Item 19c: Synthesis methods – Causes of inconsistency

If applicable, describe any methods used to explore possible causes of inconsistency among study results (e.g., subgroup analysis).

Title	1	Title ✓
Abstract	2	See tip sheets for Abstracts ✓
Summary	3	Plain language summary ✓
Open Science	4	Registration and protocol *a. Registration information* *b. Accession of protocol* *c. Protocol amendments*
	5	Support ✓
	6	Competing interests
	7	Availability of data and other materials
Introduction	8	Rationale ✓
	9	Objectives
Methods	10	Followed guidelines
	11	Eligibility criteria
	12	Information sources
	13	Search strategy
	14	Selection process
	15	Data collection process
	16	Data items
	17	Study risk of bias assessment
	18	Measurement properties
	19	**Synthesis methods** *a. Eligibility processes* *b. Methods for synthesis* ***c. Causes of inconsistency*** *d. Sensitivity analyses* ◀
	20	Certainty assessment
	21	Formulating recommendations
Results	22	Study selection *a. Results of search and selection* *b. Excluded reports with reasons*
	23	OMI characteristics *a. Characteristics of OMIs* *b. Interpretability aspects of OMIs* *c. Feasibility aspects of OMIs*
	24	Study characteristics
	25	Risk of bias in studies
	26	Results of individual studies
	27	Results of syntheses *a. Results of syntheses conducted* *b. Results of causes of inconsistency* *c. Results of sensitivity analyses*
	28	Certainty of evidence
	29	Recommendations
Discussion	30	Discussion *a. Interpretation of results* *b. Limitations of evidence* *c. Limitations of review processes* *d. Implications*

Tips for reporting this item:

- If methods were used to explore possible causes of inconsistency, specify which causes were explored.
- If methods were followed to deal with inconsistency, specify the methods used (such as subgroup analysis, ignoring certain results).

Examples:

"When individual studies showed inconsistent results, explanations for inconsistency in terms of differences in populations or study quality were explored. When inconsistency could be explained, results were summarized and rated per subset of studies. When inconsistency could not be explained, the overall rating was inconsistent (±), without summarizing the results or based on the majority of consistent results (+, −, or ?). If studies with a + or − rating were available, studies with a ? were ignored and not included when summarizing the results."

Elsman EBM et al. Systematic review on the measurement properties of diabetes-specific patient-reported outcome measures (PROMs) for measuring physical functioning in people with type 2 diabetes. *BMJ Open Diabetes Res. Care*, 2022;10(3):e002729. https://doi.org/10.1136/bmjdrc-2021-002729.

"When the number of studies is sufficient (n ≥ 3), subgroup analyses were conducted to explore the potential sources of heterogeneity. Subgroup were defined a priori and included running speed, IMUs' [inertial measurement units] position and running surface. The running speed was set to two levels: low (speed ≤ 15 km/h) and fast (speed > 15 km/h), and the running surface was divided into treadmill and ground."

Zeng Z et al. Validity and reliability of inertial measurement units on lower extremity kinematics during running: A systematic review and meta-analysis. *Sports Med. – Open*, 2022;8(1):86. https://doi.org/10.1186/s40798-022-00477-0.

"If the ratings of each study were inconsistent, we explored possible explanations (e.g., different languages). If the explanation was reasonable, we provided ratings by subgroup. If the explanation was unreasonable, the overall rating of the measurement property was rated as inconsistent (±). If there was no information to support the rating, the overall rating was rated as uncertain (?)."

Wen H et al.. Psychometric properties of self-reported measures of health-related quality of life in people living with HIV: a systematic review. *Health Qual. Life Outcomes,* 2022;20:1-43. https://doi.org/10.1186/s12955-021-01910-w.

From: Elsman EBM, Mokkink LB, Terwee CB, Beaton D, Gagnier JJ, Tricco AC, et al. Guideline for reporting systematic reviews of outcome measurement instruments (OMIs): PRISMA-COSMIN for OMIs 2024. J Clin Epidemiol, 2024, https://doi.org/10.1016/j.jclinepi.2024.111422.

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