**Supplementary Table 4** Assessment of methodological quality for included cross-sectional studies

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|   | **First author surname** | **Year of publication** | **Q1** | **Q2** | **Q3** | **Q4** | **Q5** | **Q6** | **Q7** | **Q8** | **Quality of study** |
| 1 | Achila [16] | 2020 | Y | Y | N | Y | N | N | Y | Y | Moderate |
| 2 | Adejumo [17] | 2012 | Y | N | U | Y | N | N | U | Y | Poor |
| 3 | Adeniyi [18] | 2016 | Y | Y | Y | Y | N | Y | Y | Y | Good |
| 4 | Afolabi [19] | 2018 | Y | N | Y | Y | N | N | Y | Y | Moderate |
| 5 | Akabwai [20] | 2016 | Y | Y | Y | Y | N | N | Y | Y | Moderate |
| 6 | Akpalu [21] | 2018 | Y | N | Y | Y | Y | Y | Y | Y | Good |
| 7 | Anioke [22] | 2019 | Y | Y | Y | Y | Y | Y | Y | Y | Good |
| 8 | Ayele [25] | 2019 | Y | Y | Y | Y | N | N | Y | Y | Moderate |
| 9 | Belay [26] | 2017 | Y | Y | U | Y | N | Y | N | Y | Moderate |
| 10 | BeLue [27] | 2016 | Y | Y | Y | Y | N | N | Y | Y | Moderate |
| 11 | Biadgo B [28] | 2018 | Y | Y | Y | Y | N | N | N | Y | Moderate |
| 12 | Biru [29] | 2017 | Y | N | U | Y | N | N | U | Y | Poor |
| 13 | Blum [30] | 2018 | Y | Y | Y | Y | N | N | Y | Y | Moderate |
| 14 | Botchway [31] | 2021 | Y | Y | Y | Y | Y | Y | Y | Y | Good |
| 15 | Camara [32] | 2015 | Y | Y | U | Y | N | N | Y | Y | Moderate |
| 16 | Dagnew [33] | 2017 | Y | Y | Y | Y | N | N | N | Y | Moderate |
| 17 | Demoz [34] | 2019 | Y | Y | Y | Y | N | N | U | Y | Moderate |
| 18 | Doglikuu [35] | 2021 | N | Y | Y | Y | N | N | Y | Y | Moderate |
| 19 | Eticha [36] | 2016 | Y | Y | U | Y | N | N | U | Y | Poor |
| 20 | Fekadu [39] | 2019 | Y | Y | Y | Y | N | N | N | Y | Moderate |
| 21 | Fseha [40] | 2017 | Y | Y | Y | Y | N | N | N | Y | Moderate |
| 22 | Gebremedhin [42] | 2019 | Y | Y | Y | Y | N | N | N | Y | Moderate |
| 23 | Id [44] | 2021 | Y | Y | Y | Y | N | N | N | Y | Moderate |
| 24 | Inih [45] | 2018 | N | N | Y | Y | N | N | Y | Y | Poor |
| 25 | Kalain [46] | 2020 | Y | Y | U | Y | N | N | U | Y | Poor |
| 26 | Kamuhabwa [47] | 2014 | Y | Y | N | Y | N | Y | N | Y | Moderate |
| 27 | Kassahun [48] | 2016 | Y | Y | Y | Y | N | N | N | Y | Moderate |
| 28 | Kefale [49] | 2019 | Y | Y | Y | Y | N | N | N | Y | Moderate |
| 29 | Khoza [50] | 2018 | Y | Y | Y | Y | N | N | Y | Y | Moderate |
| 30 | Kimando [51] | 2017 | Y | Y | Y | Y | N | N | Y | Y | Moderate |
| 31 | Mashele [56] | 2019 | Y | Y | Y | Y | N | N | Y | Y | Moderate |
| 32 | Mobula [58] | 2018 | Y | Y | Y | Y | N | N | Y | Y | Moderate |
| 33 | Mohammed [60] | 2020 | Y | Y | Y | Y | N | N | N | Y | Moderate |
| 34 | Mphwanthe G[61] | 2020 | N | N | Y | Y | Y | Y | Y | Y | Moderate |
| 35 | Mphwantwe[62] | 2020 | Y | Y | Y | Y | N | N | Y | Y | Moderate |
| 36 | Mwavua [64]  | 2016 | Y | Y | Y | Y | N | N | Y | Y | Moderate |
| 37 | Mwita [65] | 2019 | Y | Y | Y | Y | N | N | U | Y | Moderate |
| 38 | Noor [66] | 2017 | Y | Y | Y | Y | N | N | Y | Y | Moderate |
| 39 | Omar [67] | 2018 | Y | Y | Y | Y | N | N | U | Y | Moderate |
| 40 | Osuji [68] | 2018 | Y | Y | Y | Y | N | N | Y | Y | Moderate |
| 41 | Otieno [69] | 2017 | Y | Y | Y | Y | N | N | Y | Y | Moderate |
| 42 | Oyewole [70] | 2019 | N | Y | N | Y | N | N | Y | Y | Poor |
| 43 | Ramkisson [72] | 2016 | Y | N | N | Y | N | Y | Y | Y | Moderate |
| 44 | Rwegerera [73] | 2019 | Y | Y | N | Y | N | N | Y | Y | Moderate |
| 45 | Shimels [75] | 2018 | Y | Y | Y | Y | N | N | N | Y | Moderate |
| 46 | Tefera [77] | 2020 | Y | Y | Y | Y | N | N | N | Y | Moderate |
| 47 | Tekalegn [78] | 2018 | Y | Y | Y | Y | N | Y | N | Y | Moderate |
| 48 | Teklay [79] | 2013 | Y | Y | Y | Y | N | N | N | Y | Moderate |
| 49 | Thuita [80] | 2019 | Y | N | Y | Y | N | N | Y | Y | Moderate |
| 50 | Woldu [83] | 2014 | Y | Y | Y | Y | N | N | N | Y | Moderate |
| 51 | Yigazu [85] | 2017 | Y | Y | Y | Y | N | N | N | Y | Moderate |
| 52 | Yimam [86] | 2020 | Y | Y | Y | Y | N | N | N | Y | Moderate |
| 53 | Yosef [87] | 2021 | Y | Y | Y | Y | N | N | N | Y | Moderate  |
| 54 | Abera [88] | 2022 | Y | Y | Y | Y | N | Y |  Y | Y | Good |
| 55 | Abebe [89] | 2022 | Y | Y | Y | Y | N | N | N | Y | Moderate |
| All (%) | 93 | 85 | 80 | 100 | 7 | 18 | 51 | 100 |   |

Legend: Q1. Were the criteria for inclusion in the sample clearly defined? Q2. Were the study subjects and the setting described in detail? Q3. Was the exposure measured in a valid and reliable way? Q4. Were objective, standard criteria used for measurement of the condition? Q5. Were confounding factors identified? Q6. Were strategies to deal with confounding factors stated? Q7. Were the outcomes measured in a valid and reliable way? Q8. Was appropriate statistical analysis used? Y: Yes, N: No, U: Unknown.