Additional Table 3: Quality assessment scores for quantitative studies. Yes- 2, Partial- 1, No- 0, Not applicable-NA.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Question/ objective** | **Study design** | **Subject selection** | **Subject characteristics** | **Random allocation** | **Investigator blinding** | **Subject blinding** | **Outcome measure** | **Sample size** | **Data analysis** | **Estimate of variance** | **Control for confounding** | **Result reporting** | **Conclusions** |
| Agbozo *et al.* (2018)(26) | 2 | 2 | 2 | 2 | NA | NA | NA | 2 | 2 | 2 | 0 | 0 | 2 | 1 |
| Amenyah *et al.* (2016)(27) | 2 | 2 | 2 | 2 | NA | NA | NA | 2 | 2 | 2 | 2 | 1 | 2 | 2 |
| Aounalla-Sikhiri *et al.* (2011)(28) | 2 | 2 | 2 | 2 | NA | NA | NA | 2 | 2 | 2 | 1 | 2 | 2 | 1 |
| Becquey *et al.* (2010)(29) | 2 | 2 | 2 | 1 | NA | NA | NA | 2 | 2 | 2 | 1 | 2 | 2 | 2 |
| \*Charlton *et al.* (2004)(59) | 2 | 2 | 1 | 2 | N/A | N/A | N/A | 1 | N/A | 0 | N/A | N/A | 2 | 2 |
| Cisse-Egbuonye *et al.* (2017)(30) | 2 | 2 | 2 | 2 | NA | NA | NA | 1 | 2 | 2 | 2 | 2 | 2 | 1 |
| Codjoe *et al.* (2016)(31) | 2 | 2 | 1 | 2 | NA | NA | NA | 2 | 2 | 2 | 2 | 2 | 2 | 1 |
| El Ansari *et al.* (2015)(32) | 2 | 2 | 1 | 2 | NA | NA | NA | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Feeley *et al.* (2013)(33) | 1 | 2 | 1 | 2 | NA | NA | NA | 1 | 2 | 2 | 1 | 2 | 2 | 2 |
| Fokeena *et al.* (2012)(34) | 2 | 2 | 1 | 1 | NA | NA | NA | 2 | 1 | 2 | 2 | 0 | 2 | 2 |
| Glozah *et al.* (2015)(35) | 2 | 1 | 1 | 2 | NA | NA | NA | 1 | 2 | 2 | 2 | 2 | 2 | 1 |
| Gitau *et al.* (2014)(36) | 2 | 2 | 2 | 1 | NA | NA | NA | 2 | 1 | 2 | 0 | 0 | 2 | 1 |
| Hattingh *et al.* 2006(37); 2011(38) ; 2014(39) | 1 | 2 | 2 | 2 | N/A | N/A | N/A | 1 | 1 | 2 | 1 | N/A | 2 | 2 |
| Jafri *et al.* (2013)(40) | 2 | 2 | 2 | 0 | N/A | N/A | N/A | 1 | 1 | 2 | 0 | 0 | 2 | 2 |
| Kiboi *et al.* (2017)(41) | 1 | 2 | 2 | 2 | NA | NA | NA | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Landais *et al.* 2012(42);(2015)(43) | 2 | 2 | 2 | 2 | NA | NA | NA | 2 | 2 | 2 | 2 | 1 | 2 | 1 |
| Lopez *et al.* (2012)(44) | 2 | 2 | 1 | 2 | NA | NA | NA | 2 | 2 | 2 | 0 | 0 | 2 | 0 |
| Mayen *et al.* (2016)(45) | 1 | 2 | 2 | 2 | NA | NA | NA | 1 | 2 | 2 | 1 | 0 | 2 | 0 |
| Mbochi *et al.* (2012)(46) | 2 | 1 | 2 | 1 | N/A | N/A | N/A | 1 | 2 | 2 | 1 | 0 | 1 | 2 |
| Mogre *et al.* (2013)(47) | 2 | 2 | 2 | 2 | N/A | N/A | N/A | 1 | 1 | 2 | 0 | N/A | 2 | 2 |
| Njelekela *et al.* (2011)(48) | 1 | 2 | 2 | 1 | NA | NA | NA | 2 | 2 | 2 | 1 | 0 | 2 | 1 |
| Onyririuka *et al*. (2013)(49) | 2 | 2 | 2 | 2 | NA | NA | NA | 2 | 2 | 2 | 2 | 0 | 2 | 2 |
| Peltzer *et al.* (2012)(50) | 2 | 2 | 1 | 2 | NA | NA | NA | 2 | 2 | 2 | 0 | 0 | 2 | 2 |
| \*Pradeilles (2015)(60) | 2 | 2 | 2 | 2 | NA | NA | NA | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Savy *et al.* (2008)(51) | 2 | 2 | 2 | 2 | N/A | N/A | N/A | 2 | 1 | 2 | 2 | 2 | 2 | 2 |
| Sodjinou *et al.* 2008(52); 2009(53) | 2 | 2 | 2 | 2 | N/A | N/A | N/A | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Soualem *et al.* (2012)(54) | 2 | 2 | 2 | 2 | NA | NA | NA | 2 | 2 | 2 | 2 | 0 | 2 | 1 |
| Steyn *et al.* (2011)(55) | 2 | 2 | 2 | 1 | NA | NA | NA | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Van Zyl *et al.* (2010)(56) | 2 | 1 | 1 | 2 | N/A | N/A | N/A | 2 | 2 | 2 | N/A | 0 | 2 | 2 |
| Waswa, 2011(57) | 2 | 2 | 2 | 2 | N/A | N/A | N/A | 1 | 1 | 2 | 2 | 1 | 2 | 2 |
| Zeba et al. (2014)(58) | 2 | 2 | 2 | 2 | NA | NA | NA | 2 | 2 | 2 | 2 | 1 | 2 | 2 |

**\***mixed methods study- scored here for quantitative component. Quality appraisal was conducted using a validated quality assessment tool(13).