Table 4. Summary of risk of bias assessment.

| Name | Ref | External validity |  |  |  | Internal validity |  |  |  |  |  | SUM |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |  |
| Abrahao | 37 | H | L | L | L | L | L | L | L | L | L | L |
| Adane | 38 | H | L | L | L | L | L | L | L | L | H | H |
| Akhtar | 39 | H | H | H | L | L | L | L | L | L | L | H |
| Al-Darraji | 40 | H | L | L | L | L | L | L | L | L | L | L |
| Alemayehu | 41 | H | H | H | H | L | L | L | L | L | L | H |
| Ali | 42 | H | L | L | H | L | L | L | L | L | L | M |
| Andre | 43 | H | H | H | H | L | H | L | L | L | L | H |
| Anger | 44 | H | L | L | L | L | L | L | L | L | L | L |
| Aunsborg | 45 | H | L | L | L | L | L | H | L | L | L | M |
| Aye | 46 | H | H | H | H | L | L | L | H | L | L | H |
| Ayles \#1 | 47 | L | L | L | L | L | H | L | H | L | L | M |
| Ayles \#2 | 48 | L | L | L | L | L | L | L | L | L | L | L |
| Badiaga | 49 | H | L | L | H | L | L | L | L | L | L | M |
| Balcha | 50 | H | L | L | L | L | L | L | L | L | H | M |
| Banu \#1 | 51 | H | L | H | H | L | L | H | L | L | L | H |
| Banu \#2 | 52 | H | L | H | L | L | L | L | L | L | L | M |
| Banu \#3 | 53 | H | L | L | L | L | L | L | L | L | L | L |
| Bassett | 54 | H | L | L | L | L | L | L | L | L | L | L |
| Berhe | 55 | L | L | L | H | L | L | L | L | L | L | L |
| Beyanga | 56 | H | H | L | H | L | H | L | L | L | L | H |
| Bhat | 57 | H | L | L | L | L | L | L | L | L | L | H |
| Bjerregaard-Andersen | 58 | H | L | L | L | L | H | L | L | L | L | M |
| Bogdanova | 59 | L | L | H | H | L | L | L | H | L | L | M |
| Borgen | 60 | H | H | H | L | L | L | L | H | L | L | H |
| Bozorgmehr | 61 | H | L | L | L | L | L | L | H | L | L | M |
| Carbone | 62 | H | H | L | L | L | H | L | L | L | L | M |
| Cavany | 63 | L | L | L | L | L | L | L | H | L | L | L |
| Chen C | 64 | H | L | L | L | L | L | L | H | L | L | M |
| Chen JO | 65 | H | L | L | L | L | L | L | H | L | L | M |
| Cheng | 26 | H | L | H | H | L | L | L | H | L | L | H |
| Chheng | 66 | H | L | H | L | L | L | L | L | L | L | M |
| China Tuberculosis Control Collaboration | 67 | L | L | L | L | L | L | L | L | L | L | L |
| Corbett \#1 | 68 | H | L | L | L | L | L | L | L | L | L | L |
| Corbett \#2 | 69 | H | L | L | L | L | L | L | L | L | L | L |
| Corbett \#3 | 70 | H | L | H | L | L | L | L | L | L | L | H |
| Cowger | 71 | L | L | L | H | L | L | L | L | L | L | L |
| Crepet | 72 | L | L | L | H | L | L | L | L | L | L | L |


| Creswell | 73 | H | L | H | L | L | L | L | L | L | L | M |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Dabhi | 74 | H | L | L | H | L | L | L | L | L | L | M |
| Day | 75 | H | L | L | L | L | L | L | L | L | L | H |
| Delva | 76 | L | L | L | H | L | L | L | L | L | L | L |
| Dememew | 77 | L | L | L | L | L | L | L | L | L | L | L |
| Demissie | 78 | H | L | L | H | L | H | L | L | L | L | H |
| den Boon | 79 | H | L | L | H | L | H | L | L | L | L | H |
| Deribew | 80 | H | L | H | H | L | H | H | L | L | L | H |
| Dey | 81 | H | L | L | H | H | L | L | H | L | L | H |
| Dierberg | 82 | H | H | L | H | L | L | L | L | L | L | M |
| Dolla | 83 | H | L | L | L | L | L | L | L | L | L | L |
| Elden | 84 | H | L | L | H | L | H | L | L | L | L | M |
| Erkens | 85 | L | L | L | L | L | L | L | L | L | L | L |
| Fatima \#1 | 86 | L | L | H | H | L | L | L | L | L | L | M |
| Fatima \#2 | 87 | H | L | L | L | L | L | L | L | L | L | L |
| Fournet | 88 | H | L | L | L | L | L | L | L | L | L | L |
| Fox | 89 | L | L | L | L | L | L | L | L | H | L | L |
| Gashu | 90 | H | L | L | L | L | L | L | L | L | L | L |
| Goetsch | 91 | H | H | H | H | L | L | L | L | L | L | H |
| Gopi | 92 | H | L | L | L | L | H | L | L | L | L | M |
| Gounder | 93 | H | L | L | H | L | H | L | L | L | L | M |
| Griffiths | 22 | H | L | L | H | L | L | L | L | L | L | M |
| Gupta | 94 | H | L | L | H | L | H | L | L | L | L | H |
| Habeenzu | 95 | L | L | H | H | L | L | L | L | L | L | M |
| Habib | 96 | H | L | L | L | L | L | L | L | L | L | L |
| Hamusse | 97 | H | L | L | L | L | L | L | L | L | H | M |
| Harling | 98 | H | L | L | H | L | L | L | H | L | L | M |
| Hoa | 99 | L | L | L | L | L | L | L | L | L | L | L |
| Horie | 100 | H | L | L | L | L | L | L | L | L | L | L |
| Huang | 101 | H | L | L | L | L | L | L | L | L | L | L |
| Imsanguan | 102 | H | L | L | H | L | L | L | L | L | L | M |
| Jackson-Sillah | 103 | H | L | L | L | L | L | L | L | L | L | L |
| James | 104 | H | L | L | H | L | L | L | L | L | L | M |
| Jerene | 105 | L | L | L | L | L | L | L | L | L | L | L |
| Jimenes-Fuentes | 106 | H | L | L | L | L | L | L | L | L | L | L |
| John | 107 | H | L | H | H | L | H | L | L | L | L | H |
| Kakinda | 108 | L | L | L | H | L | L | L | L | L | L | L |
| Kali | 109 | H | L | L | H | L | L | L | L | L | L | M |
| Kamenska | 110 | L | L | L | H | L | L | L | L | L | L | L |
| Karamagi | 111 | H | H | H | H | L | L | L | H | L | L | H |
| Karki | 112 | H | L | L | H | L | H | L | L | L | L | M |
| Kebede | 113 | L | L | L | L | L | L | L | L | L | L | L |
| Kempker | 114 | H | L | L | H | L | L | L | L | L | L | M |
| Khaparde | 115 | H | L | L | L | L | L | L | L | L | L | L |
| Khatana | 116 | H | L | L | H | L | H | L | L | L | L | M |
| Kigozi | 117 | H | L | L | L | L | L | L | L | L | L | L |


| Kilacaslan | 118 | H | H | L | L | H | L | H | H | H | L | H |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Kimerling | 119 | H | L | L | H | L | L | L | H | L | L | M |
| Kirkpatrick | 120 | H | H | L | H | L | L | L | L | L | L | H |
| Kranzer | 121 | H | H | H | L | L | L | L | L | L | L | M |
| Lawn | 122 | H | H | L | L | L | L | L | H | L | L | M |
| Lebina | 123 | H | L | L | H | L | H | L | H | L | L | H |
| Lee | 124 | L | H | H | H | L | L | L | H | L | L | H |
| Legesse | 125 | H | L | L | H | L | L | L | L | L | L | M |
| Leung | 126 | H | L | L | L | L | L | L | L | L | L | L |
| Lewis | 127 | H | L | L | L | L | L | L | L | L | L | M |
| Little | 128 | H | L | L | L | L | L | L | L | L | L | L |
| Lorent | 129 | H | L | L | L | H | L | L | H | L | L | M |
| Mabuto | 130 | H | L | L | H | L | L | L | L | L | L | M |
| Manzardo | 131 | H | H | H | H | L | H | H | H | H | L | H |
| Marks | 28 | L | L | L | L | L | L | L | L | L | L | L |
| Masur | 132 | H | L | L | L | L | L | L | L | L | L | L |
| Matee | 133 | H | L | H | H | L | L | L | L | L | L | H |
| Merid \#1 | 134 | H | L | L | L | L | L | L | L | L | L | L |
| Merid \#2 | 135 | H | L | L | L | L | L | L | L | L | L | L |
| Middelkoop | 136 | H | L | L | L | L | L | L | L | L | L | L |
| Migambi | 137 | L | L | L | L | L | L | L | L | L | L | L |
| Miller | 138 | H | L | L | H | L | L | L | L | L | L | M |
| Mor \#1 | 139 | H | H | L | H | L | L | L | L | L | L | M |
| Mor \#2 | 140 | H | L | L | L | L | L | L | L | L | L | L |
| Morishita | 141 | H | L | L | H | L | L | L | H | L | L | M |
| Mugisha | 142 | H | L | L | L | L | L | L | L | L | L | L |
| Mwansa-Kamafwile | 143 | H | H | H | H | L | H | H | L | L | L | H |
| Nachega | 144 | H | H | H | H | L | L | H | L | L | L | H |
| Nair | 145 | H | L | L | L | L | L | L | L | L | L | L |
| Ngadaya | 146 | H | L | H | H | L | H | L | L | L | L | H |
| Noeske | 147 | H | L | L | L | L | H | L | L | L | L | M |
| Nogueira | 148 | H | L | L | L | L | L | H | L | L | L | M |
| Ogbudebe | 149 | L | L | L | H | L | L | L | L | L | L | L |
| Ohene | 150 | H | L | L | L | L | L | L | L | L | L | L |
| Oshi | 151 | H | H | H | H | L | L | L | L | L | L | H |
| Page-Shipp | 152 | H | H | H | H | L | H | L | L | L | L | H |
| Pelissari | 153 | H | L | L | L | L | L | L | L | L | L | L |
| Plant | 154 | H | L | L | L | L | L | L | L | L | L | L |
| Pontarelli | 155 | H | L | L | L | L | L | L | L | L | H | M |
| Qian | 156 | H | L | H | H | L | L | L | L | L | L | H |
| Rao \#1 | 157 | H | L | L | H | L | H | L | L | L | L | H |
| Rao \#2 | 158 | L | L | L | L | L | L | L | L | L | L | L |
| Rao \#3 | 159 | H | L | L | L | L | L | L | L | L | L | L |
| Reddy | 160 | H | H | H | H | L | L | L | L | L | L | H |
| Rekha Devi | 161 | H | L | L | H | L | H | L | L | L | L | M |
| Rivera | 162 | H | L | L | L | L | L | L | L | L | L | L |


| Romero-Sandoval | 163 | H | L | L | H | L | H | L | L | L | L | H |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Rumman | 23 | H | L | H | H | L | H | H | L | L | L | H |
| Sanaie | 164 | L | H | L | H | L | H | L | L | L | L | M |
| Sanchez \#1 | 165 | H | L | L | L | L | L | L | L | L | L | L |
| Sanchez \#2 | 166 | H | L | L | L | L | L | L | L | L | L | L |
| Santha | 167 | H | L | H | L | L | H | L | L | L | L | H |
| Santos | 168 | H | L | L | L | L | L | L | L | L | L | L |
| Saunders | 169 | H | L | L | L | H | H | L | H | H | H | H |
| Schepisi | 170 | H | H | H | H | L | L | L | H | L | L | H |
| Sculier | 171 | H | L | L | L | L | L | L | L | L | L | M |
| Sekandi \#1 | 172 | H | L | H | H | L | L | L | L | L | L | M |
| Sekandi \#2 | 173 | H | L | H | L | L | H | L | L | L | L | M |
| Sengai | 174 | H | H | H | H | L | L | L | H | L | L | H |
| Shah \#1 | 175 | L | L | L | L | L | H | L | L | L | L | L |
| Shah \#2 | 176 | H | H | H | H | L | H | L | L | L | L | H |
| Shapiro | 177 | H | L | L | L | L | L | L | L | L | L | L |
| Shargie | 178 | H | L | L | H | H | H | L | L | L | L | H |
| Shenoi | 179 | H | H | H | H | L | L | L | L | L | L | H |
| Shriraam | 180 | H | L | L | L | L | H | L | L | L | L | M |
| Soemantri | 181 | L | L | L | L | L | H | H | L | L | L | M |
| Ssemmondo | 182 | H | L | L | L | L | H | L | L | L | L | M |
| Su | 183 | H | L | L | L | L | L | L | L | L | L | L |
| Tefera | 184 | H | L | H | L | L | L | L | L | L | L | M |
| Thind | 185 | H | L | L | H | L | L | L | L | L | L | L |
| Thorson | 186 | H | L | L | H | H | H | H | L | L | L | H |
| Tripodi | 187 | H | H | H | H | L | H | H | L | L | L | H |
| Tupasi | 188 | L | L | L | H | L | L | L | L | L | L | L |
| Van Duc | 189 | H | L | L | H | L | H | L | L | L | L | H |
| Verver | 190 | H | L | H | H | L | L | L | L | L | L | M |
| Vieira | 191 | H | L | L | L | L | L | H | L | L | L | L |
| Vijayageetha | 192 | H | H | L | H | L | L | L | L | L | L | M |
| Vo | 193 | H | L | L | H | L | L | L | H | L | L | M |
| Volkmann | 194 | H | L | H | H | L | H | H | H | L | L | H |
| Vyas | 195 | H | H | L | H | L | H | L | H | L | L | H |
| Wali | 196 | H | L | L | L | L | L | L | L | L | L | L |
| Wang | 197 | H | L | L | L | L | L | L | L | L | L | L |
| Wei | 198 | H | H | L | H | L | L | L | L | L | L | M |
| Weinrich | 199 | H | L | L | L | L | L | L | L | L | L | L |
| Whalen | 200 | H | L | L | H | L | L | H | L | L | L | M |
| Wood | 201 | H | L | L | L | L | L | L | L | L | L | L |
| Wu | 202 | H | L | L | L | L | H | H | H | L | L | H |
| Yassin | 203 | H | L | L | L | L | L | L | L | L | L | L |
| Yimer | 204 | H | L | L | H | H | H | L | L | L | L | H |
| Yoon | 205 | H | L | L | L | L | L | L | L | L | L | L |
| Zachariah | 206 | H | L | L | H | L | L | H | L | L | L | M |
| Zaman | 207 | H | L | L | L | H | H | H | L | L | L | H |


| Zhang 208 | H | L | L | H | L | $H$ | $L$ | L | L | L | M |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| High, n (\%) | 148 | 31 | 41 | 82 | 8 | 44 | 18 | 27 | 4 | 5 | 51 |  |
|  |  | $(84)$ | $(18)$ | $(23)$ | $(47)$ | $(5)$ | $(25)$ | $(10)$ | $(15)$ | $(2)$ | $(3)$ | $(29)$ |

$H=h i g h$ risk; $M=m o d e r a t e ~ r i s k ; ~ L=l o w ~ r i s k . ~$
*mean total points

1: Was the study's target population a close representation of the national population in relation to relevant variables?

2: Was the sampling frame a true or close representation of the target population?
3: Was some form of random selection used to select the sample, OR was a census undertaken?
4: Was the likelihood of nonresponse bias minimal?
5: Were data collected directly from the subjects (as opposed to a proxy)?
6: Was an acceptable case definition used in the study?
7: Was the study instrument that measured the parameter of interest shown to have validity and reliability?
8: Was the same mode of data collection used for all subjects?
9: Was the length of the shortest prevalence period for the parameter of interest appropriate?
10: Were the numerator(s) and denominator(s) for the parameter of interest appropriate? ${ }^{16}$

