Procedures Compared to Professional Standards (MARS and PRISMA)¹

Meta-analytic reporting standards (MARS) checklist of recommended methods (APA, 2008).

MARS reporting standard	Procedures in this book
Methods	
<i>Inclusion and Exclusion Criteria</i>	
Operational characteristics of independent (predictor) and dependent (outcome) variable(s)	Varied by topic, see chapter descriptions
Geographical and/or cultural restrictions	USA/Canada only; cultural restrictions varied by topic, see chapter descriptions.
Eligible research design features	All quantitative research designs included except for case studies and single-N designs
Time period in which studies needed to be conducted	After 1960, with ending dates between 2008 and 2013, as reported in Appendix A.
<i>Search Strategies</i>	
Reference and citation databases searched	Reported in Appendix A
Keywords used	Varied by topic; available from first author
Search software used and version	EBSCO, various versions from 2007 to 2013
Listserves queried	Only conducted for chapters on ethnic identity, racial/ethnic matching, and culturally adapted interventions.
Contacts made with authors	Only conducted for chapters on ethnic identity, racial/ethnic matching, and culturally adapted interventions.
Reference lists of reports examined	Yes, reference lists of all coded reports were examined to identify additional reports.
Method of addressing reports in languages other than English	Reports in languages other than English were excluded.
Process for determining study eligibility:	
Aspects of reports were examined (i.e, title, abstract, and/or full text)	Initial searches screened on titles only. Abstracts with relevant titles were then read, with full text reviewed if abstract deemed relevant.
Number and qualifications of relevance judges	Three to ten graduate and undergraduate students conducted the literature searches for each topic/chapter.
Indication of agreement	All relevant studies identified in initial searches were reviewed by the book first author. No indicators of agreement were tracked.
How disagreements were resolved	The book first author decided inclusion/exclusion.
Treatment of unpublished studies	Unpublished studies were included in every analysis.
<i>Coding Procedures</i>	
Number and qualifications of coders (e.g., level of expertise in the area, training)	Two teams of two coders coded each study. Coders were undergraduate and graduate students trained in meta-analytic coding.
Intercoder reliability or agreement	Reliability coefficients reported in Appendix A
Whether each report was coded by more than one coder and if so, how disagreements were resolved	Disagreements within and between coding teams were resolved by appeal to the study attributes to the point of consensus or by arbitration by the book first author.
If a quality scale was employed, a description of criteria	Study quality was not estimated.

and the procedures for application	
If study design features were coded, what these were	Research design was coded
How missing data were handled	Studies with missing data were omitted from analyses specific to that variable.
<i>Statistical Methods</i>	
Effect size metric(s)	Varied by topic, see chapter descriptions
Effect sizes calculating formulas	Meta-analysis Calculator and Comprehensive Meta-analysis software were used to transform statistics from one metric to another.
Corrections made to effect sizes	No corrections to effect sizes were made prior to aggregation.
Effect size averaging and/or weighting method(s)	All analyses involved random effects models that were weighted by the inverse variance.
How effect size confidence intervals (or standard errors) were calculated	Confidence intervals or standard errors were calculated and reported.
How effect size credibility intervals were calculated, if used	Effect size credibility estimates were not calculated.
How studies with more than one effect size were handled	Effect sizes were averaged weighted by N or by standard error.
Whether fixed and/or random effects models were used and the model choice justification	All analyses involved random effects weighted models.
How heterogeneity in effect sizes was assessed or estimated	Heterogeneity was assessed using several metrics.
<i>Ms and SDs for measurement artifacts, if construct-level relationships were the focus</i>	Measurement artifacts were not coded.
Tests and any adjustments for data censoring (e.g., publication bias, selective reporting)	Estimates of publication bias appear in every chapter.
Tests for statistical outliers	Scatterplots of data appear in every chapter.
Statistical power of the meta-analysis	Statistical power was not estimated.
Statistical programs or software packages used to conduct statistical analyses	Comprehensive Meta-analysis, STATA, and SPSS
Results	
Number of citations examined for relevance	This information was not recorded.
List of citations included in the synthesis	Studies included in the analyses are identified in the references of each chapter.
Number of citations relevant on many but not all inclusion criteria excluded from the meta-analysis	This information was not recorded.
Number of exclusions for each exclusion criterion (e.g., effect size could not be calculated), with examples	This information was not recorded.
Table giving descriptive information for each included study, including effect size and sample size	Tables with data from individual studies were omitted from the book due to page constraints.
Overall characteristics of the database (e.g., number of studies with different research designs)	Reported within each chapter in tabular and narrative form.
Overall effect size estimates, including measures of uncertainty (e.g., confidence intervals)	Reported within each chapter.
Number of studies and total sample sizes for each moderator analysis	Reported within each chapter.

Assessment of interrelations among variables used for moderator and mediator analyses	Meta-regressions that accounted for interrelations among variables were reported in some chapters.
Assessment of bias including possible data censoring	Estimates of publication bias were reported in each chapter, but possible data censoring was not estimated.

Adapted from "Reporting Standards for Research in Psychology: Why Do We Need Them? What Might They Be?" by APA Publications and Communications Board Working Group on Journal Article Reporting Standards, 2008, *American Psychologist*, 63, pp. 848–849. Copyright 2008 by the American Psychological Association.

Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) checklist of items to include when reporting a systematic review or meta-analysis (Moher et al., 2009).

Section/topic	#	Checklist item	Reported in this book
TITLE			
Title	1	Identify the report as a systematic review, meta-analysis, or both.	Yes
ABSTRACT			
Structured summary	2	Provide a structured summary including, as applicable: background; objectives; data sources; study eligibility criteria, participants, and interventions; study appraisal and synthesis methods; results; limitations; conclusions and implications of key findings; systematic review registration number.	No, book chapters do not contain abstracts
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known.	Yes
Objectives	4	Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS).	Yes
METHODS			
Protocol and registration	5	Indicate if a review protocol exists, if and where it can be accessed (e.g., Web address), and, if available, provide registration information.	Protocols are available from the author
Eligibility criteria	6	Specify study characteristics (e.g., PICOS, length of follow-up) and report characteristics (e.g., years considered, language, publication status) used as criteria for eligibility, giving rationale.	Yes
Information sources	7	Describe all information sources (e.g., databases with dates of coverage, contact with study authors to identify additional studies) in the search and date last searched.	Yes
Search	8	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.	Yes

Section/topic	#	Checklist item	Reported in this book
Study selection	9	State the process for selecting studies (i.e., screening, eligibility, included in systematic review, and, if applicable, included in the meta-analysis).	Yes
Data collection process	10	Describe method of data extraction from reports (e.g., piloted forms, independently, in duplicate) and any processes for obtaining and confirming data from investigators.	Yes
Data items	11	List and define all variables for which data were sought (e.g., PICOS, funding sources) and any assumptions and simplifications made.	No, available from the authors
Risk of bias in individual studies	12	Describe methods used for assessing risk of bias of individual studies (including specification of whether this was done at the study or outcome level), and how this information is to be used in any data synthesis.	No, within-study bias was not estimated
Summary measures	13	State the principal summary measures (e.g., risk ratio, difference in means).	Yes
Synthesis of results	14	Describe the methods of handling data and combining results of studies, if done, including measures of consistency (e.g., I^2) for each meta-analysis.	Yes
Risk of bias across studies	15	Specify any assessment of risk of bias that may affect the cumulative evidence (e.g., publication bias, selective reporting within studies).	Yes
Additional analyses	16	Describe methods of additional analyses (e.g., sensitivity or subgroup analyses, meta-regression), if done, indicating which were pre-specified.	Yes
RESULTS			
Study selection	17	Give numbers of studies screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally with a flow diagram.	No, most studies were located prior to 2009
Study characteristics	18	For each study, present characteristics for which data were extracted (e.g., study size, PICOS, follow-up period) and provide the citations.	No, this data is available from the authors
Risk of bias within	19	Present data on risk of bias of each study and, if available, any outcome-level assessment (see	No, within-study

Section/topic	#	Checklist item	Reported in this book
studies		Item 12).	bias was not estimated
Results of individual studies	20	For all outcomes considered (benefits or harms), present, for each study: (a) simple summary data for each intervention group and (b) effect estimates and confidence intervals, ideally with a forest plot.	No, this data is available from the authors
Synthesis of results	21	Present results of each meta-analysis done, including confidence intervals and measures of consistency.	Yes
Risk of bias across studies	22	Present results of any assessment of risk of bias across studies (see Item 15).	Yes
Additional analysis	23	Give results of additional analyses, if done (e.g., sensitivity or subgroup analyses, meta-regression) (see Item 16).	Yes
DISCUSSION			
Summary of evidence	24	Summarize the main findings including the strength of evidence for each main outcome; consider their relevance to key groups (e.g., health care providers, users, and policy makers).	Yes
Limitations	25	Discuss limitations at study and outcome level (e.g., risk of bias), and at review level (e.g., incomplete retrieval of identified research, reporting bias).	Yes
Conclusions	26	Provide a general interpretation of the results in the context of other evidence, and implications for future research.	Yes
FUNDING			
Funding	27	Describe sources of funding for the systematic review and other support (e.g., supply of data); role of funders for the systematic review.	Yes

Additional Explanations for Selected Points in the PRISMA Checklist

2. Structured summary

Our book chapters do not contain an abstract. Abstracts are appropriate for journal articles but are not typically included in book chapters.

4. Objectives

Objectives of the meta-analyses are listed as research questions within each chapter.

5. Protocol and registration

The coding sheets used in each meta-analysis are available from the authors.

10. Data collection process

All data were coded from manuscripts using two teams of two coders each. The first team coded the manuscript, and the second team compared the coding of the first team to the data in the manuscript. Discrepancies between teams were subsequently resolved in a meeting of members from both teams.

12. Risk of bias in individual

Possible biases of individual studies were not evaluated because in most cases relevant information was missing from reports or would have required conjecture.

15. Risk of bias across studies

Analyses to detect possible publication bias are reported within each chapter.

16. Additional analyses

Analyses of possible participant and study characteristics are reported within each chapter. Sub-group analyses and exploratory analyses are also reported in some chapters.

17. Study selection

It has become common practice to report flow charts of the number of studies screened (by reasons for exclusion). However, the literature search procedures for the analyses in this book were conducted several years ago, before such documentation had become widespread. Thus we have no record of the initial number of hits when search terms were entered into the electronic databases, and we have no estimates of the numbers of manuscripts excluded or the specific reasons why they were excluded. It is likely that several studies that should have been included in our analyses were not located through our literature search strategies.

18. Study characteristics

Individual study characteristics are not provided in this book due to page constraints. However, this information is available from the authors.

19. Risk of bias within studies

Possible sources of within-study bias were not evaluated (see item 12).

20. Results of individual studies

Individual study results are not provided in this book due to page constraints. However, this information is available from the authors.

27. Funding

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