

Table 1 *Meta-Analysis Reporting Standards (MARS): Information Recommended for Inclusion in Manuscripts Reporting Meta-Analyses*

Paper section and topic	Description
Title	Make it clear that the report describes a research synthesis and include "meta-analysis," if applicable Footnote funding source(s)
Abstract	The problem or relation(s) under investigation Study eligibility criteria Type(s) of participants included in primary studies Meta-analysis methods (indicating whether a fixed or random model was used) Main results (including the more important effect sizes and any important moderators of these effect sizes) Conclusions (including limitations) Implications for theory, policy, and/or practice
Introduction	Clear statement of the question or relation(s) under investigation: Historical background Theoretical, policy, and/or practical issues related to the question or relation(s) of interest Rationale for the selection and coding of potential moderators and mediators of results Types of study designs used in the primary research, their strengths and weaknesses Types of predictor and outcome measures used, their psychometric characteristics Populations to which the question or relation is relevant Hypotheses, if any
Method	
Inclusion and exclusion criteria	Operational characteristics of independent (predictor) and dependent (outcome) variable(s) Eligible participant populations Eligible research design features (e.g., random assignment only, minimal sample size) Time period in which studies needed to be conducted Geographical and/or cultural restrictions
Moderator and mediator analyses	Definition of all coding categories used to test moderators or mediators of the relation(s) of interest
Search strategies	Reference and citation databases searched Registries (including prospective registries) searched: Keywords used to enter databases and registries Search software used and version Time period in which studies needed to be conducted, if applicable Other efforts to retrieve all available studies: Listservs queried Contacts made with authors (and how authors were chosen) Reference lists of reports examined Method of addressing reports in languages other than English Process for determining study eligibility: Aspects of reports were examined (i.e., title, abstract, and/or full text) Number and qualifications of relevance judges Indication of agreement How disagreements were resolved Treatment of unpublished studies
Coding procedures	Number and qualifications of coders (e.g., level of expertise in the area, training) Intercoder reliability or agreement Whether each report was coded by more than one coder and if so, how disagreements were resolved Assessment of study quality: If a quality scale was employed, a description of criteria and the procedures for application If study design features were coded, what these were How missing data were handled
Statistical methods	Effect size metric(s): Effect sizes calculating formulas (e.g., <i>Ms</i> and <i>SDs</i> , use of univariate <i>F</i> to <i>r</i> transform) Corrections made to effect sizes (e.g., small sample bias, correction for unequal <i>ns</i>) Effect size averaging and/or weighting method(s)

Table 1 (continued)

Paper section and topic	Description
Statistical methods (continued)	How effect size confidence intervals (or standard errors) were calculated How effect size credibility intervals were calculated, if used How studies with more than one effect size were handled Whether fixed and/or random effects models were used and the model choice justification How heterogeneity in effect sizes was assessed or estimated <i>Ms</i> and <i>SDs</i> for measurement artifacts, if construct-level relationships were the focus Tests and any adjustments for data censoring (e.g., publication bias, selective reporting) Tests for statistical outliers Statistical power of the meta-analysis Statistical programs or software packages used to conduct statistical analyses
Results	Number of citations examined for relevance List of citations included in the synthesis Number of citations relevant on many but not all inclusion criteria excluded from the meta-analysis Number of exclusions for each exclusion criterion (e.g., effect size could not be calculated), with examples Table giving descriptive information for each included study, including effect size and sample size Assessment of study quality, if any Tables and/or graphic summaries: Overall characteristics of the database (e.g., number of studies with different research designs) Overall effect size estimates, including measures of uncertainty (e.g., confidence and/or credibility intervals) Results of moderator and mediator analyses (analyses of subsets of studies): Number of studies and total sample sizes for each moderator analysis Assessment of interrelations among variables used for moderator and mediator analyses Assessment of bias including possible data censoring
Discussion	Statement of major findings Consideration of alternative explanations for observed results: Impact of data censoring Generalizability of conclusions: Relevant populations Treatment variations Dependent (outcome) variables Research designs General limitations (including assessment of the quality of studies included) Implications and interpretation for theory, policy, or practice Guidelines for future research
