

### Additional file 3

Full assessment of SRMA with individual items, associated component labels (i.e., domains) and, whether applicable, the guideline or tool of reference. The items of interest to be assessed in SRMAs were selected based on key information that is (i) suitable to be presented in systematic reviews with exercise intervention or exposures related to physical activity; (ii) relevant to allow methodological reproducibility; and (iii) important to describe how evidence is weighted in by authors in order to provide well-reasoned knowledge translation.

Component	Item	Reference (guideline, checklist item; unless otherwise stated)
Transparency	Registration: Is the review registered in a public database?	PRISMA, 2 and 5 AMSTAR 2, 2
Transparency	Protocol: Is there referral of a publicly available methodological protocol? (Note: if so, you must also use the protocol to consult information about the review)	PRISMA, 5 AMSTAR 2, 2
Transparency	Methods: Is there at least one search query fully available? (Note: a full search query should allow complete replication)	PRISMA, 8
Transparency	Is there a statement regarding the data availability (data sharing plan)?	Not applicable
Completeness	Title: Is the study identified as a systematic review, meta-analysis, or both?	PRISMA, 1
Completeness	Abstract: Does the abstract list the data sources used in the review? (Note: if more than five databases were used, simplified or partial referral should be considered as "Yes")	PRISMA, 2
Completeness	Abstract: Does the abstract inform key eligibility criteria for study selection?	PRISMA, 2

Completeness	Abstract: Is there a description of the number of included studies?	Not applicable
Completeness	Introduction: Is there a description for the research question (with PICOS elements) or precisely stated objectives (with PICOS) ?	PRISMA, 4 AMSTAR 2, 1
Completeness	Methods: Is there a detailed explanation of eligibility criteria for PICOS elements? (Note: detailed explanation should allow complete replication)	PRISMA, 6 ROBIS, 1.3
Completeness	Results: Is there a full description regarding the numbers of references (retrieval, eligibility, synthesis)?	PRISMA, 17
Completeness	Results: Is there a description about the sample sizes of individual studies?	PRISMA, 18
Completeness	Results: Is there a description of study duration (follow-up lengths)?	PRISMA, 18 ROBIS, 3.2
Completeness	Is there a statement regarding the sources of funding? (Note: funding for the review itself)	PRISMA, 27 CONSORT, 25
Completeness	Did the review authors declare whether they had any conflicts of interest (COI)?	AMSTAR 2, 16
Participants	Abstract: Is there a description regarding the population (participants) or main condition(s) addressed in the review?	PRISMA, 2
Intervention / Exposure	Abstract: Is there a description regarding the interventions/exposures (or, broadly, independent variables) addressed in the review?	PRISMA, 2
Participants; Intervention / Exposure	Results: Is there a full description of characteristics? (Note: the available PICOS elements should be considered)	PRISMA, 18 AMSTAR 2, 8 ROBIS, 3.2
Outcome	Abstract: Is there a result description for the main outcome of interest?	PRISMA, 2
Outcome	Methods: Is there a description of the statistical combination (meta-analysis) regarding the effect measure (e.g., relative risk or mean difference), statistical method (e.g., inverse	PRISMA, 14 ROBIS, 3.3

	variance), and effects approach (fixed or random)?	
Outcome	Methods: Is there a description regarding the assessment of statistical heterogeneity?	PRISMA, 14
Outcome	Results: Is there a minimally recommended description of meta-analytic summary estimates? (Note: binary outcomes as frequencies with and without the event (or as proportions such as 12/45); continuous outcomes as the mean, standard deviation, and sample size for each group)	PRISMA, 20, 21
Outcome	Results: Is there a full description of individual results for studies composing the meta-analysis? (Note: effects size, imprecision measure and percentage weight should be considered)	PRISMA, 20
Methodological rigor	Methods: Did the search strategy include non-published evidence? ("grey literature")	PRISMA, 7 AMSTAR 2, 4 ROBIS 2.1
Methodological rigor	Methods: If the search is restricted for evidence generated after 1980, is there an indirect or direct justification related to the time range?	PRISMA, 8 ROBIS, 2.4
Methodological rigor	Methods: How many languages were considered for study eligibility?	PRISMA, 6 ROBIS, 2.4
Methodological rigor	Methods: Was the study selection carried out in duplicate?	PRISMA, 10 AMSTAR 2, 5 ROBIS, 2.5
Methodological rigor	Methods: Was the data extraction carried out in duplicate?	PRISMA, 11 AMSTAR 2, 6
Methodological rigor	Methods: Is there a description of the assessment of risk of biases?	PRISMA, 12 ROBIS, 3.4
Methodological rigor	Methods: Was the assessment of risk of biases carried out in duplicate?	ROBIS, 3.5

Critical appraisal	Results: Is there a description of risk of bias within studies? (Note: your assessment should be based on the characteristic of the RoB tool)	PRISMA, 22
Critical appraisal	Results: Is there a description for non-planned modifications to the synthesis during the course of the review? (e.g.: change in eligibility criteria or RoB tools; please, what was changed and its justification [why] should be considered).	AMSTAR 2, 2 ROBIS, 4.2
Critical appraisal	Discussion: Is there a potential spin bias based on a specific reporting strategy to highlight that the experimental treatment (or condition of interest) leads to the hypothesized result?	Based on Boutron et al [1] ROBIS, C (Phase 3)
Critical appraisal	Discussion: Are the results discussed in light of the risk of biases in individual studies?	PRISMA, 25 AMSTAR 2, 13 ROBIS, 4.6 and A (Phase 3)
Critical appraisal	Discussion: Are limitations discussed at the study/outcome and/or at the review level?	PRISMA, 25 AMSTAR 2, 12 ROBIS, A (Phase 3)

Components are coded by colors, except the item related to full description of participants and intervention (white background), which accounts twice for both Participants and Interventions/Exposures.

AMSTAR: A MeaSurement Tool to Assess systematic Reviews; COI: conflict of interest; PICOS: acronym for Population, Intervention, Comparator/Control, Outcome, Setting; PRISMA: Preferred Reporting Items for Systematic Reviews and Meta-Analyses; ROBIS: Risk Of Bias In Systematic Reviews; RoB: risk of bias.

Component label	Number of items
Transparency	4
Completeness	11
Participants	2
Intervention / Exposure	2

Methodological rigor	7
Outcome	5
Critical appraisal	5
Note: As a same item (relating to both Intervention/Exposure and Participants components) accounts twice, the final sum totalizes 36 items.	

## Reference

1. Boutron I, Dutton S, Ravaud P, Altman DG. Reporting and interpretation of randomized controlled trials with statistically nonsignificant results for primary outcomes. *JAMA*. 2010;303:2058–64.