PRISMA 2020 Checklist

Section/topic	Item No	Checklist item	Reported on Page Number/Line Number	Reported on Section/Paragraph
TITLE				
Title	1	Identify the report as a systematic review.	Page 1/Line 1-2	Title
ABSTRACT				
Abstract	2	See the PRISMA 2020 for Abstracts checklist (Table 2).	Page 1/Line 14-29	Abstract
INTRODUCTION				
Rationale	3	Describe the rationale for the review in the context of existing knowledge.	Page 2/Line 5-17	Introduction/Paragraph1
Objectives	4	Provide an explicit statement of the objective(s) or question(s) the review addresses.	Page 2/Line 18-22	Introduction/Paragraph1
METHODS				
Eligibility criteria	5	Specify the inclusion and exclusion criteria for the review and how studies were grouped for the syntheses.	Page 2/Line 25-30	Methods/Paragraph 1
Information sources	6	Specify all databases, registers, websites, organisations, reference lists and other sources searched or consulted to identify studies. Specify the date when each source was last searched or consulted.	Page 3/Line 19-21	Methods/Paragraph 2
Search strategy	7	Present the full search strategies for all databases, registers and websites, including any filters and limits used.	Page 3/Line 22	Methods/Paragraph 2
Selection process	8	Specify the methods used to decide whether a study met the inclusion criteria of the review, including how many reviewers screened each record and each report retrieved, whether they worked independently, and if applicable, details of automation tools used in the process.	Page 3/Line 25-29	Methods/Paragraph 3
Data collection process	9	Specify the methods used to collect data from reports, including how many reviewers collected data from each report, whether they worked independently, any processes for obtaining or confirming data from study investigators, and if applicable, details of automation tools used in the process.	Page 3/Line 30	Methods/Paragraph 3
Data items	10a	List and define all outcomes for which data were sought. Specify whether all results that were compatible with each outcome domain in each study were sought (e.g. for all measures, time points, analyses), and if not, the methods used to decide which results to collect.	Page 4/Line 9-10	Methods/Paragraph 3
	10b	List and define all other variables for which data were sought (e.g. participant and intervention characteristics, funding sources). Describe any assumptions made about any missing or unclear information.	Page 4/Line 1-9	Methods/Paragraph 3

Study risk of bias assessment	11	Specify the methods used to assess risk of bias in the included studies, including details of the tool(s) used, how many reviewers assessed each study and whether they worked independently, and if applicable, details of automation tools used in the process.	Page 4/Line 16-19	Methods/Paragraph 4
Effect measures	12	Specify for each outcome the effect measure(s) (e.g. risk ratio, mean difference) used in the synthesis or presentation of results.	Page 4/Line 22-23	Methods/Paragraph 5
Synthesis methods	13a	Describe the processes used to decide which studies were eligible for each synthesis.	Page 4/Line 22	Methods/Paragraph 5
	13b	Describe any methods required to prepare the data for presentation or synthesis, such as handling of missing summary statistics, or data conversions.	Page 4/Line 11-13	Methods/Paragraph 3
	13c	Describe any methods used to tabulate or visually display results of individual studies and syntheses.	Page 4/Line 24	Methods/Paragraph 5
	13d	Describe any methods used to synthesize results and provide a rationale for the choice(s). If meta-analysis was performed, describe the model(s), method(s) to identify the presence and extent of statistical heterogeneity, and software package(s) used.	Page 4/Line 26-27	Methods/Paragraph 5
	13e	Describe any methods used to explore possible causes of heterogeneity among study results.	Page 4/Line 30	Methods/Paragraph 5
	13f	Describe any sensitivity analyses conducted to assess robustness of the synthesized results.	Page 5/Line 1	Methods/Paragraph 5
Reporting bias assessment	14	Describe any methods used to assess risk of bias due to missing results in a synthesis (arising from reporting biases).	Page 4/Line 29	Methods/Paragraph 5
Certainty assessment	15	Describe any methods used to assess certainty (or confidence) in the body of evidence for an outcome.	Page 4/Line 23	Methods/Paragraph 5
RESULTS				
Study selection	16a	Describe the results of the search and selection process, from the number of records identified in the search to the number of studies included in the review, ideally using a flow diagram.	Fig 1	Fig 1
	16b	Cite studies that met many but not all inclusion criteria ('near-misses') and explain why they were excluded.	Page 5/Line 5-6	Results/Paragraph 1
Study characteristics	17	Cite each included study and present its characteristics.	Table 1	Table 1
Risk of bias in studies	18	Present assessments of risk of bias for each included study.	Table 2	Table 2
Results of individual studies	19	For all outcomes, present, for each study: (a) summary statistics for each group (where appropriate) and (b) an effect estimate and its precision (e.g. confidence/credible interval), ideally using structured tables or plots.	Fig 2-5	Fig 2-5

Results of syntheses	20a	For each synthesis, briefly summarise the characteristics and risk of bias among contributing studies.	Page 7/Line 14	Results/Paragraph 4
	20b	Present results of all statistical syntheses conducted. If meta-analysis was done, present for each the summary estimate and its precision (e.g. confidence/credible interval) and measures of statistical heterogeneity. If comparing groups, describe the direction of the effect.	Page 7/Line 15-17	Results/Paragraph 4
	20c	Present results of all investigations of possible causes of heterogeneity among study results.	Page 10/Line 13-17	Results/Paragraph 5
	20d	Present results of all sensitivity analyses conducted to assess the robustness of the synthesized results.	Fig 6	Fig 6
Reporting biases	21	Present assessments of risk of bias due to missing results (arising from reporting biases) for each synthesis assessed.	Fig 7	Fig 7
Certainty of evidence	22	Present assessments of certainty (or confidence) in the body of evidence for each outcome assessed.	Page 7/Line 17	Results/Paragraph 4
DISCUSSION				
Discussion	23a	Provide a general interpretation of the results in the context of other evidence.	Page 12/Line 5-18	Discussion/Paragraph1-6
	23b	Discuss any limitations of the evidence included in the review.	Page 13/Line 21-23	Discussion/Paragraph 7
	23c	Discuss any limitations of the review processes used.	Page 13/Line 23-27	Discussion/Paragraph 7
	23d	Discuss implications of the results for practice, policy, and future research.	Page 13/Line 28-30	Discussion/Paragraph 8
OTHER INFORMATION				
Registration and protocol	24a	Provide registration information for the review, including register name and registration number, or state that the review was not registered.	N/A	N/A
	24b	Indicate where the review protocol can be accessed, or state that a protocol was not prepared.	N/A	N/A
	24c	Describe and explain any amendments to information provided at registration or in the protocol.	N/A	N/A
Support	25	Describe sources of financial or non-financial support for the review, and the role of the funders or sponsors in the review.	N/A	N/A
Competing interests	26	Declare any competing interests of review authors.	N/A	N/A
Availability of data, code and other materials	27	Report which of the following are publicly available and where they can be found: template data collection forms; data extracted from included studies; data used for all analyses; analytic code; any other materials used in the review.	N/A	N/A

Table 2 PRISMA 2020 for Abstracts checklist

Section/topic	Item No	Checklist item	Reported on Page Number/Line Number	Reported on Section/Paragraph
TITLE				
Title	1	Identify the report as a systematic review.	Page 1/Line 1-2	Title
BACKGROUND				
Objectives	2	Provide an explicit statement of the main objective(s) or question(s) the review addresses.	Page 1/Line 14-18	Abstract/Background
METHODS				
Eligibility criteria	3	Specify the inclusion and exclusion criteria for the review.	Page 1/Line 20	Abstract/Methods
Information sources	4	Specify the information sources (e.g. databases, registers) used to identify studies and the date when each was last searched.	Page 1/Line 18-19	Abstract/Methods
Risk of bias	5	Specify the methods used to assess risk of bias in the included studies.	Page 1/Line 20	Abstract/Methods
Synthesis of results	6	Specify the methods used to present and synthesize results.	Page 1/Line 21	Abstract/Methods
RESULTS				
Included studies	7	Give the total number of included studies and participants and summarise relevant characteristics of studies.	Page 1/Line 21-22	Abstract/Results
Synthesis of results	8	Present results for main outcomes, preferably indicating the number of included studies and participants for each. If meta-analysis was done, report the summary estimate and confidence/credible interval. If comparing groups, indicate the direction of the effect (i.e. which group is favoured).	Page 1/Line 22-28	Abstract/Results
DISCUSSION				
Limitations of evidence	9	Provide a brief summary of the limitations of the evidence included in the review (e.g. study risk of bias, inconsistency and imprecision).	Page 1/Line 28	Abstract/Discussion
Interpretation	10	Provide a general interpretation of the results and important implications.	Page 1/Line 29	Abstract/Discussion
OTHER				
Funding	11	Specify the primary source of funding for the review.	N/A	N/A
Registration	12	Provide the register name and registration number.	N/A	N/A

Article information: https://dx.doi.org/10.21037/gs-21-832
*As the checklist was provided upon initial submission, the page number/line number reported may be changed due to copyediting and may not be referable in the published version. In this case, the section/paragraph may be used as an alternative reference.