## PRISMA 2020 Checklist

| Section and                   | ltem | Checklist Item                                                                                                                                                                                                                                                                                                         | Location             |
|-------------------------------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| Торіс                         | #    |                                                                                                                                                                                                                                                                                                                        | where<br>item is     |
|                               |      |                                                                                                                                                                                                                                                                                                                        | reported             |
| TITLE                         |      |                                                                                                                                                                                                                                                                                                                        |                      |
| Title                         | 1    | Identify the report as a systematic review                                                                                                                                                                                                                                                                             | N/A                  |
| ABSTRACT                      |      |                                                                                                                                                                                                                                                                                                                        |                      |
| Abstract                      | 2    | See the PRISMA 2020 for Abstracts checklist                                                                                                                                                                                                                                                                            | N/A                  |
| INTRODOCUT                    |      |                                                                                                                                                                                                                                                                                                                        | 1                    |
| Rationale                     | 3    | Describe the rationale for the review in the context of existing knowledge                                                                                                                                                                                                                                             | Pg. 2                |
| Objectives                    | 4    | Provide an explicit statement of the objective(s) or<br>question(s) the review addresses                                                                                                                                                                                                                               | Pg. 3                |
| METHODS                       |      |                                                                                                                                                                                                                                                                                                                        |                      |
| Eligibility<br>criteria       | 5    | Specify the inclusion and exclusion criteria for the review and how studies were grouped for the syntheses.                                                                                                                                                                                                            | Pg. 21               |
| Information<br>sources        | 6    | Specify all databases, registers, websites,<br>organisations, reference lists and other sources<br>searched or consulted to identify studies. Specify the<br>date when each source was last searched or<br>consulted.                                                                                                  | Pg. 3                |
| Search<br>strategy            | 7    | Present the full search strategies for all databases,<br>registers and websites, including any filters and limits<br>used.                                                                                                                                                                                             | Pg. 3 & 21           |
| Selection<br>process          | 8    | Specify the methods used to decide whether a study<br>met the inclusion criteria of the review, including how<br>many reviewers screened each record and each<br>report retrieved, whether they worked independently,<br>and if applicable, details of automation tools used in<br>the process.                        | Pg. 3 & 4            |
| Data<br>collection<br>process | 9    | Specify the methods used to collect data from<br>reports, including how many reviewers collected data<br>from each report, whether they worked<br>independently, any processes for obtaining or<br>confirming data from study investigators, and if<br>applicable, details of automation tools used in the<br>process. | Pg. 3 & 4            |
| Data items                    | 10a  | List and define all outcomes for which data were<br>sought. Specify whether all results that were<br>compatible with each outcome domain in each study<br>were sought (e.g. for all measures, time points,<br>analyses), and if not, the methods used to decide<br>which results to collect.                           | Pg. 3, 4 &<br>Pg. 21 |

| ection and<br>opic | ltem<br># |                                                                                                   | Location<br>where<br>item is<br>reported |
|--------------------|-----------|---------------------------------------------------------------------------------------------------|------------------------------------------|
|                    | 10b       | List and define all other variables for which data were sought (e.g. participant and intervention | Pg. 21                                   |

|                                     |     | characteristics, funding sources). Describe any assumptions made about any missing or unclear information.                                                                                                                                                                       |           |
|-------------------------------------|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| Study risk of<br>bias<br>assessment | 11  | Specify the methods used to assess risk of bias in<br>the included studies, including details of the tool(s)<br>used, how many reviewers assessed each study and<br>whether they worked independently, and if<br>applicable, details of automation tools used in the<br>process. | Pg. 3, 4  |
| Effect<br>measures                  | 12  | Specify for each outcome the effect measure(s) (e.g. risk ratio, mean difference) used in the synthesis or presentation of results.                                                                                                                                              | N/A       |
| Synthesis<br>methods                | 13a | Describe the processes used to decide which studies<br>were eligible for each synthesis (e.g. tabulating the<br>study intervention characteristics and comparing<br>against the planned groups for each synthesis (item<br>#5)).                                                 | Pg. 3 & 4 |
|                                     | 13b | Describe any methods required to prepare the data<br>for presentation or synthesis, such as handling of<br>missing summary statistics, or data conversions.                                                                                                                      | N/A       |
|                                     | 13c | Describe any methods used to tabulate or visually display results of individual studies and syntheses.                                                                                                                                                                           | N/A       |
|                                     | 13d | Describe any methods used to synthesize results<br>and provide a rationale for the choice(s). If meta-<br>analysis was performed, describe the model(s),<br>method(s) to identify the presence and extent of<br>statistical heterogeneity, and software package(s)<br>used.      | Pg. 4     |
|                                     | 13e | Describe any methods used to explore possible<br>causes of heterogeneity among study results (e.g.<br>subgroup analysis, meta-regression).                                                                                                                                       | N/A       |
|                                     | 13f | Describe any sensitivity analyses conducted to assess robustness of the synthesized results.                                                                                                                                                                                     | N/A       |
| Reporting bias assessment           | 14  | Describe any methods used to assess risk of bias<br>due to missing results in a synthesis (arising from<br>reporting biases).                                                                                                                                                    | N/A       |
| Certainty<br>assessment             | 15  | Describe any methods used to assess certainty (or confidence) in the body of evidence for an outcome.                                                                                                                                                                            | N/A       |

| Section and<br>Topic | ltem<br># | Checklist Item                                                                                                                                                                                        | Location<br>where<br>item is<br>reported |
|----------------------|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|
| RESULTS              |           |                                                                                                                                                                                                       |                                          |
| Study selection      | 16a       | Describe the results of the search and selection<br>process, from the number of records identified in the<br>search to the number of studies included in the<br>review, ideally using a flow diagram. |                                          |

|                                     | 16b | Cite studies that might appear to meet the inclusion criteria, but which were excluded, and explain why                                                                                                                                                                                             | Pg. 3, 4 & 26  |
|-------------------------------------|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
|                                     |     | they were excluded.                                                                                                                                                                                                                                                                                 | 20             |
| Study                               | 17  | Cite each included study and present its                                                                                                                                                                                                                                                            | Pg. 22 -       |
| characteristics                     |     | characteristics.                                                                                                                                                                                                                                                                                    | 24             |
| Risk of bias in<br>studies          | 18  | Present assessments of risk of bias for each included study.                                                                                                                                                                                                                                        | N/A            |
| Results of<br>individual<br>studies | 19  | For all outcomes, present, for each study: (a)<br>summary statistics for each group (where<br>appropriate) and (b) an effect estimate and its<br>precision (e.g. confidence/credible interval), ideally<br>using structured tables or plots.                                                        | N/A            |
| Results of syntheses                | 20a | For each synthesis, briefly summarise the characteristics and risk of bias among contributing studies.                                                                                                                                                                                              | N/A            |
|                                     | 20b | Present results of all statistical syntheses<br>conducted. If meta-analysis was done, present for<br>each the summary estimate and its precision (e.g.<br>confidence/credible interval) and measures of<br>statistical heterogeneity. If comparing groups,<br>describe the direction of the effect. | N/A            |
|                                     | 20c | Present results of all investigations of possible causes of heterogeneity among study results.                                                                                                                                                                                                      | N/A            |
|                                     | 20d | Present results of all sensitivity analyses conducted to assess the robustness of the synthesized results.                                                                                                                                                                                          | N/A            |
| Reporting<br>biases                 | 21  | Present assessments of risk of bias due to missing results (arising from reporting biases) for each synthesis assessed.                                                                                                                                                                             | N/A            |
| Certainty of                        | 22  | Present assessments of certainty (or confidence) in                                                                                                                                                                                                                                                 | N/A            |
| evidence                            |     | the body of evidence for each outcome assessed.                                                                                                                                                                                                                                                     | <u> </u>       |
| DISCUSSION                          |     |                                                                                                                                                                                                                                                                                                     | 1              |
| Discussion                          | 23a | Provide a general interpretation of the results in the context of other evidence.                                                                                                                                                                                                                   | Pg. 12 –<br>15 |
|                                     | 23b | Discuss any limitations of the evidence included in the review.                                                                                                                                                                                                                                     | Pg. 15         |

| Section and<br>Topic         | ltem<br># | Checklist Item                                                                                                                                       | Location<br>where<br>item is<br>reported |
|------------------------------|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|
|                              | 23c       | Discuss any limitations of the review processes used.                                                                                                | Pg. 15                                   |
|                              | 23d       | Discuss implications of the results for practice,                                                                                                    | Pg. 12 -                                 |
|                              |           | policy, and future research.                                                                                                                         | 16                                       |
| <b>OTHER INFOR</b>           | MATIO     | N                                                                                                                                                    |                                          |
| Registration<br>and protocol | 24a       | Provide registration information for the review,<br>including register name and registration number, or<br>state that the review was not registered. | N/A                                      |
|                              | 24b       | Indicate where the review protocol can be accessed, or state that a protocol was not prepared.                                                       | N/A                                      |
|                              | 24c       | Describe and explain any amendments to information provided at registration or in the protocol.                                                      | N/A                                      |

| Support                                                 | 25 | Describe sources of financial or non-financial support<br>for the review, and the role of the funders or<br>sponsors in the review.                                                                                                                    | Pg. 16 |
|---------------------------------------------------------|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| Competing interests                                     | 26 | Declare any competing interests of review authors.                                                                                                                                                                                                     | Pg. 16 |
| Availability of<br>data, code<br>and other<br>materials | 27 | Report which of the following are publicly available<br>and where they can be found: template data<br>collection forms; data extracted from included<br>studies; data used for all analyses; analytic code;<br>any other materials used in the review. | N/A    |

Appendix A: Critical Appraisal Skills Programme Systematic Review Checklist used to critique the quality of evidence in the review of the literature [32]

| Article   | Article Title                                                                                                                                                                                                                                                                                                                                                                         | Yes | Can't | No |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-------|----|
|           |                                                                                                                                                                                                                                                                                                                                                                                       |     | Tell  |    |
| Questions | <ol> <li>Did the review address a clearly focused<br/>question?</li> <li>Did the authors look for the right type of papers?</li> <li>Do you think all the important, relevant studies<br/>were included?</li> <li>Did the review's authors do enough to assess<br/>quality of the included studies?</li> </ol>                                                                        |     |       |    |
| 6         | <ol> <li>5. If the results of the review have been combined,<br/>was it reasonable to do so?</li> <li>6. What are the overall results of the review?</li> <li>7. How precise are the results?</li> <li>8. Can the results be applied to the local population?</li> <li>9. Were all important outcomes considered?</li> <li>10. Are the benefits worth the harms and costs?</li> </ol> |     |       |    |
| Score     |                                                                                                                                                                                                                                                                                                                                                                                       |     |       |    |

Appendix B: Critical Appraisal Skills Programme Qualitative Research Checklist used to critique the quality of evidence in the review of the literature [33]

| Article   | Article Title                                                                           | Yes | Can't | No |
|-----------|-----------------------------------------------------------------------------------------|-----|-------|----|
|           |                                                                                         |     | Tell  |    |
| Questions | 1. Was there a clear statement of the aims of the research?                             |     |       |    |
|           | 2. Is a qualitative methodology appropriate?                                            |     |       |    |
|           | 3. Was the research design appropriate to address the aims of the research?             |     |       |    |
|           | 4. Was the recruitment strategy appropriate to the aims of the research?                |     |       |    |
|           | 5. Was the data collected in a way that addressed the research issue?                   |     |       |    |
|           | 6. Has the relationship between researcher and participants been adequately considered? |     |       |    |
|           | 7. Have ethical issues been taken into consideration?                                   |     |       |    |
|           | 8. Was the data analysis sufficiently rigorous?                                         |     |       |    |
|           | 9. Is there a clear statement of findings?                                              |     |       |    |
|           | 10. How valuable is the research?                                                       |     |       |    |
| Score     |                                                                                         |     |       |    |

Appendix C: AMSTAR 2 critical appraisal tool for systematic reviews that include randomised or non-randomised studies of healthcare interventions, or both [35]

| 1. | Did the research questions and inclusion     | Yes                                |
|----|----------------------------------------------|------------------------------------|
|    | criteria for the review include the          |                                    |
|    | components of PICO?                          |                                    |
| 2. | Did the report of the review contain an      | Partial Yes: review questions,     |
|    | explicit statement that the review methods   | search strategy,                   |
|    | were established prior to the conduct of the | inclusion/exclusion criteria, risk |
|    | review and did the report justify any        | of bias assessment                 |
|    | significant deviations from the protocol?    |                                    |

| 3. | Did the review authors explain their            | Yes                               |
|----|-------------------------------------------------|-----------------------------------|
|    | selection of the study designs for inclusion in |                                   |
|    | the review?                                     |                                   |
| 4. | Did the review authors use a comprehensive      | Partial yes: searched at least 2  |
|    | literature search strategy?                     | databases, provided key word      |
|    | <u>ov</u>                                       | and/or search strategy, justified |
|    |                                                 | publication restrictions (e.g.    |
|    |                                                 | language)                         |
| 5  | Did the review authors perform study            | Yes: at least two reviewers       |
| 5. | · · ·                                           |                                   |
|    | selection in duplicate?                         | independently agreed on           |
|    |                                                 | selection of eligible studies and |
|    |                                                 | achieved consensus on which       |
|    |                                                 | studies to include                |
| 6. | Did the review authors perform data             | Yes: at least two reviewers       |
|    | extraction in duplicate?                        | achieved consensus on which       |
|    |                                                 | data to extract from included     |
|    |                                                 | studies                           |
| 7. | Did the review authors provide a list of        | Yes: justified the exclusion from |
|    | excluded studies and justify the exclusions?    | the review of each potentially    |
|    |                                                 | relevant study                    |
| 8. | Did the review authors describe the included    | Partial yes: described            |
|    | studies in adequate detail?                     | populations, described            |
|    |                                                 | interventions, described          |
|    |                                                 | comparators, described outcomes,  |
|    |                                                 | described research designs)       |
| 9. | Did the review authors use a satisfactory       | Yes                               |
|    | technique for assessing the risk of bias        |                                   |
|    | (RoB) in individual studies that were           |                                   |
|    | included in the review?                         |                                   |
| 10 | . Did the review authors report on the sources  | Yes                               |
|    | of funding for the studies included in the      |                                   |
|    | review?                                         |                                   |
|    |                                                 |                                   |

| 11. If meta-analysis was performed did the         | N/A: no meta-analysis conducted |
|----------------------------------------------------|---------------------------------|
| review authors use appropriate methods for         |                                 |
| statistical combination of results?                |                                 |
|                                                    |                                 |
| 12. If meta-analysis was performed, did the        | N/A: no meta-analysis conducted |
| review authors assess the potential impact of      |                                 |
| <b>RoB</b> in individual studies on the results of |                                 |
| the meta-analysis or other evidence                |                                 |
| synthesis?                                         |                                 |
| 13. Did the review authors account for RoB in      | Yes: included only low risk of  |
| individual studies when                            | bias studies                    |
| interpreting/discussing the results of the         |                                 |
| review?                                            |                                 |
| 14. Did the review authors provide a               | Yes: there was no significant   |
| satisfactory explanation for, and discussion       | heterogeneity in the results    |
| of, any heterogeneity observed in the results      |                                 |
| of the review?                                     |                                 |
| 15. If they performed quantitative synthesis did   | N/A: no meta-analysis conducted |
| the review authors carry out an adequate           |                                 |
| investigation of publication bias (small study     |                                 |
| bias) and discuss its likely impact on the         |                                 |
| results of the review?                             |                                 |
| 16. Did the review authors report any potential    | Yes: the authors reported no    |
| sources of conflict of interest, including any     | competing interests             |
| funding they received for conducting the           |                                 |
| review?                                            |                                 |

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