Supplemental Tables:

Table 1: An assessment on the risk of bias for included cross-sectional studies

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Reference | Is the source population representative of the population of interest? | Is the response rate adequate | Is there little missing data? | Is the survey clinically sensible? | Is there any evidence for the reliability and validity of the survey instrument? |
| Acheampong et al. 2017 | Probably yes | Probably yes | Probably yes | Definitely yes | Probably yes |
| Acheampong et al. 2018 | Probably yes | Probably yes | Probably yes | Definitely yes | Definitely yes |
| Ahmed et al. 2016 | Probably yes | Probably yes | Probably no | Probably yes | Probably no |
| Ajemjoy et al. 2017 | Probably yes | Definitely yes | Probably yes | Probably no | Probably no |
| Akachi et al. 2017 | Definitely yes | Probably yes | Definitely yes | Definitely yes | Probably yes |
| Akombi et al. 2017 | Definitely yes | Definitely yes | Probably no | Definitely yes | Definitely yes |
| Al-Delaimy et al. 2014 | Probably no | Definitely yes | Definitely yes | Probably yes | Probably yes |
| Alemu et al. 2017 | Definitely yes | Definitely yes | Probably no | Probably yes | Probably yes |
| Aluko et al. 2018 | Definitely yes | Definitely yes | Probably yes | Definitely yes | Definitely yes |
| Angoua et al. 2018 | Probably yes | Definitely yes | Definitely yes | Definitely yes | Definitely yes |
| Atalabi, Lawal, and Ipinlaye 2016a | Definitely yes | Probably yes | Probably no | Probably no | Probably no |
| Baker et al. 2018 | Probably yes | Definitely yes | Probably yes | Probably yes | Probably yes |
| Bisung & Elliot, 2018 | Definitely yes | Definitely yes | Probably yes | Definitely yes | Definitely yes |
| Bornman et al. 2012 | Probably yes | Probably yes | Probably no | Definitely yes | Definitely yes |
| Braxton & Larson, 2019 | Probably no | Probably no | Probably yes | N/A | N/A |
| Budhathoki et al. 2018 | Probably yes | Definitely yes | Probably yes | Probably yes | Probably yes |
| Cairncross et al. 2005 | Probably yes | Probably no | Probably no | Probably no | Probably no |
| Chaudhuri, 2017 | Probably no | Probably no | Probably yes | Probably yes | Probably no |
| Davis et al. 2018 | Definitely yes | Probably yes | Probably yes | Probably yes | Probably yes |
| Dendup et al. 2018 | Definitely yes | Definitely yes | Definitely yes | Definitely yes | Definitely yes |
| Desalegn et al. 2018 | Definitely yes | Definitely yes | Definitely no | Definitely yes | Definitely yes |
| Donohue et al. 2017 | Probably no | Probably no | Probably no | Definitely yes | Probably yes |
| Fuge et al. 2015 | Probably yes | Definitely yes | Definitely yes | Probably yes | Probably yes |
| Geere et al. 2018 | Probably yes | Definitely yes | Probably yes | Definitely yes | Definitely yes |
| Guy et al. 2018 | Probably yes | Definitely yes | Definitely yes | Probably yes | Probably no |
| Hall & Le, 2018 | Definitely yes | Definitely yes | Probably no | Probably yes | Probably yes |
| Hasan & Richardson 2017 | Definitely yes | Probably yes | Probably no | Probably yes | Probably yes |
| Holvoet et al. 2016 | Definitely yes | Definitely yes | Probably yes | Probably yes | Probably no |
| Hunter, 2006 | Definitely yes | Probably no | Probably no | Probably yes | Probably yes |
| Huq et al. 2010 | Probably yes | Probably no | Probably no | Definitely yes | Definitely yes |
| Inobaya et al. 2018 | Probably yes | Definitely yes | Definitely yes | Probably yes | Probably yes |
| Kapito-Tembo et al. 2009 | Definitely yes | Definitely yes | Probably no | Probably yes | Probably yes |
| Katsivo et al. 1993 | Probably yes | Definitely yes | Definitely yes | probably yes | Probably yes |
| Khan et al. 2017 | Definitely yes | Definitely yes | Probably yes | Probably yes | Probably yes |
| Kwiringira et al. 2014 | Probably yes | Probably no | Definitely yes | N/A | N/A |
| Lubon et al. 2018 | Probably yes | Probably yes | Probably yes | N/A | N/A |
| Magnin et al. 2018 | Probably no | Probably no | Probably no | N/A | N/A |
| Magnusson & Bickenback, 2019 | Probably no | Definitely yes | Probably no | Probably yes | Probably yes |
| Marinda et al. 2018 | Definitely yes | Probably no | Probably yes | Probably yes | Probably yes |
| Nasr et al. 2013 | Probably yes | Probably yes | Probably yes | Definitely yes | Definitely yes |
| Njuguna, 2019 | Definitely yes | Probably no | Probably no | Definitely yes | Definitely yes |
| Nyoka et al. 2017 | Probably yes | Definitely yes | Probably no | N/A | N/A |
| Oberoi et al. 2014 | Probably no | Definitely yes | Probably yes | Probably no | Probably no |
| Odetola & Fakorede, 2018 | Definitely yes | Probably no | Probably yes | Probably yes | Probably yes |
| O'Reilly et al. 2014 | Probably no | Probably no | Probably yes | N/A | N/A |
| Pickering et al. 2017 | Definitely yes | Probably yes | Definitely yes | Definitely yes | Definitely yes |
| Sato et al. 2016 | Probably no | Probably no | Probably no | N/A | N/A |
| Scott et al. 2018 | Probably yes | Probably yes | Probably yes | N/A | N/A |
| Ugbomoiko et al. 2009 | Definitely yes | Definitely yes | Definitely yes | Probably no | Probably no |
| Williams et al. 2015 | Probably yes | Probably yes | Definitely yes | Probably yes | Probably yes |
| Winter et al. 2018 | Probably no | Probably no | Definitely yes (0-3% missing data) | Probably yes | Probably no |
| Yeasmin et al. 2017 | Probably no | Probably no | Probably yes | N/A | N/A |

Table 2: An assessment on the risk of bias for included cohort studies

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Reference | Was selection of exposed and non-exposed cohorts drawn from the same population? | Can we be confident in the assessment of exposure? | Can we be confident that the outcome of interest was not present at the start of the study? | Did the study match exposed and unexposed for all variables that are associated with the outcome of interest or did the statistical analysis adjust for these prognostic variables? | Can we be confident tin the assessment of the presence or absence of prognostic factors? | Can we be confident in the assessment of the outcome? | Was the follow-up of the cohorts adequate | Were co-interventions similar between groups? |
| Prado et al. 2019 | Definitely yes | Definitely yes | Definitely yes | Definitely yes | Definitely yes | Definitely yes | Probably yes | Probably yes |
| West et al. 1996 | Probably yes | Definitely yes | Definitely yes | Definitely yes | Probably yes | Probably yes | Probably yes | Probably yes |
| Rose et al. 2006 | Definitely yes | Definitely yes | Probably yes | Probably yes | Probably no | Probably yes | Probably yes | Probably yes |
| Doherty et al. 2007 | Definitely yes | Definitely yes | Definitely yes | Probably yes | Probably yes | Definitely yes | Probably yes | Probably yes |
| Wilson & Chandler, 1993 | Probably yes | Probably yes | Probably yes | Definitely no | Definitely no | Probably yes | Probably yes | Probably no |
| Gaspar et al. 2017 | Probably yes | Probably yes | Probably yes | Probably yes | Probably yes | Definitely yes | Probably yes | Probably yes |

Table 3: An assessment on the risk of bias for included randomized control trials

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Reference | Was the allocation sequence adequately generated? | Was the allocation adequately concealed? | Were participants blinded? | Were healthcare providers blinded? | Were data collectors blinded? | Were outcome assessors blinded? | Were data analysts blinded? | Was loss to follow-up infrequent? | Are reports of the study free of selective outcome reporting? | Was the study apparently free of other problems that could put it at a risk of bias? |
| Alzaher et al. 2018 | Probably yes (cluster randomized approach) | Probably no (hands-on intervention) | Definitely no | Definitely no | Probably no | Probably no | Probably no | Definitely yes (no loss to follow-up) | Probably yes | Probably yes |