

Assessment of methodological quality of systematic reviews published in the Cochrane Library about physical activity for chronic noncommunicable diseases



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Objective: To analyze the quality of all SRs published in the Cochrane Library about physical activity for treating or preventing NCDs, and to assess the methods used for risk of bias analysis.

Methods: The search strategy was developed for the Cochrane Library to identify all systematic reviews related to the theme, all references selected were screened, and the full text were assessed. The AMSTAR tool was used to assess the methodological quality of SRs. Agreement proportion between authors were independently assessed by two authors (AJG and APVC). SRs were evaluated by only one author (AJG).

Results: Were found 91 references in the first screening (23 protocol; 18 registered title; two SRs were withdraw); 48 SRs fulfilled the inclusion criteria.

Items from AMSTAR	Y	N	CA	NA
1. Was an 'a priori' design provided?	100 (48)	0.0 (0)	0.0 (0)	0.0 (0)
2. Was there duplicate study selection and data extraction?	100 (48)	0.0 (0)	0.0 (0)	0.0 (0)
3. Was a comprehensive literature search performed?	97.9 (47)	2.1 (1)	0.0 (0)	0.0 (0)
4. Was the status of publication (i.e. grey literature) used as an inclusion criterion?	97.9 (47)	2.1 (1)	0.0 (0)	0.0 (0)
5. Was a list of studies (included and excluded) provided?	100 (48)	0.0 (0)	0.0 (0)	0.0 (0)
6. Were the characteristics of the included studies provided?	100 (48)	0.0 (0)	0.0 (0)	0.0 (0)
7. Was the scientific quality of the included studies assessed and documented?	100 (48)	0.0 (0)	0.0 (0)	0.0 (0)
8. Was the scientific quality of the included studies used appropriately in formulating conclusions?	95.8 (46)	2.1 (1)	2.1 (1)	0.0 (0)
9. Were the methods used to combine the findings of studies appropriate?	77.1 (37)	2.1 (1)	20.8 (10)	0.0 (0)
10. Was the likelihood of publication bias assessed?	14.8 (7)	43.8 (21)	6.3 (3)	35.4 (17)
11. Was the conflict of interest stated?	100 (48)	0.0 (0)	0.0 (0)	0.0 (0)

Agreement proportion between evaluators was 0.88 (CI 95% = 0.5204 - 0.9904). Eighteen SRs used two tools to evaluate the RoB, 16 only used the tool developed by Cochrane. 16 uses some items of Cochrane tool, 13 (Jadad), 4 (Van Tulder), 2 used PEDRO scale, 1 used Delphi tool.

Conclusions: The methodological quality of systematic reviews about physical activity for NCDs published in the Cochrane Library demonstrated high quality. Most of characteristics represented in the questions considered in the tool were contemplated in the review analyzed. Although all SRs have evaluated the risk of bias in the included studies, the tool used differed among the reviews, and it could indicate lack of standardization.