

**Appendix S1: Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Checklist**

SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE #
<b>TITLE</b>			
Title	1	Identify the report as a scoping review.	1
<b>ABSTRACT</b>			
Structured summary	2	Provide a structured summary that includes (as applicable): background, objectives, eligibility criteria, sources of evidence, charting methods, results, and conclusions that relate to the review questions and objectives.	3
<b>INTRODUCTION</b>			
Rationale	3	Describe the rationale for the review in the context of what is already known. Explain why the review questions/objectives lend themselves to a scoping review approach.	4
Objectives	4	Provide an explicit statement of the questions and objectives being addressed with reference to their key elements (e.g., population or participants, concepts, and context) or other relevant key elements used to conceptualize the review questions and/or objectives.	4
<b>METHODS</b>			
Protocol and registration	5	Indicate whether a review protocol exists; state if and where it can be accessed (e.g., a Web address); and if available, provide registration information, including the registration number.	4
Eligibility criteria	6	Specify characteristics of the sources of evidence used as eligibility criteria (e.g., years considered, language, and publication status), and provide a rationale.	5
Information sources*	7	Describe all information sources in the search (e.g., databases with dates of coverage and contact with authors to identify additional sources), as well as the date the most recent search was executed.	5
Search	8	Present the full electronic search strategy for at least 1 database, including any limits used, such that it could be repeated.	Appendix S2
Selection of sources of evidence†	9	State the process for selecting sources of evidence (i.e., screening and eligibility) included in the scoping review.	5
Data charting process‡	10	Describe the methods of charting data from the included sources of evidence (e.g., calibrated forms or forms that have been tested by the team before their use, and whether data charting was done independently or in duplicate) and any processes for obtaining and confirming data from investigators.	6
Data items	11	List and define all variables for which data were sought and any assumptions and simplifications made.	7
Critical appraisal of individual sources of evidence§	12	If done, provide a rationale for conducting a critical appraisal of included sources of evidence; describe the methods used and how this information was used in any data synthesis (if appropriate).	6 & appendix 3
Synthesis of	13	Describe the methods of handling and	7

SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE #
results		summarizing the data that were charted.	
<b>RESULTS</b>			
Selection of sources of evidence	14	Give numbers of sources of evidence screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally using a flow diagram.	7, figure 1 & appendix 4
Characteristics of sources of evidence	15	For each source of evidence, present characteristics for which data were charted and provide the citations.	7-8 & appendix 5
Critical appraisal within sources of evidence	16	If done, present data on critical appraisal of included sources of evidence (see item 12).	8, figure 2 & appendix 6
Results of individual sources of evidence	17	For each included source of evidence, present the relevant data that were charted that relate to the review questions and objectives.	8 & table 1
Synthesis of results	18	Summarize and/or present the charting results as they relate to the review questions and objectives.	8 & figure 3
<b>DISCUSSION</b>			
Summary of evidence	19	Summarize the main results (including an overview of concepts, themes, and types of evidence available), link to the review questions and objectives, and consider the relevance to key groups.	9
Limitations	20	Discuss the limitations of the scoping review process.	9-10
Conclusions	21	Provide a general interpretation of the results with respect to the review questions and objectives, as well as potential implications and/or next steps.	11-12
<b>FUNDING</b>			
Funding	22	Describe sources of funding for the included sources of evidence, as well as sources of funding for the scoping review. Describe the role of the funders of the scoping review.	13

JB1 = Joanna Briggs Institute; PRISMA-ScR = Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews.

\* Where *sources of evidence* (see second footnote) are compiled from, such as bibliographic databases, social media platforms, and Web sites.

† A more inclusive/heterogeneous term used to account for the different types of evidence or data sources (e.g., quantitative and/or qualitative research, expert opinion, and policy documents) that may be eligible in a scoping review as opposed to only studies. This is not to be confused with *information sources* (see first footnote).

‡ The frameworks by Arksey and O'Malley (6) and Levac and colleagues (7) and the JBI guidance (4, 5) refer to the process of data extraction in a scoping review as data charting.

§ The process of systematically examining research evidence to assess its validity, results, and relevance before using it to inform a decision. This term is used for items 12 and 19 instead of "risk of bias" (which is more applicable to systematic reviews of interventions) to include and acknowledge the various sources of evidence that may be used in a scoping review (e.g., quantitative and/or qualitative research, expert opinion, and policy document).

**Appendix S2: Search strings conducted for literature search and selection of studies.**

Data bases	Search strings
<b>Pubmed</b>	(("integrity" OR "Ethic*") AND/OR ("unethical" OR "misconduct" OR "fraud" OR "dishonesty" OR "transparency" OR "violation" OR "responsible conduct of research" OR "questionable research practice" OR "questionable research" OR "duplicated publication*" OR "irreproducible" OR "fake" OR "inconsistent result" OR "retract*" OR "falsification" OR "plagiarism")) Filters applied: Meta-Analysis, Systematic Review
<b>Scopus</b>	( TITLE-ABS-KEY ( ethic* ) OR TITLE-ABS-KEY ( integrity ) OR TITLE-ABS-KEY ( misconduct ) OR TITLE-ABS-KEY ( fraud ) OR TITLE-ABS-KEY ( dishonesty ) OR TITLE-ABS-KEY ( transparency ) OR TITLE-ABS-KEY ( "responsible conduct of research" ) OR TITLE-ABS-KEY ( "questionable research practice" ) OR TITLE-ABS-KEY ( "questionable research" ) OR TITLE-ABS-KEY ( "duplicated publication" ) OR TITLE-ABS-KEY ( retraction ) OR TITLE-ABS-KEY ( falsification ) OR TITLE-ABS-KEY ( plagiarism ) AND TITLE-ABS-KEY ( "systematic review" ) OR TITLE-ABS-KEY ( "scoping review" ) ) AND ( LIMIT-TO ( DOCTYPE , "re" ) OR LIMIT-TO ( DOCTYPE , "cr" ) ) AND ( LIMIT-TO ( SRCTYPE , "j" ) )
<b>Cochrane Central</b>	Title Abstract Keyword OR misconduct in Title Abstract Keyword OR plagiarism in Title Abstract Keyword OR falsification in Title Abstract Keyword OR retraction in Title Abstract Keyword OR "ethical" in Title Abstract Keyword - (Word variations have been searched)
<b>Google Scholar</b>	allintitle: "systematic review" AND "unethical" OR "integrity" OR "misconduct" OR "fraud" OR "dishonesty" OR "transparency" OR "responsible conduct of research" OR "questionable research" OR "duplicated publication" OR "retraction" OR "falsification" OR "plagiarism"

**Appendix S3: Quality assessment tool based on a modified AMSTAR-2 checklist for the included reviews concerning integrity of clinical trials.**

1. Did the aim/objective and inclusion criteria for the review include the RCT study design covered with the integrity issue explicitly?

- Yes
- Partial Yes
- No

For Yes:

- RCT study design
- AND Integrity issue

For Partial Yes:

- RCT study design
- OR Integrity issue

2. Did the report of the review contain an explicit statement about prospective registration?\*

- Yes
- No

3. Did the review authors explain their selection of the study designs for inclusion in the review?

- Yes
- Partial Yes
- No

4. Did the review authors use a comprehensive literature search strategy?\*

- Yes
- Partial Yes
- No

For Partial Yes:

- searched at least 2 databases (relevant to research question)
- provided key word and/or search strategy
- justified publication restrictions (e.g. language)

For Yes, should also have (all the following):

- searched the reference lists / bibliographies of included studies
- searched trial/study registries
- included/consulted content experts in the field
- where relevant, searched for grey literature
- conducted search within 24 months of completion of the review

5. Did the review authors perform study selection in duplicate?

- Yes
- No

For Yes, either ONE of the following:

- at least two reviewers independently agreed on selection of eligible studies and achieved consensus on which studies to include

- OR two reviewers selected a sample of eligible studies and achieved good agreement (at least 80 percent), with the remainder selected by one reviewer.

6. Did the review authors perform data extraction in duplicate?

- Yes
- No

For Yes, either ONE of the following:

- at least two reviewers achieved consensus on which data to extract from included studies
- OR two reviewers extracted data from a sample of eligible studies and achieved good agreement (at least 80 percent), with the remainder extracted by one reviewer.

7. Did the review authors provide a list of excluded studies and justify the exclusions?\*

- Yes
- Partial Yes
- No

For Partial Yes:

- provided a list of all potentially relevant studies that were read in full-text form but excluded from the review

For Yes, must also have:

- justified the exclusion from the review of each potentially relevant study

8. Did the review authors describe the integrity issue in the included studies in adequate detail?

- Yes
- Partial Yes
- No

9. Did the review authors use a satisfactory technique for assessing the risk of bias (RoB) in individual studies that were included in the review?\*

- Yes
- Partial Yes
- No

For Yes:

- RoB assessment performed using an assessment tool has been already validated

For Partial Yes:

- RoB assessment performed without a validated assessment tool

10. Did the review authors report on the sources of funding for the studies included in the review?

- Yes
- No

For Yes:

- Must have reported on the sources of funding for individual studies included in the review. Note: Reporting that the reviewers looked for this information but it was not reported by study authors also qualifies

11. If meta-analysis was performed did the review authors use appropriate methods for statistical combination of results?\*

- Yes
- No
- No meta-analysis conducted

For Yes:

- The authors justified combining the data in a meta-analysis
- AND they used an appropriate weighted technique to combine study results and adjusted for heterogeneity if present.
- AND investigated the causes of any heterogeneity
- AND they reported separate subgroup. summary estimates for different study designs

12. If meta-analysis was performed, did the review authors assess the potential impact of RoB in individual studies on the results of the meta-analysis or other evidence synthesis?

- Yes
- No
- No meta-analysis conducted

For Yes:

- included only low risk of bias RCTs
- OR, if the pooled estimate was based on RCTs and/or NRSI at variable RoB, the authors performed analyses to investigate possible impact of RoB on summary estimates of effect.

13. Did the review authors account for RoB in individual studies when interpreting/discussing the results of the review?\*

- Yes
- No

For Yes:

- included only low risk of bias RCTs
- OR, if RCTs with moderate or high RoB, or NRSI were included the review provided a discussion of the likely impact of RoB on the results

14. Did the review authors provide a satisfactory explanation for, and discussion of, any heterogeneity observed in the results of the review?

- Yes
- No

For Yes:

- There was no significant heterogeneity in the results
- OR if heterogeneity was present the authors performed an investigation of sources of any heterogeneity in the results and discussed the impact of this on the results of the review

15. If they performed quantitative synthesis did the review authors carry out an adequate investigation of publication bias (small study bias; i.e. funnel plot analysis) and discuss its likely impact on the results of the review?\*

- Yes
- No
- No meta-analysis conducted

For Yes:

- performed graphical or statistical tests for publication bias and discussed the likelihood and magnitude of impact of publication bias

16. Did the review authors report any potential sources of conflict of interest, including any funding they received for conducting the review?

- Yes
- No

For Yes:

- The authors reported no competing interests
- OR The authors described their funding sources and how they managed potential conflicts of interest

#### Appendix S4: Excluded citations and reasons for exclusions after full-text articles reviewed (n=128).

Number	Reason for exclusion	Reference
n=43	No systematic review	(1–43)
n=50	Not research integrity related	(44–93)
n=33	Not randomised trials related	(94–126)
n=1	Outside the scope of review	(127)
n=1	Manuscript not available	(128)

#### References

1. van der Steen JT, ter Riet G, van den Bogert CA, Bouter LM. Causes of reporting bias: A theoretical framework. *F1000Research* [Internet]. 2019 [cited 2022 Jan 14];8. Available from: <https://pubmed.ncbi.nlm.nih.gov/31497290/>
2. McDowell GS, Knutsen JD, Graham JM, Oelker SK, Lijek RS. Co-reviewing and ghostwriting by early-career researchers in the peer review of manuscripts. *Elife* [Internet]. 2019 Oct 1 [cited 2022 Jan 14];8. Available from: <https://pubmed.ncbi.nlm.nih.gov/31668163/>
3. Hamilton S, Bernstein AB, Blakey G, Fagan V, Farrow T, Jordan D, et al. Developing the Clarity and Openness in Reporting: E3-based (CORE) Reference user manual for creation of clinical study reports in the era of clinical trial transparency. *Res Integr peer Rev* [Internet]. 2016 Dec [cited 2022 Jan 14];1(1). Available from: <https://pubmed.ncbi.nlm.nih.gov/29451540/>
4. Denison HJ, Dodds RM, Ntani G, Cooper R, Cooper C, Sayer AA, et al. How to get started with a systematic review in epidemiology: an introductory guide for early career researchers. *Arch Public Health* [Internet]. 2013 Dec [cited 2022 Jan 14];71(1). Available from: <https://pubmed.ncbi.nlm.nih.gov/23919540/>
5. Lund H, Bala M, Blaine C, Brunnhuber K, Robinson KA. How to improve the study design of clinical trials in internal medicine: recent advances in the evidence-based methodology. *Polish Arch Intern Med* [Internet]. 2021 Sep 30 [cited 2022 Jan 14];131(9):848–53. Available from: <https://pubmed.ncbi.nlm.nih.gov/34590450/>
6. Ogden T, Fixsen DL. Implementation science: A brief overview and a look ahead. *Zeitschrift fur Psychol / J Psychol*. 2014;222(1):4–11.
7. Boyd EA, Bero LA. Improving the use of research evidence in guideline development: 4. Managing conflicts of interests. *Heal Res policy Syst* [Internet]. 2006 Dec 1 [cited 2022 Jan 14];4. Available from: <https://pubmed.ncbi.nlm.nih.gov/17140441/>
8. Schünemann HJ, Oxman AD, Fretheim A. Improving the use of research evidence in guideline development: 6. Determining which outcomes are important. *Heal Res policy Syst* [Internet]. 2006 Dec 1 [cited 2022 Jan 14];4. Available from: <https://pubmed.ncbi.nlm.nih.gov/17140444/>

9. Nix HP, Weijer C, Brehaut JC, Forster D, Goldstein CE, Taljaard M. Informed consent in cluster randomised trials: a guide for the perplexed. *BMJ Open* [Internet]. 2021 Sep 27 [cited 2022 Jan 14];11(9). Available from: <https://pubmed.ncbi.nlm.nih.gov/34580104/>
10. Li W, van Wely M, Gurrin L, Mol BW. Integrity of randomized controlled trials: challenges and solutions. *Fertil Steril* [Internet]. 2020 Jun 1 [cited 2022 Jan 14];113(6):1113–9. Available from: <https://pubmed.ncbi.nlm.nih.gov/32387277/>
11. Thomas B, Tachble A, Peiris D, Malhi R, Godlovitch G, Lin Y. Making literature reviews more ethical: a researcher and health sciences librarian collaborative process. *Futur Sci OA* [Internet]. 2015 Nov 1 [cited 2022 Jan 14];1(4). Available from: <https://pubmed.ncbi.nlm.nih.gov/28031927/>
12. Turner TL, Balmer DF, Coverdale JH. Methodologies and study designs relevant to medical education research. *Int Rev Psychiatry* [Internet]. 2013 Jun [cited 2022 Jan 14];25(3):301–10. Available from: <https://pubmed.ncbi.nlm.nih.gov/23859093/>
13. Alcauskas M, Galetta S. Editors' note: Systematic review and statistical analysis of the integrity of 33 randomized controlled trials. *Neurology* [Internet]. 2018 Mar 20 [cited 2022 Jan 14];90(12):577–577. Available from: <https://n.neurology.org/content/90/12/577.2>
14. Bossuyt PM. Ruim. Ruim 200 richtlijnen voor rapportage van onderzoek | Nederlands Tijdschrift voor Geneeskunde. *Ned Tijdschr Geneeskd* [Internet]. 2015 [cited 2022 Jan 14];159:87–97. Available from: <https://www.ntvg.nl/artikelen/ruim-200-richtlijnen-voor-rapportage-van-onderzoek>
15. Sandercock P. Negative results: why do they need to be published? *Int J Stroke* [Internet]. 2012 Jan [cited 2022 Jan 14];7(1):32–3. Available from: <https://pubmed.ncbi.nlm.nih.gov/22188851/>
16. Myers EF. Nutrition research integrity: To believe or not to believe? That is the question! *Nutr Today* [Internet]. 2016 [cited 2022 Jan 14];51(5):251–8. Available from: [https://www.researchgate.net/publication/308736947\\_Nutrition\\_Research\\_Integrity\\_To\\_Believe\\_or\\_Not\\_to\\_Believe\\_That\\_Is\\_the\\_Question](https://www.researchgate.net/publication/308736947_Nutrition_Research_Integrity_To_Believe_or_Not_to_Believe_That_Is_the_Question)
17. Lichtenstein AH, Petersen K, Barger K, Hansen KE, Anderson CAM, Baer DJ, et al. Perspective: Design and Conduct of Human Nutrition Randomized Controlled Trials. *Adv Nutr* [Internet]. 2021 Jan 1 [cited 2022 Jan 14];12(1):4–20. Available from: <https://pubmed.ncbi.nlm.nih.gov/33200182/>
18. Romanelli JR, Fuchshuber PR, Stulberg JJ, Kowalski RB, Sinha P, Aloia TA, et al. Public reporting and transparency: a primer on public outcomes reporting. *Surg Endosc* [Internet]. 2019 Jul 15 [cited 2022 Jan 14];33(7):2043–9. Available from: <https://pubmed.ncbi.nlm.nih.gov/31161288/>
19. Ioannidis JPA, Munafò MR, Fusar-Poli P, Nosek BA, David SP. Publication and other reporting biases in cognitive sciences: detection, prevalence, and prevention. *Trends Cogn Sci* [Internet]. 2014 [cited 2022 Jan 14];18(5):235–41. Available from: <https://pubmed.ncbi.nlm.nih.gov/24656991/>
20. Tumber MB, Dickersin K. Publication of clinical trials: accountability and accessibility. *J Intern Med* [Internet]. 2004 Oct [cited 2022 Jan 14];256(4):271–83. Available from: <https://pubmed.ncbi.nlm.nih.gov/15367169/>

21. Abaid LN, Grimes DA, Schulz KF. Reducing publication bias through trial registration. *Obstet Gynecol* [Internet]. 2007 Jun [cited 2022 Jan 14];109(6):1434–7. Available from: <https://pubmed.ncbi.nlm.nih.gov/17540818/>
22. Wade D. Registration of all rehabilitation clinical trials: an ethical and editorial imperative. *Clin Rehabil* [Internet]. 2016 Mar 1 [cited 2022 Jan 14];30(3):211–2. Available from: <https://pubmed.ncbi.nlm.nih.gov/26467720/>
23. Duke S, Bennett H. Review: a narrative review of the published ethical debates in palliative care research and an assessment of their adequacy to inform research governance. *Palliat Med* [Internet]. 2010 Mar [cited 2022 Jan 14];24(2):111–26. Available from: <https://pubmed.ncbi.nlm.nih.gov/19965950/>
24. Ten Have M, de Beaufort ID, Teixeira PJ, Mackenbach JP, van der Heide A. Ethics and prevention of overweight and obesity: an inventory. *Obes Rev* [Internet]. 2011 Sep [cited 2022 Jan 14];12(9):669–79. Available from: <https://pubmed.ncbi.nlm.nih.gov/21545391/>
25. Adamson J, Cockayne S, Puffer S, Torgerson DJ. Review of randomised trials using the post-randomised consent (Zelen’s) design. *Contemp Clin Trials* [Internet]. 2006 Aug [cited 2022 Jan 14];27(4):305–19. Available from: <https://pubmed.ncbi.nlm.nih.gov/16455306/>
26. Liberati A, Moja LP, Moschetti I. [The future of clinical research: why do we need an ecological approach?]. *Recenti Prog Med* [Internet]. 2006 Nov [cited 2022 Jan 14];97(11):604–10. Available from: <https://pubmed.ncbi.nlm.nih.gov/17252716/>
27. Hamilton S, Seiler W, Gertel A. The EMWA Budapest Working Group: A 2-year collaboration to make recommendations for aligning the ICH E3 guideline with current practice and developing clinical study protocol guidance. *Med Writ* [Internet]. 2014 Dec [cited 2022 Jan 14];23(4):281–8. Available from: [https://www.researchgate.net/publication/286230286\\_The\\_EMWA\\_Budapest\\_Working\\_Group\\_A\\_2-year\\_collaboration\\_to\\_make\\_recommendations\\_for\\_aligning\\_the\\_ICH\\_E3\\_guideline\\_with\\_current\\_practice\\_and\\_developing\\_clinical\\_study\\_protocol\\_guidance](https://www.researchgate.net/publication/286230286_The_EMWA_Budapest_Working_Group_A_2-year_collaboration_to_make_recommendations_for_aligning_the_ICH_E3_guideline_with_current_practice_and_developing_clinical_study_protocol_guidance)
28. Wager E. The need for trial identifiers. *Curr Med Res Opin* [Internet]. 2004 [cited 2022 Jan 14];20(2):203–6. Available from: <https://pubmed.ncbi.nlm.nih.gov/15006015/>
29. Gupta YK, Meenu M, Mohan P. The Tamiflu fiasco and lessons learnt. *Indian J Pharmacol* [Internet]. 2015 Jan 1 [cited 2022 Jan 14];47(1):11–6. Available from: <https://pubmed.ncbi.nlm.nih.gov/25821304/>
30. Seruga B, Templeton AJ, Badillo FEV, Ocana A, Amir E, Tannock IF. Under-reporting of harm in clinical trials. *Lancet Oncol* [Internet]. 2016 May 1 [cited 2022 Jan 14];17(5):e209–19. Available from: <https://pubmed.ncbi.nlm.nih.gov/27301048/>
31. Sarkis-Onofre R, Cenci MS, Demarco FF, Lynch CD, Fleming PS, Pereira-Cenci T, et al. Use of guidelines to improve the quality and transparency of reporting oral health research. *J Dent* [Internet]. 2015 Apr 1 [cited 2022 Jan 14];43(4):397–404. Available from: <https://pubmed.ncbi.nlm.nih.gov/25676182/>
32. Costa LOP, Maher CG, Lopes AD, de Noronha MA, Costa LCM. Transparent reporting of studies relevant to physical therapy practice. *Rev Bras Fisioter* [Internet]. 2011 [cited

- 2022 Jan 14];15(4):267–71. Available from:  
<https://pubmed.ncbi.nlm.nih.gov/21975681/>
33. Krepelka P. [Informed consent in gynecology and obstetrics] - PubMed. *Ces Gynekol* [Internet]. 2006 [cited 2022 Jan 14];71:74–8. Available from:  
<https://pubmed.ncbi.nlm.nih.gov/16465921/>
  34. van Bruchem-Visser RL, van Dijk G, de Beaufort I, Mattace-Raso F. Ethical frameworks for complex medical decision making in older patients: A narrative review. *Arch Gerontol Geriatr* [Internet]. 2020 Sep 1 [cited 2022 Jan 14];90. Available from:  
<https://pubmed.ncbi.nlm.nih.gov/32629372/>
  35. Bhide A, Shah PS, Acharya G. A simplified guide to randomized controlled trials. *Acta Obstet Gynecol Scand* [Internet]. 2018 Apr 1 [cited 2022 Jan 14];97(4):380–7. Available from: <https://pubmed.ncbi.nlm.nih.gov/29377058/>
  36. Wager E, Wiffen PJ. Ethical issues in preparing and publishing systematic reviews. *J Evid Based Med* [Internet]. 2011 May [cited 2022 Jan 14];4(2):130–4. Available from:  
<https://pubmed.ncbi.nlm.nih.gov/23672703/>
  37. Mulvihill JJ, Capps B, Joly Y, Lysaght T, Zwart HAE, Chadwick R. Ethical issues of CRISPR technology and gene editing through the lens of solidarity. *Br Med Bull* [Internet]. 2017 Jun 1 [cited 2022 Jan 14];122(1):17–29. Available from:  
<https://pubmed.ncbi.nlm.nih.gov/28334154/>
  38. Bolland MJ, Avenell A, Gamble GD, Grey A. Systematic review and statistical analysis of the integrity of 33 randomized controlled trials. *Neurology* [Internet]. 2016 Dec 6 [cited 2022 Jan 14];87(23):2391–402. Available from:  
<https://pubmed.ncbi.nlm.nih.gov/27920281/>
  39. Seiler CM, Kellmeyer P, Kienle P, Büchler MW, Knaebel HP. Assessment of the ethical review process for non-pharmacological multicentre studies in Germany on the basis of a randomised surgical trial. *J Med Ethics* [Internet]. 2007 Feb [cited 2022 Jan 14];33(2):113–8. Available from: <https://pubmed.ncbi.nlm.nih.gov/17264200/>
  40. Schou A, Mølgaard J, Andersen LW, Holm S, Sørensen M. Ethics in extracorporeal life support: a narrative review. *Crit Care* [Internet]. 2021 Dec 1 [cited 2022 Jan 14];25(1). Available from: <https://pubmed.ncbi.nlm.nih.gov/34289885/>
  41. Rothwell PM. External validity of randomised controlled trials: “to whom do the results of this trial apply?” *Lancet* (London, England) [Internet]. 2005 Jan 1 [cited 2022 Jan 14];365(9453):82–93. Available from: <https://pubmed.ncbi.nlm.nih.gov/15639683/>
  42. Tomillero A, Moral MA. Gateways to clinical trials. *Methods Find Exp Clin Pharmacol* [Internet]. 2010 [cited 2022 Jan 14];32(10):749. Available from:  
<https://pubmed.ncbi.nlm.nih.gov/21225012/>
  43. Acai A, Sonnadara RR, O’Neill TA. Getting with the times: a narrative review of the literature on group decision making in virtual environments and implications for promotions committees. *Perspect Med Educ* [Internet]. 2018 Jun 1 [cited 2022 Jan 14];7(3):147–55. Available from: <https://pubmed.ncbi.nlm.nih.gov/29797289/>
  44. Petersen JM, Ranker LR, Barnard-Mayers R, MacLehose RF, Fox MP. A systematic review of quantitative bias analysis applied to epidemiological research. *Int J Epidemiol* [Internet]. 2021 Nov 10 [cited 2022 Jan 15];50(5):1708–30. Available from:

<https://pubmed.ncbi.nlm.nih.gov/33880532/>

45. Samaratunga R, Johnson L, Gatzidis C, Swain I, Wainwright T, Middleton R. A review of participant recruitment transparency for sound validation of hip surgery simulators: a novel umbrella approach. *J Med Eng Technol* [Internet]. 2021 [cited 2022 Jan 15];45(6):434–56. Available from: <https://pubmed.ncbi.nlm.nih.gov/34016011/>
46. Wilpers A, Francis K, Spinner SS, Kennedy HP. Integrative Review of Nursing Practices in Fetal Therapy. *J Obstet Gynecol neonatal Nurs JOGNN* [Internet]. 2020 May 1 [cited 2022 Jan 15];49(3):254–62. Available from: <https://pubmed.ncbi.nlm.nih.gov/32109429/>
47. Matovina C, Birkeland AC, Zick S, Shuman AG. Integrative Medicine in Head and Neck Cancer. *Otolaryngol Head Neck Surg* [Internet]. 2017 Feb 1 [cited 2022 Jan 15];156(2):228–37. Available from: <https://pubmed.ncbi.nlm.nih.gov/27729559/>
48. de Brito GMG, de Oliveira Santa Rosa D. Nurses performance in clinical ethics committees and commissions: An integrative review. *Nurs Ethics* [Internet]. 2019 May 1 [cited 2022 Jan 15];26(3):688–99. Available from: <https://pubmed.ncbi.nlm.nih.gov/28933257/>
49. Olavarria OA, Shah P, Bernardi K, Lyons NB, Holihan JL, Ko TC, et al. Lack of Regulations and Conflict of Interest Transparency of New Hernia Surgery Technologies. *J Surg Res* [Internet]. 2020 Mar 1 [cited 2022 Jan 15];247:445–52. Available from: <https://pubmed.ncbi.nlm.nih.gov/31668430/>
50. Brøgger-Mikkelsen M, Ali Z, Zibert JR, Andersen AD, Thomsen SF. Online Patient Recruitment in Clinical Trials: Systematic Review and Meta-Analysis. *J Med Internet Res* [Internet]. 2020 Nov 1 [cited 2022 Jan 15];22(11). Available from: <https://pubmed.ncbi.nlm.nih.gov/33146627/>
51. Probst P, Grummich K, Harnoss JC, Hüttner FJ, Jensen K, Braun S, et al. Placebo-Controlled Trials in Surgery: A Systematic Review and Meta-Analysis. *Medicine (Baltimore)* [Internet]. 2016 Apr 1 [cited 2022 Jan 15];95(17). Available from: <https://pubmed.ncbi.nlm.nih.gov/27124060/>
52. Krol FJ, Hagin M, Vieta E, Harazi R, Lotan A, Strous RD, et al. Placebo-To be or not to be? Are there really alternatives to placebo-controlled trials? *Eur Neuropsychopharmacol* [Internet]. 2020 Mar 1 [cited 2022 Jan 15];32:1–11. Available from: <https://pubmed.ncbi.nlm.nih.gov/31959380/>
53. Kim S, Jabori S, O’Connell J, Freeman S, Fung CC, Ekram S, et al. Research methodologies in informed consent studies involving surgical and invasive procedures: time to re-examine? *Patient Educ Couns* [Internet]. 2013 Dec [cited 2022 Jan 15];93(3):559–66. Available from: <https://pubmed.ncbi.nlm.nih.gov/24021416/>
54. Sofaer N, Strech D. Reasons Why Post-Trial Access to Trial Drugs Should, or Need not be Ensured to Research Participants: A Systematic Review. *Public Health Ethics* [Internet]. 2011 Jul [cited 2022 Jan 15];4(2):160–84. Available from: <https://pubmed.ncbi.nlm.nih.gov/21754950/>
55. Murunga VI, Oronje RN, Bates I, Tagoe N, Pulford J. Review of published evidence on knowledge translation capacity, practice and support among researchers and research institutions in low- and middle-income countries. *Heal Res policy Syst* [Internet]. 2020

- Feb 10 [cited 2022 Jan 15];18(1). Available from:  
<https://pubmed.ncbi.nlm.nih.gov/32039738/>
56. Borrelli MR, Farwana R, Andrew TW, Chicco M, Abukhder M, Mobarak D, et al. Assessing the Compliance of Randomized Controlled Trials Published in Craniofacial Surgery Journals With the CONSORT Statement. *J Craniofac Surg* [Internet]. 2019 Jan 1 [cited 2022 Jan 15];30(1):96–104. Available from:  
<https://pubmed.ncbi.nlm.nih.gov/30444780/>
  57. Joseph PD, Caldwell PHY, Tong A, Hanson CS, Craig JC. Stakeholder Views of Clinical Trials in Low- and Middle-Income Countries: A Systematic Review. *Pediatrics* [Internet]. 2016 Feb 1 [cited 2022 Jan 15];137(2). Available from:  
<https://pubmed.ncbi.nlm.nih.gov/26812926/>
  58. Imberger G, Damgaard Vejlbj A, Hansen SB, Møller AM, Wetterslev J. Statistical multiplicity in systematic reviews of anaesthesia interventions: a quantification and comparison between Cochrane and non-Cochrane reviews. *PLoS One* [Internet]. 2011 Dec 2 [cited 2022 Jan 15];6(12). Available from:  
<https://pubmed.ncbi.nlm.nih.gov/22164288/>
  59. Haro Adánez M, Nishihara H, Att W. A systematic review and meta-analysis on the clinical outcome of zirconia implant-restoration complex. *J Prosthodont Res* [Internet]. 2018 Oct 1 [cited 2022 Jan 15];62(4):397–406. Available from:  
<https://pubmed.ncbi.nlm.nih.gov/29983377/>
  60. Hersh AM, Walter RJ, Abberegg SK. Use of Mortality as an Endpoint in Noninferiority Trials May Lead to Ethically Problematic Conclusions. *J Gen Intern Med* [Internet]. 2019 Apr 15 [cited 2022 Jan 15];34(4):618–23. Available from:  
<https://pubmed.ncbi.nlm.nih.gov/30756306/>
  61. RASHIDIAN A, Joudaki H. Assessing medical misconduct and complaints in Iranian health system: A systematic review of the literature. *Iran J Forensic Med* [Internet]. 2010 [cited 2022 Jan 15];15(4):234–43. Available from: <http://sjfm.ir/article-1-242-en.html>
  62. Kish-Gephart JJ, Harrison DA, Treviño LK. Bad apples, bad cases, and bad barrels: meta-analytic evidence about sources of unethical decisions at work. *J Appl Psychol* [Internet]. 2010 Jan [cited 2022 Jan 15];95(1):1–31. Available from:  
<https://pubmed.ncbi.nlm.nih.gov/20085404/>
  63. Elbek O. Ethical Issues in Tuberculosis Control. *Turkish Thorac J* [Internet]. 2015 [cited 2022 Jan 15];16(2):73–85. Available from: <https://pubmed.ncbi.nlm.nih.gov/29404082/>
  64. Pino C, Boutron I, Ravaud P. Inadequate description of educational interventions in ongoing randomized controlled trials. *Trials* [Internet]. 2012 May 18 [cited 2022 Jan 15];13. Available from: <https://pubmed.ncbi.nlm.nih.gov/22607344/>
  65. Molino C de GRC, Ribeiro E, Romano-Lieber NS, Stein AT, de Melo DO. Methodological quality and transparency of clinical practice guidelines for the pharmacological treatment of non-communicable diseases using the AGREE II instrument: a systematic review protocol. *Syst Rev* [Internet]. 2017 Nov 2 [cited 2022 Jan 15];6(1). Available from: <https://pubmed.ncbi.nlm.nih.gov/29096721/>
  66. Thannhauser RE, Morris ZA, Gamble N. Informed Consent, Confidentiality, and Practitioner Disclosure in Therapeutic Work with Youth: A Systematic Review of

- Practitioners' Perspectives. *Adolesc Res Rev* [Internet]. 2021 [cited 2022 Jan 15]; Available from: /record/2021-94068-001
67. Ocak S, Köseoglu MA, Yildiz M. Business ethics research in healthcare management: A systematic review. *Int J Healthc Manag* [Internet]. 2020 Apr 2 [cited 2022 Jan 15];13(2):170–6. Available from: [https://www.researchgate.net/publication/317426921\\_Business\\_ethics\\_research\\_in\\_healthcare\\_management\\_A\\_systematic\\_review](https://www.researchgate.net/publication/317426921_Business_ethics_research_in_healthcare_management_A_systematic_review)
  68. Ortiz-Prado E, Simbaña-Rivera K, Gómez-Barreno L, Tamariz L, Lister A, Baca JC, et al. Potential research ethics violations against an indigenous tribe in Ecuador: a mixed methods approach. *BMC Med Ethics* [Internet]. 2020 Dec 1 [cited 2022 Jan 15];21(1). Available from: <https://pubmed.ncbi.nlm.nih.gov/33069227/>
  69. Waddington H, Stevenson J, Sonnenfeld A, Gaarder M. PROTOCOL: Participation, inclusion, transparency and accountability (PITA) to improve public services in low- and middle-income countries: a systematic review. *Campbell Syst Rev* [Internet]. 2018 Jan 1 [cited 2022 Jan 15];14(1):1–69. Available from: <https://onlinelibrary.wiley.com/doi/full/10.1002/CL2.205>
  70. Pope JE, Hazlewood GS. Randomized Trials, Meta-Analyses, and Systematic Reviews: Using Examples from Rheumatology. *Rheum Dis Clin North Am* [Internet]. 2018 May 1 [cited 2022 Jan 15];44(2):295–305. Available from: <https://pubmed.ncbi.nlm.nih.gov/29622296/>
  71. Sundus A, Shahzad S, Younas A. Ethical and culturally competent care of transgender patients: A scoping review. *Nurs Ethics* [Internet]. 2021 Sep 1 [cited 2022 Jan 15];28(6):1041–60. Available from: <https://pubmed.ncbi.nlm.nih.gov/33706609/>
  72. Malec JF. Ethical and evidence-based practice in brain injury rehabilitation. *Neuropsychol Rehabil* [Internet]. 2009 [cited 2022 Jan 15];19(6):790–806. Available from: <https://pubmed.ncbi.nlm.nih.gov/19626559/>
  73. Angehrn Z, Sostar J, Nordon C, Turner A, Gove D, Karcher H, et al. Ethical and Social Implications of Using Predictive Modeling for Alzheimer's Disease Prevention: A Systematic Literature Review. *J Alzheimers Dis* [Internet]. 2020 [cited 2022 Jan 15];76(3):923–40. Available from: <https://pubmed.ncbi.nlm.nih.gov/32597799/>
  74. Smedinga M, Tromp K, Schermer MHN, Richard E. Ethical Arguments Concerning the Use of Alzheimer's Disease Biomarkers in Individuals with No or Mild Cognitive Impairment: A Systematic Review and Framework for Discussion. *J Alzheimers Dis* [Internet]. 2018 [cited 2022 Jan 15];66(4):1309–22. Available from: <https://pubmed.ncbi.nlm.nih.gov/30507575/>
  75. Ratheesh A, Cotton SM, Davey CG, Adams S, Bechdolf A, Macneil C, et al. Ethical considerations in preventive interventions for bipolar disorder. *Early Interv Psychiatry* [Internet]. 2017 Apr 1 [cited 2022 Jan 15];11(2):104–12. Available from: <https://pubmed.ncbi.nlm.nih.gov/27027848/>
  76. Spoljar D, Curkovic M, Gastmans C, Gordijn B, Vrkic D, Jozepovic A, et al. Ethical content of expert recommendations for end-of-life decision-making in intensive care units: A systematic review. *J Crit Care* [Internet]. 2020 Aug 1 [cited 2022 Jan 15];58:10–9. Available from: <https://pubmed.ncbi.nlm.nih.gov/32278227/>

77. Bagnasco A, Cadorin L, Barisone M, Bressan V, Lemmi M, Prandi M, et al. Ethical dimensions of paediatric nursing: A rapid evidence assessment. *Nurs Ethics* [Internet]. 2018 Feb 1 [cited 2022 Jan 15];25(1):111–22. Available from: <https://pubmed.ncbi.nlm.nih.gov/27005952/>
78. King M, Nazareth I, Lampe F, Bower P, Chandler M, Morou M, et al. Conceptual framework and systematic review of the effects of participants' and professionals' preferences in randomised controlled trials. *Health Technol Assess* [Internet]. 2005 [cited 2022 Jan 15];9(35). Available from: <https://pubmed.ncbi.nlm.nih.gov/16153352/>
79. Van Dam L, Bretthauer M. Ethical issues in colorectal cancer screening. *Best Pract Res Clin Gastroenterol* [Internet]. 2014 [cited 2022 Jan 15];28(2):315–26. Available from: <https://pubmed.ncbi.nlm.nih.gov/24810192/>
80. Kahrass H, Strech D, Mertz M. Ethical issues in obesity prevention for school children: a systematic qualitative review. *Int J Public Health* [Internet]. 2017 Dec 1 [cited 2022 Jan 15];62(9):981–8. Available from: <https://pubmed.ncbi.nlm.nih.gov/28801690/>
81. Caplan L, Hoffecker L, Prochazka A V. Ethics in the rheumatology literature: a systematic review. *Arthritis Rheum* [Internet]. 2008 Jun 15 [cited 2022 Jan 15];59(6):816–21. Available from: <https://pubmed.ncbi.nlm.nih.gov/18512718/>
82. Stretton S. Systematic review on the primary and secondary reporting of the prevalence of ghostwriting in the medical literature. *BMJ Open* [Internet]. 2014 [cited 2022 Jan 15];4(7). Available from: <https://pubmed.ncbi.nlm.nih.gov/25023129/>
83. Gooren LJ. Clinical review: Ethical and medical considerations of androgen deprivation treatment of sex offenders. *J Clin Endocrinol Metab* [Internet]. 2011 Dec [cited 2022 Jan 15];96(12):3628–37. Available from: <https://pubmed.ncbi.nlm.nih.gov/21956411/>
84. Torreão L de A, Pereira CR, Troster E. Ethical aspects in the management of the terminally ill patient in the pediatric intensive care unit. *Rev Hosp Clin Fac Med Sao Paulo* [Internet]. 2004 [cited 2022 Jan 15];59(1):3–9. Available from: <https://pubmed.ncbi.nlm.nih.gov/15029279/>
85. Neerkin J, Riley J. Ethical aspects of palliative care in lung cancer and end stage lung disease. *Chron Respir Dis* [Internet]. 2006 [cited 2022 Jan 15];3(2):93–101. Available from: <https://pubmed.ncbi.nlm.nih.gov/16729767/>
86. Kumar M, Gotz D, Nutley T, Smith JB. Research gaps in routine health information system design barriers to data quality and use in low- and middle-income countries: A literature review. *Int J Health Plann Manage* [Internet]. 2018 Jan 1 [cited 2022 Jan 15];33(1):e1–9. Available from: <https://pubmed.ncbi.nlm.nih.gov/28766742/>
87. Weller D, Vedsted P, Rubin G, Walter FM, Emery J, Scott S, et al. The Aarhus statement: improving design and reporting of studies on early cancer diagnosis. *Br J Cancer* [Internet]. 2012 Mar 27 [cited 2022 Jan 15];106(7):1262–7. Available from: <https://pubmed.ncbi.nlm.nih.gov/22415239/>
88. Bandarian F, Azizi F. Ethical considerations in preimplantation genetic diagnosis: A systematic review [Internet]. Vol. 13, *Iranian Journal of Endocrinology and Metabolism*. 2011 [cited 2022 Jan 17]. Available from: [https://www.researchgate.net/publication/286407592\\_Ethical\\_considerations\\_in\\_preimplantation\\_genetic\\_diagnosis\\_A\\_systematic\\_review](https://www.researchgate.net/publication/286407592_Ethical_considerations_in_preimplantation_genetic_diagnosis_A_systematic_review)

89. Ghanbari V, Ardalan A, Zareiyan A, Nejati A, Hanfling D, Bagheri A. Ethical prioritization of patients during disaster triage: A systematic review of current evidence. *Int Emerg Nurs* [Internet]. 2019 Mar 1 [cited 2022 Jan 15];43:126–32. Available from: <https://pubmed.ncbi.nlm.nih.gov/30612846/>
90. Guntzburger Y, Pauchant TC, Tanguy PA. Ethical Risk Management Education in Engineering: A Systematic Review. *Sci Eng Ethics* [Internet]. 2017 Apr 1 [cited 2022 Jan 15];23(2):323–50. Available from: <https://pubmed.ncbi.nlm.nih.gov/27053262/>
91. Salman Popattia A, Winch S, La Caze A. Ethical responsibilities of pharmacists when selling complementary medicines: a systematic review. *Int J Pharm Pract* [Internet]. 2018 Apr 1 [cited 2022 Jan 15];26(2):93–103. Available from: <https://pubmed.ncbi.nlm.nih.gov/29315916/>
92. Hazelwood T, Murray CM, Baker A, Stanley M. Ethical tensions: A qualitative systematic review of new graduate perceptions. *Nurs Ethics* [Internet]. 2019 May 1 [cited 2022 Jan 15];26(3):884–902. Available from: <https://pubmed.ncbi.nlm.nih.gov/28905677/>
93. Enam A, Torres-Bonilla J, Eriksson H. Evidence-Based Evaluation of eHealth Interventions: Systematic Literature Review. *J Med Internet Res* [Internet]. 2018 [cited 2022 Jan 15];20(11). Available from: <https://pubmed.ncbi.nlm.nih.gov/30470678/>
94. Rong LQ, Audisio K, Rahouma M, Soletti GJ, Cancelli G, Gaudino M. A Systematic Review of Retractions in the Field of Cardiothoracic and Vascular Anesthesia. *J Cardiothorac Vasc Anesth* [Internet]. 2022 [cited 2022 Jan 17];36(2). Available from: <https://pubmed.ncbi.nlm.nih.gov/34600831/>
95. Huang X, O'Connor M, Ke LS, Lee S. Ethical and methodological issues in qualitative health research involving children: A systematic review. *Nurs Ethics* [Internet]. 2016 May 1 [cited 2022 Jan 17];23(3):339–56. Available from: <https://pubmed.ncbi.nlm.nih.gov/25552586/>
96. Singhal N, Bhola P. Ethical practices in community-based research in non-suicidal self-injury: A systematic review. *Asian J Psychiatr* [Internet]. 2017 Dec 1 [cited 2022 Jan 17];30:127–34. Available from: <https://pubmed.ncbi.nlm.nih.gov/28903081/>
97. Balak N, Broekman MLD, Mathiesen T. Ethics in contemporary health care management and medical education. *J Eval Clin Pract* [Internet]. 2020 Jun 1 [cited 2022 Jan 17];26(3):699–706. Available from: <https://pubmed.ncbi.nlm.nih.gov/31975509/>
98. Bellemare CA, Dagenais P, Bédard SK, Béland JP, Bernier L, Daniel CÉ, et al. ETHICS IN HEALTH TECHNOLOGY ASSESSMENT: A SYSTEMATIC REVIEW. *Int J Technol Assess Health Care* [Internet]. 2018 [cited 2022 Jan 17];34(5):447–57. Available from: <https://pubmed.ncbi.nlm.nih.gov/30296950/>
99. Stolt M, Leino-Kilpi H, Ruokonen M, Repo H, Suhonen R. Ethics interventions for healthcare professionals and students: A systematic review. *Nurs Ethics* [Internet]. 2018 Mar 1 [cited 2022 Jan 17];25(2):133–52. Available from: <https://pubmed.ncbi.nlm.nih.gov/28393607/>
100. Yıldız E. Ethics in nursing: A systematic review of the framework of evidence perspective. *Nurs Ethics* [Internet]. 2019 Jun 1 [cited 2022 Jan 17];26(4):1128–48. Available from: <https://pubmed.ncbi.nlm.nih.gov/29166840/>
101. Blood Z, Tran A, Caleo L, Saw R, Dieng M, Shackleton M, et al. Implementation of

- patient-reported outcome measures and patient-reported experience measures in melanoma clinical quality registries: a systematic review. *BMJ Open* [Internet]. 2021 Feb 11 [cited 2022 Jan 17];11(2). Available from: <https://pubmed.ncbi.nlm.nih.gov/33574144/>
102. Moreira NCF, Pachêco-Pereira C, Keenan L, Cummings G, Flores-Mir C. Informed consent comprehension and recollection in adult dental patients: A systematic review. *J Am Dent Assoc* [Internet]. 2016 Aug 1 [cited 2022 Jan 17];147(8):605-619.e7. Available from: <https://pubmed.ncbi.nlm.nih.gov/27174578/>
  103. Gordon EJ, Daud A, Caicedo JC, Cameron KA, Jay C, Fryer J, et al. Informed consent and decision-making about adult-to-adult living donor liver transplantation: a systematic review of empirical research. *Transplantation* [Internet]. 2011 Dec 27 [cited 2022 Jan 17];92(12):1285–96. Available from: <https://pubmed.ncbi.nlm.nih.gov/22143436/>
  104. Khan A, Capps BJ, Sum MY, Kuswanto CN, Sim K. Informed consent for human genetic and genomic studies: a systematic review. *Clin Genet* [Internet]. 2014 [cited 2022 Jan 17];86(3):199–206. Available from: <https://pubmed.ncbi.nlm.nih.gov/24646408/>
  105. Bernardes MJ, Nunes R. Consentimento dos doentes para a publicação de casos clínicos: Revisão da literatura. *Arq Med* [Internet]. 2013 [cited 2022 Jan 17];27(2):58–64. Available from: [https://www.researchgate.net/publication/317471486\\_Consentimento\\_dos\\_doentes\\_para\\_a\\_publicacao\\_de\\_Casos\\_Clinicos\\_revisao\\_da\\_literatura](https://www.researchgate.net/publication/317471486_Consentimento_dos_doentes_para_a_publicacao_de_Casos_Clinicos_revisao_da_literatura)
  106. Kwisda K, White L, Hübner D. Ethical arguments concerning human-animal chimera research: a systematic review. *BMC Med Ethics* [Internet]. 2020 Mar 23 [cited 2022 Jan 17];21(1). Available from: <https://pubmed.ncbi.nlm.nih.gov/32293411/>
  107. Sastrawan S, Newton JM, Malik G. Nurses' integrity and coping strategies: An integrative review. *J Clin Nurs* [Internet]. 2019 Mar 1 [cited 2022 Jan 17];28(5–6):733–44. Available from: <https://pubmed.ncbi.nlm.nih.gov/30358004/>
  108. De Pinho Campos K, Norman CD, Jadad AR. Product development public-private partnerships for public health: a systematic review using qualitative data. *Soc Sci Med* [Internet]. 2011 Oct [cited 2022 Jan 17];73(7):986–94. Available from: <https://pubmed.ncbi.nlm.nih.gov/21839562/>
  109. Chappell AG, Kane RL, Wood SM, Wescott AB, Chung KC. Representation of Ethics in the Plastic Surgery Literature: A Systematic Review. *Plast Reconstr Surg* [Internet]. 2021 [cited 2022 Jan 17];148(2):289E-298E. Available from: <https://pubmed.ncbi.nlm.nih.gov/34228030/>
  110. Holmes AL, Bugeja L, Ibrahim JE. Role of a Clinical Ethics Committee in Residential Aged Long-Term Care Settings: A Systematic Review. *J Am Med Dir Assoc* [Internet]. 2020 Dec 1 [cited 2022 Jan 17];21(12):1852-1861.e8. Available from: <https://pubmed.ncbi.nlm.nih.gov/32736991/>
  111. Kardeş S, Levack W, Özkuk K, Atmaca Aydın E, Seringeç Karabulut S. Retractions in Rehabilitation and Sport Sciences Journals: A Systematic Review. *Arch Phys Med Rehabil* [Internet]. 2020 Nov 1 [cited 2022 Jan 17];101(11):1980–90. Available from: <https://pubmed.ncbi.nlm.nih.gov/32402503/>
  112. White RG, Hakim AJ, Salganik MJ, Spiller MW, Johnston LG, Kerr L, et al. Strengthening

the Reporting of Observational Studies in Epidemiology for respondent-driven sampling studies: “sTROBE-RDS” statement [Internet]. Vol. 68, *Journal of Clinical Epidemiology*. *J Clin Epidemiol*; 2015 [cited 2022 Jan 17]. p. 1463–71. Available from: <https://pubmed.ncbi.nlm.nih.gov/26112433/>

113. Polanin JR, Hennessy EA, Tsuji S. Transparency and Reproducibility of Meta-Analyses in Psychology: A Meta-Review. *Perspect Psychol Sci* [Internet]. 2020 Jul 1 [cited 2022 Jan 17];15(4):1026–41. Available from: <https://pubmed.ncbi.nlm.nih.gov/32516081/>
114. Corvol A, Moutel G, Somme D. What ethics for case managers? Literature review and discussion. *Nurs Ethics* [Internet]. 2016 Nov 1 [cited 2022 Jan 17];23(7):729–42. Available from: <https://pubmed.ncbi.nlm.nih.gov/26038377/>
115. Beyari MM, Strain D, Li CS, Lamfon HA. Conflict of interest reporting in dentistry meta-analyses: A systematic review. *J Clin Exp Dent* [Internet]. 2014 [cited 2022 Jan 17];6(3). Available from: <https://pubmed.ncbi.nlm.nih.gov/25136431/>
116. Khaji A, Larijani B, Ghodsi SM, Mohagheghi MA, Khankeh HR, Saadat S, et al. Ethical issues in Technological Disaster: A systematic review of literature. *Arch Bone Jt Surg*. 2018 Jul 1;6(4):269–76.
117. Droste S, Gerhardus A. Ethical Aspects of Short Health Technology Assessments - A Systematic Review. *Z Arztl Fortbild Qualitatssich* [Internet]. 2003 [cited 2022 Jan 17];97(10):711–5. Available from: <https://pubmed.ncbi.nlm.nih.gov/14997589/>
118. Al-Ghareeb A, Hillel S, McKenna L, Cleary M, Visentin D, Jones M, et al. Retraction of publications in nursing and midwifery research: A systematic review. *Int J Nurs Stud* [Internet]. 2018 May 1 [cited 2022 Jan 17];81:8–13. Available from: <https://pubmed.ncbi.nlm.nih.gov/29425913/>
119. Davino-Ramaya C, Krause LK, Robbins CW, Harris JS, Koster M, Chan W, et al. Transparency matters: Kaiser Permanente’s National Guideline Program methodological processes. *Perm J* [Internet]. 2012 [cited 2022 Jan 17];16(1):55–62. Available from: <https://pubmed.ncbi.nlm.nih.gov/22529761/>
120. Rapani A, Lombardi T, Berton F, Del Lupo V, Di Lenarda R, Stacchi C. Retracted publications and their citation in dental literature: A systematic review. *Clin Exp Dent Res* [Internet]. 2020 Aug 1 [cited 2022 Jan 17];6(4):383–90. Available from: <https://pubmed.ncbi.nlm.nih.gov/32233020/>
121. Martins Pereira S, Hernández-Marrero P. Ethical challenges of outcome measurement in palliative care clinical practice: a systematic review of systematic reviews. *Ann Palliat Med* [Internet]. 2018 [cited 2022 Jan 17];7(Suppl 3):S207–18. Available from: <https://pubmed.ncbi.nlm.nih.gov/30180733/>
122. Voltelen B, Konradsen H, Østergaard B. Ethical considerations when conducting joint interviews with close relatives or family: an integrative review. *Scand J Caring Sci* [Internet]. 2018 Jun 1 [cited 2022 Jan 17];32(2):515–26. Available from: <https://pubmed.ncbi.nlm.nih.gov/28994460/>
123. Droste S, Herrmann-Frank A, Scheibler F, Krones T. Ethical issues in autologous stem cell transplantation (ASCT) in advanced breast cancer: a systematic literature review. *BMC Med Ethics* [Internet]. 2011 [cited 2022 Jan 17];12(1). Available from: <https://pubmed.ncbi.nlm.nih.gov/21496244/>

124. Whicher DM, Kass NE, Audera-Lopez C, Butt M, Jauregui IL, Harris K, et al. Ethical Issues in Patient Safety Research: A Systematic Review of the Literature. *J Patient Saf* [Internet]. 2015 Sep 7 [cited 2022 Jan 17];11(3):174–84. Available from: <https://pubmed.ncbi.nlm.nih.gov/24618642/>
125. Sundgren S, Stolt M, Suhonen R. Ethical issues related to the use of gerontechnology in older people care: A scoping review. *Nurs Ethics* [Internet]. 2020 Feb 1 [cited 2022 Jan 17];27(1):88–103. Available from: <https://pubmed.ncbi.nlm.nih.gov/31113266/>
126. Gribble MO, Him DMA. Ethics and Community Involvement in Syntheses Concerning American Indian, Alaska Native, or Native Hawaiian Health: A Systematic Review. *AJOB Empir Bioeth* [Internet]. 2014 [cited 2022 Jan 17];5(2):1–24. Available from: <https://pubmed.ncbi.nlm.nih.gov/25089283/>
127. Xie Y, Wang K, Kong Y. Prevalence of Research Misconduct and Questionable Research Practices: A Systematic Review and Meta-Analysis. *Sci Eng Ethics* [Internet]. 2021 Jun 29 [cited 2022 Jan 17];27(4):41. Available from: <https://pubmed.ncbi.nlm.nih.gov/34189653/>
128. Bian ZX, Moher D, Dagenais S, Li YP, Liu L, Wu TX, et al. Improving the quality of randomized controlled trials in Chinese herbal medicine, part II: control group design. *Zhong Xi Yi Jie He Xue Bao* [Internet]. 2006 [cited 2022 Jan 25];4(2):130–6. Available from: <https://pubmed.ncbi.nlm.nih.gov/16529687/>

**Appendix S5: Description of the included reviews (n=55) concerning research integrity of clinical trials.**

Author	Year	Journal	Geographical area	Time period	Focus of the study	Number of studies included	Integrity issue	
<b>General</b>								
1	<b>Maccaro A</b>	<b>2021</b>	Health and Technology	Unlimited	Up to 2020	Non-specified	38	Ethics
2	<b>Ni Y</b>	<b>2019</b>	Sci Eng Ethics	China	up to 2016	Non-specified	21	Misconduct prevention
3	<b>Awasthi S</b>	<b>2019</b>	Journal of Library & Information Technology,	Unlimited	2009- 2018	Non-specified	408	Plagiarism
4	<b>Stavale R</b>	<b>2019</b>	PLoS One	Brazil	2004-2017	Non-specified	65	Retraction of publications
5	<b>Guraya S</b>	<b>2017</b>	JPak Med Assoc	Unlimited	2000-2015	Non-specified	30	Plagiarism
6	<b>Wang J</b>	<b>2017</b>	World Neurosurg	Unlimited	1995-2016	Neurosurgery	97	Retraction of publications
7	<b>Guraya S</b>	<b>2016</b>	Pak J Med Sci	Unlimited	2000 - 2015	Non-specified	51	Misconduct prevention
8	<b>Nicholls SG</b>	<b>2015</b>	PLoS One	Unlimited	1979 - 2014	Non-specified	198	Ethics
<b>Design and approval</b>								
9	<b>Hutchings E.</b>	<b>2021</b>	Syst Rev	Unlimited	up to 2020	Non-specified	75	Data-sharing
10	<b>Paramasivan S.</b>	<b>2021</b>	BMJ Glob Health	India	up to 2019	Non-specified	80	Ethics
11	<b>Natale P.</b>	<b>2021</b>	J Clin Epidemiol	Unlimited	up to 2019	Non-specified	63	Recruitment challenges
12	<b>Mirchev M</b>	<b>2020</b>	Journal of Medical Internet Research	Unlimited	2000-2019	Non-specified	32	Passive data
13	<b>Maher NA</b>	<b>2019</b>	International Journal of Medical Informatics	Unlimited	Up to 2018	Non-specified	48	Passive data
14	<b>Alemayehu C</b>	<b>2018</b>	International Journal for Equity in Health	Developing countries	1995-2015	Non-specified	15	Barriers for a RCT
15	<b>Phillips, A</b>	<b>2017</b>	Accountability in Research	Unlimited	2000-2017	Non-specified	22	Ethics
16	<b>Djurisic S</b>	<b>2017</b>	BMC	Unlimited	2013-2017	Non-specified	156	Barriers for a RCT

17	Dupont JC	2016	Lancet Oncol	Unlimited	2003-2013	Paediatric oncology	78	Ethics
18	McKeown A	2015	The Journal of Pain	Unlimited	2006-2013	Pain	172	Transparency
19	Chapman S	2014	International Journal of surgery	Unlimited	2009 - 2012	Surgical journals	246	Transparency
20	Schellings R	2006	Contemporary Clinical Trials	Unlimited	1997 - 2003	Non-specified	50	Ethics
<b>Conduct and monitoring</b>								
21	Pietrzykowski T	2021	BMC	Unlimited	2019-2020	Non-specified	14	Ethics
22	Karanatsios B	2020	BMC	Unlimited	Up to 2018	Non-specified	17	Registry-based RCT
23	Houghton C	2020	Cochrane Library	Unlimited	Up to 2017	Non-specified	29	Recruitment challenges
24	Goldstein C E	2018	BMC	Unlimited	2012-2017	Non-specified	36	Ethics
25	Olsen R	2016	Eur J Clin Pharmacol	Unlimited	up to 2016	Non-specified	22	Monitoring approaches
26	Treweek S	2013	BMJ	Unlimited	Up to 2010	Non-specified	45	Recruitment challenges
<b>Reporting of protocols and findings</b>								
27	Malicki M	2021	Nature Communications	Unlimited	1987-2017	Non-specified	153	Reporting guidelines
28	Slade A.L.	2021	Trials	Unlimited	2001-2014	Cancer	84	Transparency
29	El-Menyar A	2021	Science Progress	Unlimited	2020-2021	Non-specified	124	Retraction of publications
30	Hayden J	2021	Journal of clinical epidemiology	Unlimited	Up to 2018	Trials on exercise therapy for chronic back pain	279	Integrity training
31	Hayden A A	2020	BMJ	Unlimited	Up to 2020	Sports medicine	98	Funding disclosure
32	Evuarherhe O	2019	Research Integrity and Peer Review	Unlimited	2014 - 2018	Non-specified	8	Professional medical writing support
33	Weissgerber TL	2019	Circulation	Unlimited	2018	Peripheral vascular disease	180	Transparency
34	Laothavorn	2019	Current Medical Research and Opinion	ASEAN (Association of South East Asian Nations)	2016	Non-specified	1106	Ethics

35	Darmon M	2018	Intensive Care Med	Unlimited	2011-2016	Non-specified	374	Conflicts of interest
36	Montgomery P	2018	Trials	Unlimited	up to 2013	Trials of social and psychological interventions	19	Reporting guidelines
37	Yelland L	2018	Clinical Trials	Unlimited	Up to 2015	Non-specified	82	Transparency
38	Van der Steen J.T.	2018	PLoS One	Unlimited	up to 2015	Non-specified	64	Transparency
39	Gewandtera, J	2017	J Clin Epidemiol.	Unlimited	2009-2013	Non-specified	294	Transparency
40	Liu T Y	2016	Chinese Medical Journal	Unlimited	2013	Biomedical journals with an IP $\geq$ 10	65	Reporting guidelines
41	Adewuyi T	2015	BMC Res Notes	Unlimited	up to 2010	Surgery	82	Transparency
42	Hunsinger M	2013	PAIN	Unlimited	2005	Pain Journals	221	Authorship
43	Khalil J	2012	Future Microbiol	Unlimited	Up to 2010	Human challenge studies	176	Transparency
44	Dulhunty J M	2011	Acta Anaesthesiologica Scandinavica	Unlimited	1948-2009	Articles determining authorship on multi-centre RCTs	8	Authorship
45	Milette K.	2011	J Psychosom Res	Unlimited	2008-2009	Psychology and psychosomatic studies	63	Transparency
46	Di Pietrantonj C	2005	E&P	Unlimited	1966-2004	Non-specified	20	Conflicts of interest
47	Bekelman JE	2003	JAMA	Unlimited	1980-2002	Non-specified	37	Conflicts of interest
<b>Post-publication concerns</b>								
48	Avenell A	2019	BMJ	Unlimited	1998-2019	Trials reporting on hip fracture as outcome	12	Retraction of publications
<b>Future research and development</b>								
49	Bordewijk E	2021	Journal of clinical epidemiology	Unlimited	Up to 2020	Non-specified	57	Misconduct prevention
50	Pavlenko E	2020	BMC Med Inform Decis Mak	Unlimited	up to 2018	Non-specified	24	Warehouses data access
51	Garrison S	2016	Genetics in medicine	USA	Up to 2015	Non-specified	48	Data-sharing
52	Marusic A,	2016	Cochrane	Unlimited	Up to 2014	Non-specified	31	Misconduct prevention

53	<b>Kalkman S</b>	<b>2015</b>	Drug Discov Today	Unlimited	1990-2014	Non-specified	24	Ethics
54	<b>Larson B.P</b>	<b>2012</b>	Hand (N Y)	Unlimited	up to 2011	Articles assessing the effectiveness of peer review proces	37	Peer-review process
55	<b>Marusic A</b>	<b>2011</b>	Plos One	Unlimited	1950-2011	Biomedical and social science articles	123	Authorship

**Appendix S6: Quality assessment analysis of each systematic review included (n=55)**

			Quality Assessment																
	Author	Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total
<b>General</b>																			
1	Maccaro A	2021	Partial Yes	No	No	No	Yes	Yes	No	No	No	No	No meta-analysis conducted	No meta-analysis conducted	No	No	No meta-analysis conducted	Yes	Critically low
2	Ni Y	2019	Partial Yes	No	No	Partial Yes	No	No	No	No	No	No	No meta-analysis conducted	No meta-analysis conducted	Yes	No	No meta-analysis conducted	No	Critically low
3	Awasthi S	2019	Partial Yes	No	No	No	No	No	No	Yes	No	No	No meta-analysis conducted	No meta-analysis conducted	No	No	No meta-analysis conducted	No	Critically low
4	Stavale R	2019	Partial Yes	Yes	No	Partial Yes	Yes	Yes	No	Yes	No	No	No meta-analysis conducted	No meta-analysis conducted	No	No	No meta-analysis conducted	Yes	Critically low
5	Guraya S	2017	Partial Yes	No	No	Partial Yes	Yes	No	No	No	No	No	No meta-analysis conducted	No meta-analysis conducted	No	No	No meta-analysis conducted	Yes	Critically low
6	Wang J	2017	Partial Yes	No	No	Partial Yes	Yes	No	No	No	No	No	No meta-analysis conducted	No meta-analysis conducted	No	No	No meta-analysis conducted	No	Critically low
7	Guraya S	2016	Yes	No	No	Yes	No	No	No	No	No	No	No meta-analysis conducted	No meta-analysis conducted	No	No	No meta-analysis conducted	Yes	Critically low

8	Nicholls SG	2015	Partial Yes	No	No	Yes	Yes	No	No	Yes	No	No	No meta-analysis conducted	No meta-analysis conducted	No	No	No meta-analysis conducted	Yes	Critically low
<b>Design and approval</b>																			
9	Hutchings E.	2021	Partial Yes	Yes	Yes	Partial Yes	Yes	Yes	No	Yes	Yes	No	No meta-analysis conducted	No meta-analysis conducted	No	No	No meta-analysis conducted	Yes	Critically low
10	Paramasivan S.	2021	Yes	Yes	Yes	Partial Yes	Yes	Yes	No	Yes	No	No	No meta-analysis conducted	No meta-analysis conducted	No	No	No meta-analysis conducted	No	Critically low
11	Natale P.	2021	Yes	No	Yes	Partial Yes	Yes	Yes	No	Yes	No	No	No meta-analysis conducted	No meta-analysis conducted	No	No	No meta-analysis conducted	Yes	Critically low
12	Mirchev M	2020	Partial Yes	No	Yes	Partial Yes	Yes	Yes	No	No	No	No	No meta-analysis conducted	No meta-analysis conducted	No	No	No meta-analysis conducted	Yes	Critically low
13	Maher NA	2019	Partial Yes	No	No	Partial Yes	Yes	Yes	No	No	No	No	No meta-analysis conducted	No meta-analysis conducted	No	No	No meta-analysis conducted	No	Critically low
14	Alemayehu C	2018	Partial Yes	Partial Yes	No	Partial Yes	Yes	Yes	No	Yes	Yes	No	No meta-analysis conducted	No meta-analysis conducted	No	No	No meta-analysis conducted	Yes	Critically low
15	Phillips, A	2017	Partial Yes	No	No	Partial Yes	No	No	No	Yes	No	No	No meta-analysis conducted	No meta-analysis conducted	No	Yes	No meta-analysis conducted	Yes	Critically low
16	Djurisic S	2017	Yes	No	Yes	Partial Yes	Yes	No	No	No	No	No	No meta-analysis conducted	No meta-analysis conducted	No	No	No meta-analysis conducted	Yes	Critically low
17	Dupont JC	2016	Yes	No	Yes	No	No	No	No	No	No	No	No meta-analysis conducted	No meta-analysis conducted	No	No	No meta-analysis conducted	Yes	Critically low

18	McKeown A	2015	Yes	No	No	No	No	No	No	No	No	No	No	No meta-analysis conducted	No meta-analysis conducted	No	No	No meta-analysis conducted	No	Critically low
19	Chapman S	2014	Yes	No	No	No	No	No	No	No	No	No	No	No meta-analysis conducted	No meta-analysis conducted	No	No	No meta-analysis conducted	No	Critically low
20	Schellings R	2006	Yes	No	Yes	Partial Yes	No	Yes	No	No	No	No	No	No meta-analysis conducted	No meta-analysis conducted	No	No	No meta-analysis conducted	No	Critically low

**Conduct and monitoring**

21	Pietrzykowski T	2021	Yes	No	Yes	Partial Yes	Yes	Yes	No	Yes	No	No	No	No meta-analysis conducted	No meta-analysis conducted	Yes	Yes	No meta-analysis conducted	Yes	Critically low
22	Karanatsios B	2020	Yes	Yes	Yes	Partial Yes	Yes	Yes	No	Partial Yes	No	Yes	No	No meta-analysis conducted	No meta-analysis conducted	No	Yes	No meta-analysis conducted	Yes	Critically low
23	Houghton C	2020	Partial Yes	Partial Yes	Yes	Partial Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No meta-analysis conducted	No meta-analysis conducted	Yes	No	No meta-analysis conducted	Yes	Moderate
24	Goldstein C E	2018	Yes	No	No	No	No	Yes	No	No	No	No	No	No meta-analysis conducted	No meta-analysis conducted	No	No	No meta-analysis conducted	Yes	Critically low
25	Olsen R	2016	Yes	No	Yes	No	No	No	No	Yes	No	No	No	No meta-analysis conducted	No meta-analysis conducted	No	No	No meta-analysis conducted	Yes	Critically low
26	Treweek S	2013	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	No	Yes	Yes	No	No	Yes	No	Yes	Critically low

**Reporting of protocols and findings**

27	<b>Malicki M</b>	<b>2021</b>	Partial Yes	Partial Yes	No	No	Yes	Yes	No	Partial Yes	Partial Yes	No	No	No	No	No	No	Yes	Critically low
28	<b>Slade A.L.</b>	<b>2021</b>	Yes	No	Yes	No	Yes	Yes	No	Yes	No	No	No meta-analysis conducted	No meta-analysis conducted	No	No	No meta-analysis conducted	Yes	Critically low
29	<b>El-Menyar A</b>	<b>2021</b>	Partial Yes	No	No	Partial Yes	Yes	No	No	No	No	No	No meta-analysis conducted	No meta-analysis conducted	No	No	No meta-analysis conducted	Yes	Critically low
30	<b>Hayden J</b>	<b>2021</b>	Yes	No	Yes	Yes	No	No	No	Yes	Yes	No	No meta-analysis conducted	No meta-analysis conducted	Yes	No	No meta-analysis conducted	Yes	Critically low
31	<b>Hayden A A</b>	<b>2020</b>	Yes	No	Yes	Partial Yes	No	Yes	No	No	No	Yes	No meta-analysis conducted	No meta-analysis conducted	Yes	No	No meta-analysis conducted	Yes	Critically low
32	<b>Evuarherhe O</b>	<b>2019</b>	Yes	Yes	Yes	Yes	No	No	No	Yes	No	No	No meta-analysis conducted	No meta-analysis conducted	No	No	No meta-analysis conducted	Yes	Critically low
33	<b>Weissgerber TL</b>	<b>2019</b>	Partial Yes	Yes	Yes	No	Yes	Yes	No	No	No	No	No meta-analysis conducted	No meta-analysis conducted	No	No	No meta-analysis conducted	Yes	Critically low
34	<b>Laothavorn</b>	<b>2019</b>	Partial Yes	No	No	No	No	No	No	No	No	No	No meta-analysis conducted	No meta-analysis conducted	No	No	No meta-analysis conducted	Yes	Critically low
35	<b>Darmon M</b>	<b>2018</b>	Partial Yes	Yes	Yes	No	Yes	Yes	No	No	No	No	No meta-analysis conducted	No meta-analysis conducted	No	No	No meta-analysis conducted	No	Critically low
36	<b>Montgomery P</b>	<b>2018</b>	Yes	Yes	No	No	No	No	No	No	No	No	No meta-analysis conducted	No meta-analysis conducted	No	No	No meta-analysis conducted	Yes	Critically low
37	<b>Yelland L</b>	<b>2018</b>	Yes	No	Yes	Yes	Yes	No	No	Yes	No	No	No meta-analysis	No meta-analysis conducted	No	No	No meta-analysis conducted	Yes	Critically low

													conducted						
38	<b>Van der Steen J.T.</b>	<b>2018</b>	Partial Yes	No	No	Partial Yes	Yes	Yes	No	Yes	No	No	No meta-analysis conducted	No meta-analysis conducted	No	No	No meta-analysis conducted	Yes	Critically low
39	<b>Gewandter a, J</b>	<b>2017</b>	Yes	No	Yes	No	Yes	Yes	No	Yes	No	No	No meta-analysis conducted	No meta-analysis conducted	No	No	No meta-analysis conducted	Yes	Critically low
40	<b>Liu T Y</b>	<b>2016</b>	Partial Yes	No	Yes	No	Yes	Yes	No	No	No	No	No meta-analysis conducted	No meta-analysis conducted	No	No	No meta-analysis conducted	Yes	Critically low
41	<b>Adewuyi T</b>	<b>2015</b>	Yes	No	Yes	No	Yes	Yes	No	No	No	No	No meta-analysis conducted	No meta-analysis conducted	No	No	No meta-analysis conducted	Yes	Critically low
42	<b>Hunsinger M</b>	<b>2013</b>	Yes	Yes	Yes	Partial Yes	Yes	Yes	No	Yes	No	Yes	No meta-analysis conducted	No meta-analysis conducted	Yes	No	No meta-analysis conducted	Yes	Critically low
43	<b>Khalil J</b>	<b>2012</b>	Partial Yes	No	Yes	Partial Yes	No	No	No	Yes	No	No	No meta-analysis conducted	No meta-analysis conducted	No	No	No meta-analysis conducted	Yes	Critically low
44	<b>Dulhunty J M</b>	<b>2011</b>	Yes	No	No	Yes	No	No	No	Yes	No	No	No meta-analysis conducted	No meta-analysis conducted	No	No	No meta-analysis conducted	Yes	Critically low
45	<b>Milette K.</b>	<b>2011</b>	Yes	No	Yes	No	Yes	Yes	No	Yes	No	No	No meta-analysis conducted	No meta-analysis conducted	No	No	No meta-analysis conducted	No	Critically low
46	<b>Di Pietrantonj C</b>	<b>2005</b>	Partial Yes	No	No	No	No	No	No	Yes	No	No	No	No	Yes	No	No	No	Critically low
47	<b>Bekelman JE</b>	<b>2003</b>	Partial Yes	No	No	No	Yes	No	No	Yes	No	No	No meta-analysis conducted	No meta-analysis conducted	No	Yes	No meta-analysis conducted	No	Critically low

Post-publication concerns																			
48	Avenell A	2019	Yes	No	Yes	Partial Yes	Yes	Yes	No	No	No	No	No meta-analysis conducted	No meta-analysis conducted	No	No	No meta-analysis conducted	No	Critically low
Future research and development																			
49	Bordewijk E	2021	Partial Yes	Yes	Yes	No	Yes	No	No	Yes	No	No	No meta-analysis conducted	No meta-analysis conducted	No	Yes	No meta-analysis conducted	Yes	Critically low
50	Pavlenko E	2020	Partial Yes	Yes	No	Partial Yes	Yes	No	No	No	No	No	No meta-analysis conducted	No meta-analysis conducted	No	No	No meta-analysis conducted	Yes	Critically low
51	Garrison S	2016	Partial Yes	No	Yes	Yes	Yes	Yes	No	Yes	Partial Yes	No	No meta-analysis conducted	No meta-analysis conducted	No	No	No meta-analysis conducted	Yes	Critically low
52	Marusic A,	2016	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No meta-analysis conducted	No meta-analysis conducted	Yes	Yes	No meta-analysis conducted	Yes	High
53	Kalkman S	2015	Partial Yes	Partial Yes	No	Partial Yes	No	No	No	Partial Yes	No	No	No meta-analysis conducted	No meta-analysis conducted	No	No	No meta-analysis conducted	Yes	Critically low
54	Larson B.P	2012	Partial Yes	No	No	No	No	No	No	No	No	No	No meta-analysis conducted	No meta-analysis conducted	No	No	No meta-analysis conducted	Yes	Critically low
55	Marusic A	2011	Partial Yes	Partial Yes	No	Partial Yes	Yes	Yes	No	Yes	Partial Yes	No	No	No	No	No	No	Yes	Critically low