

## DAFTAR PUSTAKA

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# cochrane risk-of-bias tool for randomized trials (RoB 2)

## TEMPLATE FOR COMPLETION

Edited by Julian PT Higgins, Jelena Savović, Matthew J Page, Jonathan AC Sterne  
on behalf of the RoB2 Development Group

Version of 22 August 2019

The development of the RoB 2 tool was supported by the MRC Network of Hubs for Trials Methodology Research (MR/L004933/2- N61), with the support of the host MRC ConDuCT-II Hub (Collaboration and innovation for Difficult and Complex randomised controlled Trials In Invasive procedures - MR/K025643/1), by MRC research grant MR/M025209/1, and by a grant from The Cochrane Collaboration.



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<b>Study details</b>	
<b>Reference</b>	
<b>Study design</b>	
<input checked="" type="checkbox"/> Individually-randomized parallel-group trial	
<input type="checkbox"/> Cluster-randomized parallel-group trial	
<input type="checkbox"/> Individually randomized cross-over (or other matched) trial	
<b>For the purposes of this assessment, the interventions being compared are defined as</b>	
Experimental: <input type="text"/>	Comparator: <input type="text"/>

<b>Specify which outcome is being assessed for risk of bias</b>	
<p><b>Specify the numerical result being assessed.</b> In case of multiple alternative analyses being presented, specify the numeric result (e.g. RR = 1.52 (95% CI 0.83 to 2.77) and/or a reference (e.g. to a table, figure or paragraph) that uniquely defines the result being assessed.</p>	
<p><b>Is the review team’s aim for this result...?</b></p> <p><input type="checkbox"/> to assess the effect of <i>assignment to intervention</i> (the ‘intention-to-treat’ effect)</p> <p><input type="checkbox"/> to assess the effect of <i>adhering to intervention</i> (the ‘per-protocol’ effect)</p>	
<p><b>If the aim is to assess the effect of <i>adhering to intervention</i></b>, select the deviations from intended intervention that should be addressed (at least one must be checked):</p> <p><input type="checkbox"/> occurrence of non-protocol interventions</p> <p><input type="checkbox"/> failures in implementing the intervention that could have affected the outcome</p> <p><input type="checkbox"/> non-adherence to their assigned intervention by trial participants</p>	
<p><b>Which of the following sources were <u>obtained</u> to help inform the risk-of-bias assessment? (tick as many as apply)</b></p> <p><input type="checkbox"/> Journal article(s) with results of the trial</p> <p><input type="checkbox"/> Trial protocol</p> <p><input type="checkbox"/> Statistical analysis plan (SAP)</p> <p><input type="checkbox"/> Non-commercial trial registry record (e.g. ClinicalTrials.gov record)</p> <p><input type="checkbox"/> Company-owned trial registry record (e.g. GSK Clinical Study Register record)</p> <p><input type="checkbox"/> “Grey literature” (e.g. unpublished thesis)</p> <p><input type="checkbox"/> Conference abstract(s) about the trial</p> <p><input type="checkbox"/> Regulatory document (e.g. Clinical Study Report, Drug Approval Package)</p> <p><input type="checkbox"/> Research ethics application</p> <p><input type="checkbox"/> Grant database summary (e.g. NIH RePORTER or Research Councils UK Gateway to Research)</p> <p><input type="checkbox"/> Personal communication with trialist</p> <p><input type="checkbox"/> Personal communication with the sponsor</p>	

## Risk of bias assessment

Responses underlined in green are potential markers for low risk of bias, and responses in **red** are potential markers for a risk of bias. Where questions relate only to sign posts to other questions, no formatting is used.

### Domain 1: Risk of bias arising from the randomization process

Signalling questions	Comments	Response options
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1.1 Was the allocation sequence random?		<u>Y</u> / <u>PY</u> / <u>PN</u> / <u>N</u> / NI
1.2 Was the allocation sequence concealed until participants were enrolled and assigned to interventions?		<u>Y</u> / <u>PY</u> / <u>PN</u> / <u>N</u> / NI
1.3 Did baseline differences between intervention groups suggest a problem with the randomization process?		Y / <u>PY</u> / <u>PN</u> / <u>N</u> / NI
Risk-of-bias judgement		Low / High / Some concerns
Optional: What is the predicted direction of bias arising from the randomization process?		NA / Favours experimental / Favours comparator / Towards null / Away from null / Unpredictable

Domain 2: Risk of bias due to deviations from the intended interventions (*effect of assignment to intervention*)

Signalling questions	Comments	Response options
2.1. Were participants aware of their assigned intervention during the trial?		Y / <u>PY</u> / <u>PN</u> / <u>N</u> / NI
2.2. Were carers and people delivering the interventions aware of participants' assigned intervention during the trial?		Y / <u>PY</u> / <u>PN</u> / <u>N</u> / NI
2.3. If <u>Y/PY/NI</u> to 2.1 or 2.2: Were there deviations from the intended intervention that arose because of the trial context?		NA / Y / <u>PY</u> / <u>PN</u> / <u>N</u> / NI
2.4 If <u>Y/PY</u> to 2.3: Were these deviations likely to have affected the outcome?		NA / Y / <u>PY</u> / <u>PN</u> / <u>N</u> / NI
2.5. If <u>Y/PY/NI</u> to 2.4: Were these deviations from intended intervention balanced between groups?		NA / <u>Y</u> / <u>PY</u> / <u>PN</u> / <u>N</u> / NI
2.6 Was an appropriate analysis used to estimate the effect of assignment to intervention?		<u>Y</u> / <u>PY</u> / <u>PN</u> / <u>N</u> / NI

2.7 If <b>N/PN/NI</b> to 2.6: Was there potential for a substantial impact (on the result) of the failure to analyse participants in the group to which they were randomized?		NA / <b>Y</b> / <b>PY</b> / <b>PN</b> / <b>N</b> / NI
Risk-of-bias judgement		Low / High / Some concerns
Optional: What is the predicted direction of bias due to deviations from intended interventions?		NA / Favours experimental / Favours comparator / Towards null / Away from null / Unpredictable

Domain 2: Risk of bias due to deviations from the intended interventions (*effect of adhering to intervention*)

Signalling questions	Comments	Response options
2.1. Were participants aware of their assigned intervention during the trial?		<b>Y</b> / <b>PY</b> / <b>PN</b> / <b>N</b> / NI
2.2. Were carers and people delivering the interventions aware of participants' assigned intervention during the trial?		<b>Y</b> / <b>PY</b> / <b>PN</b> / <b>N</b> / NI
2.3. [If applicable:] If <b>Y/PY/NI</b> to 2.1 or 2.2: Were important non-protocol interventions balanced across intervention groups?		NA / <b>Y</b> / <b>PY</b> / <b>PN</b> / <b>N</b> / NI
2.4. [If applicable:] Were there failures in implementing the intervention that could have affected the outcome?		NA / <b>Y</b> / <b>PY</b> / <b>PN</b> / <b>N</b> / NI
2.5. [If applicable:] Was there non-adherence to the assigned intervention regimen that could have affected participants' outcomes?		NA / <b>Y</b> / <b>PY</b> / <b>PN</b> / <b>N</b> / NI
2.6. If <b>N/PN/NI</b> to 2.3, or <b>Y/PY/NI</b> to 2.4 or 2.5: Was an appropriate analysis used to estimate the effect of adhering to the intervention?		NA / <b>Y</b> / <b>PY</b> / <b>PN</b> / <b>N</b> / NI
Risk-of-bias judgement		Low / High / Some concerns

Optional: What is the predicted direction of bias due to deviations from intended interventions?		NA / Favours experimental / Favours comparator / Towards null / Away from null / Unpredictable
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### Domain 3: Missing outcome data

Signalling questions	Comments	Response options
<b>3.1</b> Were data for this outcome available for all, or nearly all, participants randomized?		<u>Y</u> / <u>PY</u> / <u>PN</u> / <u>N</u> / NI
<b>3.2</b> If <u>N/PN/NI</u> to <b>3.1</b> : Is there evidence that the result was not biased by missing outcome data?		NA / <u>Y</u> / <u>PY</u> / <u>PN</u> / <u>N</u>
<b>3.3</b> If <u>N/PN</u> to <b>3.2</b> : Could missingness in the outcome depend on its true value?		NA / <u>Y</u> / <u>PY</u> / <u>PN</u> / <u>N</u> / NI
<b>3.4</b> If <u>Y/PY/NI</u> to <b>3.3</b> : Is it likely that missingness in the outcome depended on its true value?		NA / <u>Y</u> / <u>PY</u> / <u>PN</u> / <u>N</u> / NI
<b>Risk-of-bias judgement</b>		Low / High / Some concerns
Optional: What is the predicted direction of bias due to missing outcome data?		NA / Favours experimental / Favours comparator / Towards null / Away from null / Unpredictable

### Domain 4: Risk of bias in measurement of the outcome

Signalling questions	Comments	Response options
<b>4.1</b> Was the method of measuring the outcome inappropriate?		<u>Y</u> / <u>PY</u> / <u>PN</u> / <u>N</u> / NI
<b>4.2</b> Could measurement or ascertainment of the outcome have differed between intervention groups?		<u>Y</u> / <u>PY</u> / <u>PN</u> / <u>N</u> / NI
<b>4.3</b> If <u>N/PN/NI</u> to <b>4.1</b> and <b>4.2</b> : Were outcome assessors aware of the intervention received by study participants?		NA / <u>Y</u> / <u>PY</u> / <u>PN</u> / <u>N</u> / NI



4.4 If <b>Y/PY/NI</b> to 4.3: Could assessment of the outcome have been influenced by knowledge of intervention received?		NA / <b>Y</b> / <b>PY</b> / <b>PN</b> / <b>N</b> / NI
4.5 If <b>Y/PY/NI</b> to 4.4: Is it likely that assessment of the outcome was influenced by knowledge of intervention received?		NA / <b>Y</b> / <b>PY</b> / <b>PN</b> / <b>N</b> / NI
Risk-of-bias judgement		Low / High / Some concerns
Optional: What is the predicted direction of bias in measurement of the outcome?		NA / Favours experimental / Favours comparator / Towards null / Away from null / Unpredictable

Domain 5: Risk of bias in selection of the reported result

Signalling questions	Comments	Response options
5.1 Were the data that produced this result analysed in accordance with a pre-specified analysis plan that was finalized before unblinded outcome data were available for analysis?		Y / PY / PN / N / NI
Is the numerical result being assessed likely to have been selected, on the basis of the results, from...		
5.2. ... multiple eligible outcome measurements (e.g. scales, definitions, time points) within the outcome domain?		Y / PY / PN / N / NI
5.3 ... multiple eligible analyses of the data?		Y / PY / PN / N / NI
Risk-of-bias judgement		Low / High / Some concerns
Optional: What is the predicted direction of bias due to selection of the reported result?		NA / Favours experimental / Favours comparator / Towards null / Away from null / Unpredictable

Overall risk of bias

<b>Risk-of-bias judgement</b>		Low / High / Some concerns
Optional: What is the overall predicted direction of bias for this outcome?		NA / Favours experimental / Favours comparator / Towards null / Away from null / Unpredictable



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Lampiran 2



## PRISMA 2009 Checklist

<b>TITLE</b>		
Title	1	Identify the report as a systematic review, meta-analysis, or both.
<b>ABSTRACT</b>		
Structured summary	2	Provide a structured summary including, as applicable: background; objectives; data sources; study eligibility criteria, participants, and interventions; study appraisal and synthesis methods; results; limitations; conclusions and implications of key findings; systematic review registration number.
<b>INTRODUCTION</b>		
Rationale	3	Describe the rationale for the review in the context of what is already known.
Objectives	4	Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS).
<b>METHODS</b>		
Protocol and registration	5	Indicate if a review protocol exists, if and where it can be accessed (e.g., Web address), and, if available, provide registration information including registration number.
Eligibility criteria	6	Specify study characteristics (e.g., PICOS, length of follow-up) and report characteristics (e.g., years considered, language, publication status) used as criteria for eligibility, giving rationale.
Information sources	7	Describe all information sources (e.g., databases with dates of coverage, contact with study authors to identify additional studies) in the search and date last searched.

Search	8	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.	
Study selection	9	State the process for selecting studies (i.e., screening, eligibility, included in systematic review, and, if applicable, included in the meta-analysis).	
Data collection process	10	Describe method of data extraction from reports (e.g., piloted forms, independently, in duplicate) and any processes for obtaining and confirming data from investigators.	
Data items	11	List and define all variables for which data were sought (e.g., PICOS, funding sources) and any assumptions and simplifications made.	
Risk of bias in individual studies	12	Describe methods used for assessing risk of bias of individual studies (including specification of whether this was done at the study or outcome level), and how this information is to be used in any data synthesis.	
Summary measures	13	State the principal summary measures (e.g., risk ratio, difference in means).	
Synthesis of results	14	Describe the methods of handling data and combining results of studies, if done, including measures of consistency (e.g., $I^2$ ) for each meta-analysis.	

Section/topic	#	Checklist item	Reported on page #
Risk of bias across studies	15	Specify any assessment of risk of bias that may affect the cumulative evidence (e.g., publication bias, selective reporting within studies).	
Additional analyses	16	Describe methods of additional analyses (e.g., sensitivity or subgroup analyses, meta-regression), if done, indicating which were pre-specified.	
<b>RESULTS</b>			

Study selection	17	Give numbers of studies screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally with a flow diagram.	
Study characteristics	18	For each study, present characteristics for which data were extracted (e.g., study size, PICOS, follow-up period) and provide the citations.	
Risk of bias within studies	19	Present data on risk of bias of each study and, if available, any outcome level assessment (see item 12).	
Results of individual studies	20	For all outcomes considered (benefits or harms), present, for each study: (a) simple summary data for each intervention group (b) effect estimates and confidence intervals, ideally with a forest plot.	
Synthesis of results	21	Present results of each meta-analysis done, including confidence intervals and measures of consistency.	
Risk of bias across studies	22	Present results of any assessment of risk of bias across studies (see Item 15).	
Additional analysis	23	Give results of additional analyses, if done (e.g., sensitivity or subgroup analyses, meta-regression [see Item 16]).	
<b>DISCUSSION</b>			
Summary of evidence	24	Summarize the main findings including the strength of evidence for each main outcome; consider their relevance to key groups (e.g., healthcare providers, users, and policy makers).	
Limitations	25	Discuss limitations at study and outcome level (e.g., risk of bias), and at review-level (e.g., incomplete retrieval of identified research, reporting bias).	
Conclusions	26	Provide a general interpretation of the results in the context of other evidence, and implications for future research.	
<b>FUNDING</b>			
Funding	27	Describe sources of funding for the systematic review and other support (e.g., supply of data); role of funders for the systematic review.	