**Supplemental Digital Content 1: JBI critical appraisal tool for randomized controlled trials**

|  |  |  |
| --- | --- | --- |
| **RoB Assessor:**  | **Date of Appraisal:**  | **Record Number:**  |
| **Study Author:**  | **Study Title:**  | **Study Year:**  |
|  |  |  |
| **Internal Validity**  | **Choice - Comments/Justification** | **Yes** | **No** | **Unclear** | **N/A** |
| **Bias related to selection and allocation** |
| **1** | **Was true randomization used for assignment of participants to treatment groups?** |  |[ ] [ ] [ ] [ ]
| **2** | **Was allocation to treatment groups concealed?** |  |[ ] [ ] [ ] [ ]
| **3** | **Were treatment groups similar at the baseline?** |  |[ ] [ ] [ ] [ ]
| **Bias related to administration of intervention/exposure** |
| **4** | **Were participants blind to treatment assignment?** |  |[ ] [ ] [ ] [ ]
| **5** | **Were those delivering the treatment blind to treatment assignment?** |  |[ ] [ ] [ ] [ ]
| **6** | **Were treatment groups treated identically other than the intervention of interest?** |  |[ ] [ ] [ ] [ ]
| **Bias related to assessment, detection and measurement of the outcome** |
| **7** | **Were outcome assessors blind to treatment assignment?** |  | **Yes** | **No** | **Unclear** | **N/A** |
|  | **Outcome 1** |  |[ ] [ ] [ ] [ ]
|  | **Outcome 2** |  |[ ] [ ] [ ] [ ]
|  | **Outcome 3** |  |[ ] [ ] [ ] [ ]
|  | **Outcome 4** |  |[ ] [ ] [ ] [ ]
|  | **Outcome 5** |  |[ ] [ ] [ ] [ ]
|  | **Outcome 6** |  |[ ] [ ] [ ] [ ]
|  | **Outcome 7** |  |[ ] [ ] [ ] [ ]
|  |  |  |  |  |  |  |
| **8** | **Were outcomes measured in the same way for treatment groups?** |  | **Yes** | **No** | **Unclear** | **N/A** |
|  | **Outcome 1**  |  |[ ] [ ] [ ] [ ]
|  | **Outcome 2** |  |[ ] [ ] [ ] [ ]
|  | **Outcome 3** |  |[ ] [ ] [ ] [ ]
|  | **Outcome 4** |  |[ ] [ ] [ ] [ ]
|  | **Outcome 5** |  |[ ] [ ] [ ] [ ]
|  | **Outcome 6** |  |[ ] [ ] [ ] [ ]
|  | **Outcome 7** |  |[ ] [ ] [ ] [ ]
|  |  |  |  |  |  |  |
| **9** | **Were outcomes measured in a reliable way** |  | **Yes** | **No** | **Unclear** | **N/A** |
|  | **Outcome 1**  |  |[ ] [ ] [ ] [ ]
|  | **Outcome 2** |  |[ ] [ ] [ ] [ ]
|  | **Outcome 3** |  |[ ] [ ] [ ] [ ]
|  | **Outcome 4** |  |[ ] [ ] [ ] [ ]
|  | **Outcome 5** |  |[ ] [ ] [ ] [ ]
|  | **Outcome 6** |  |[ ] [ ] [ ] [ ]
|  | **Outcome 7** |  |[ ] [ ] [ ] [ ]
|  |  |  |  |
| **Bias related to participant retention** |
| **10** | **Was follow-up complete and if not, were differences between groups in terms of their follow-up adequately described and analyzed?** |  |  |
|  | **Outcome 1** |  | **Yes** | **No** | **Unclear** | **N/A** |
|  |  | Result 1 |  |[ ] [ ] [ ] [ ]
|  |  | Result 2 |  |[ ] [ ] [ ] [ ]
|  |  | Result 3 |  |[ ] [ ] [ ] [ ]
|  | **Outcome 2** |  | **Yes** | **No** | **Unclear** | **N/A** |
|  |  | Result 1 |  |[ ] [ ] [ ] [ ]
|  |  | Result 2 |  |[ ] [ ] [ ] [ ]
|  |  | Result 3 |  |[ ] [ ] [ ] [ ]
|  | **Outcome 3** |  | **Yes** | **No** | **Unclear** | **N/A** |
|  |  | Result 1 |  |[ ] [ ] [ ] [ ]
|  |  | Result 2 |  |[ ] [ ] [ ] [ ]
|  |  | Result 3 |  |[ ] [ ] [ ] [ ]
|  | **Outcome 4** |  | **Yes** | **No** | **Unclear** | **N/A** |
|  |  | Result 1 |  |[ ] [ ] [ ] [ ]
|  |  | Result 2 |  |[ ] [ ] [ ] [ ]
|  |  | Result 3 |  |[ ] [ ] [ ] [ ]
|  | **Outcome 5** |  | **Yes** | **No** | **Unclear** | **N/A** |
|  |  | Result 1 |  |[ ] [ ] [ ] [ ]
|  |  | Result 2 |  |[ ] [ ] [ ] [ ]
|  |  | Result 3 |  |[ ] [ ] [ ] [ ]
|  | **Outcome 6** |  | **Yes** | **No** | **Unclear** | **N/A** |
|  |  | Result 1 |  |[ ] [ ] [ ] [ ]
|  |  | Result 2 |  |[ ] [ ] [ ] [ ]
|  |  | Result 3 |  |[ ] [ ] [ ] [ ]
|  | **Outcome 7** |  | **Yes** | **No** | **Unclear** | **N/A** |
|  |  | Result 1 |  |[ ] [ ] [ ] [ ]
|  |  | Result 2 |  |[ ] [ ] [ ] [ ]
|  |  | Result 3 |  |[ ] [ ] [ ] [ ]
|  |  |  |  |  |  |  |
|  | **Statistical Conclusion Validity** |  |  |  |  |
| **11** | **Were participants analyzed in the groups to which they were randomized?** |  |  |
|  | **Outcome 1** |  |  | **Yes** | **No** | **Unclear** | **N/A** |
|  |  | Result 1 |  |[ ] [ ] [ ] [ ]
|  |  | Result 2 |  |[ ] [ ] [ ] [ ]
|  |  | Result 3 |  |[ ] [ ] [ ] [ ]
|  | **Outcome 2** |  |  | **Yes** | **No** | **Unclear** | **N/A** |
|  |  | Result 1 |  |[ ] [ ] [ ] [ ]
|  |  | Result 2 |  |[ ] [ ] [ ] [ ]
|  |  | Result 3 |  |[ ] [ ] [ ] [ ]
|  | **Outcome 3** |  |  | **Yes** | **No** | **Unclear** | **N/A** |
|  |  | Result 1 |  |[ ] [ ] [ ] [ ]
|  |  | Result 2 |  |[ ] [ ] [ ] [ ]
|  |  | Result 3 |  |[ ] [ ] [ ] [ ]
|  | **Outcome 4** |  | **Yes** | **No** | **Unclear** | **N/A** |
|  |  | Result 1 |  |[ ] [ ] [ ] [ ]
|  |  | Result 2 |  |[ ] [ ] [ ] [ ]
|  |  | Result 3 |  |[ ] [ ] [ ] [ ]
|  | **Outcome 5** |  | **Yes** | **No** | **Unclear** | **N/A** |
|  |  | Result 1 |  |[ ] [ ] [ ] [ ]
|  |  | Result 2 |  |[ ] [ ] [ ] [ ]
|  |  | Result 3 |  |[ ] [ ] [ ] [ ]
|  | **Outcome 6** |  | **Yes** | **No** | **Unclear** | **N/A** |
|  |  | Result 1 |  |[ ] [ ] [ ] [ ]
|  |  | Result 2 |  |[ ] [ ] [ ] [ ]
|  |  | Result 3 |  |[ ] [ ] [ ] [ ]
|  | **Outcome 7** |  | **Yes** | **No** | **Unclear** | **N/A** |
|  |  | Result 1 |  |[ ] [ ] [ ] [ ]
|  |  | Result 2 |  |[ ] [ ] [ ] [ ]
|  |  | Result 3 |  |[ ] [ ] [ ] [ ]
|  |  |  |  |  |  |
| **12** | **Was appropriate statistical analysis used?** |  |  |  |  |  |
|  | **Outcome 1** |  | **Yes** | **No** | **Unclear** | **N/A** |
|  |  | Result 1 |  |[ ] [ ] [ ] [ ]
|  |  | Result 2 |  |[ ] [ ] [ ] [ ]
|  |  | Result 3 |  |[ ] [ ] [ ] [ ]
|  | **Outcome 2** |  | **Yes** | **No** | **Unclear** | **N/A** |
|  |  | Result 1 |  |[ ] [ ] [ ] [ ]
|  |  | Result 2 |  |[ ] [ ] [ ] [ ]
|  |  | Result 3 |  |[ ] [ ] [ ] [ ]
|  | **Outcome 3** |  | **Yes** | **No** | **Unclear** | **N/A** |
|  |  | Result 1 |  |[ ] [ ] [ ] [ ]
|  |  | Result 2 |  |[ ] [ ] [ ] [ ]
|  |  | Result 3 |  |[ ] [ ] [ ] [ ]
|  | **Outcome 4** |  | **Yes** | **No** | **Unclear** | **N/A** |
|  |  | Result 1 |  |[ ] [ ] [ ] [ ]
|  |  | Result 2 |  |[ ] [ ] [ ] [ ]
|  |  | Result 3 |  |[ ] [ ] [ ] [ ]
|  | **Outcome 5** |  | **Yes** | **No** | **Unclear** | **N/A** |
|  |  | Result 1 |  |[ ] [ ] [ ] [ ]
|  |  | Result 2 |  |[ ] [ ] [ ] [ ]
|  |  | Result 3 |  |[ ] [ ] [ ] [ ]
|  | **Outcome 6** |  | **Yes** | **No** | **Unclear** | **N/A** |
|  |  | Result 1 |  |[ ] [ ] [ ] [ ]
|  |  | Result 2 |  |[ ] [ ] [ ] [ ]
|  |  | Result 3 |  |[ ] [ ] [ ] [ ]
|  | **Outcome 7** |  | **Yes** | **No** | **Unclear** | **N/A** |
|  |  | Result 1 |  |[ ] [ ] [ ] [ ]
|  |  | Result 2 |  |[ ] [ ] [ ] [ ]
|  |  | Result 3 |  |[ ] [ ] [ ] [ ]
|  |  |  |  |  |  |  |
|  |  |  | **Yes** | **No** | **Unclear** | **N/A** |
| **13** | **Was the trial design appropriate and any deviations from the standard RCT design (individual randomization, parallel groups) accounted for in the conduct and analysis of the trial?** |  |[ ] [ ] [ ] [ ]
| **Overall appraisal:** | **Include:** [ ]  | **Exclude:** [ ]  | **Seek Further Info:** [ ]  |
| **Comments:** |