| | Assessment of risk of bias of all included studies in the review | | | | | | | | | | | |
|-----|--|-------------------------------|--|------------------------------|--|-----------------------------------|---|-----------------------------|---------------------------------|---------------------------|-----------------------|----------------------|
| S.n | Study ID/Authors | Inclusi on defined ? | Subject s and setting describe d | Exposu re measur ed | Objective criteria used for measure ment | confoun ders identifie d | strategie s used to deal confoun ders | outco me measu red | Statist ical Analy sis | Overall assessmen t | Final decisi on | quali ty score |
| 1 | Birhanu, et al. 2021 | yes | yes | yes | yes | no | yes | yes | yes | low risk of bais | includ ed | 7 |
| 2 | Mersha, et al. 2021 | yes | yes | yes | yes | no | yes | yes | yes | low risk of bais | includ ed | 7 |
| 3 | Baye, et al. 2021 | no | yes | yes | yes | no | yes | yes | yes | low risk of bais | ed | 7 |
| 4 | Kassie, et al. 2020 | no | yes | yes | yes | no | yes | yes | yes | low risk of bais | includ ed | 6 |
| 5 | Jemal, et al. 2021 | yes | yes | yes | yes | no | yes | yes | yes | low risk of bais | includ ed | 6 |
| 6 | Birihane, et al. 2020 | no | yes | yes | yes | no | no | yes | yes | low risk of bais | includ ed | 7 |
| 7 | Tadesse, et al. 2020 | yes | yes | yes | yes | no | no | yes | yes | low risk of bais | includ ed | 6 |
| 8 | Hailu, et al. 2021 | yes | yes | yes | yes | no | yes | yes | yes | low risk of bais | includ ed | 7 |
| 9 | Zenbaba, et al. 2021 | no | yes | yes | yes | no | yes | yes | yes | low risk of bais | includ ed | 6 |
| 10 | Tsegaye, et al. 2021 | no | yes | yes | yes | no | yes | yes | yes | low risk of bais | includ ed | 6 |
| 11 | Mindaye, et al. 2021 | no | yes | yes | yes | no | yes | yes | yes | low risk of bais | includ ed | 6 |
| 12 | Gebremeskal , et al. 2020 | no | yes | yes | no | no | yes | yes | yes | low risk of bais | includ ed | 6 |
| 13 | Bitew, et al. 2021 | no | yes | yes | yes | no | yes | yes | yes | low risk of bais | includ ed | 6 |

| 14 | Mulu, 2020 | yes | yes | yes | yes | no | yes | yes | yes | low risk of bais | includ ed | 7 |
|----|--------------------------|---------|-----|-----|-----|----|-----|-----|-----|---------------------|--------------|---|
| 15 | Adola, et al. 2021 | no | yes | yes | yes | no | yes | yes | yes | low risk of bais | includ ed | 6 |
| 16 | Gebremedhin, et al. 2021 | no | yes | yes | yes | no | yes | yes | yes | low risk of bais | includ ed | 6 |
| 17 | Shibabaw, 2021 | no | yes | yes | yes | no | yes | yes | yes | low risk of bais | includ ed | 6 |
| 18 | Tadesse, et al. 2020 | yes | yes | yes | yes | no | no | yes | yes | low risk of bais | includ ed | 7 |
| 19 | Etafa, et al. 2021 | unclear | yes | yes | yes | no | yes | yes | yes | low risk of bais | includ ed | 6 |
| 20 | Walle, et al. 2021 | no | yes | yes | yes | no | yes | yes | yes | low risk of bais | includ ed | 6 |
| 21 | Tesfaye, et al. 2021 | no | yes | no | yes | no | yes | yes | yes | low risk of bais | includ ed | 6 |
| | | | | | | | | | | | | |

Risk of bias assessment tool. Yes (low risk); No (high risk); Unclear(high rik)

- 1. Were the criteria for inclusion in the sample clearly defined?
- 2. Were the study subjects and the setting described in detail?
- 3. Was the exposure measured in a valid and reliable way?
- 4. Were objective, standard criteria used for measurement of the condition?
- 5. Were confounding factors identified?
- 6. Were strategies to deal with confounding factors stated?
- 7. Were the outcomes measured in a valid and reliable way?
- 8. Was appropriate statistical analysis used?

The overall risk of bias was then scored according to the number of high risk of bias per study: low (\leq 2), moderate (3–4), and high (\geq 5).