Additional file 3a: Quality assessment of studies using JBI's critical appraisal tools designed for cross-sectional studies

Studies	JBI's critical appraisal questions									Overall score	Include
	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9		
Ali et al., 2019	Y	Y	Y	Y	Y	Y	Y	Y	Y	9	✓
Animaw et al., 2014	Y	Y	Y	Y	Y	Y	Y	Y	Y	9	✓
CSA ,2019	Y	N		U	Y	Y	Y	Y	Y	7	✓
CSA ,2016	Y	N		Y	Y	Y	Y	Y	Y	7	✓
Debie & Lakew, 2020	Y	N	Y	Y	Y	Y	N	Y	Y	7	✓
Deressa et al., 2020	N	N	N	Y	U	Y	Y	Y	Y	5	✓
Ebot, 2015	Y	Y	Y	Y	Y	Y	U	N	Y	7	✓
Etana & Deressa, 2012	Y	N	N	Y	Y	Y	U	U	Y	5	✓
Girmay & Dadi, 2019	Y	Y	Y	N	Y	Y	U	Y	Y	7	✓
Gualu & Dilie, 2017	Y	U	Y	N	Y	Y	Y	Y	Y	7	✓
Hailu et al., 2019	Y	Y	Y	Y	Y	Y	Y	Y	N	8	✓
Kassahun et al., 2015	Y	Y	Y	Y	Y	Y	N	Y	Y	8	✓
Kidane & Tekie, 2003	Y	N	N	Y	Y	Y	U	U	Y	5	✓
Kidanne et al., 2019	N	Y	U	Y	Y	Y	Y	Y	Y	7	✓
Kinfe et al., 2019	Y	N	Y	N	Y	Y	Y	Y	Y	7	✓
Lakew et al., 2015	N	N	Y	Y	Y	Y	Y	Y	Y	7	✓
Legesse & Dechasa, 2015	Y	Y	Y	Y	Y	Y	Y	Y	Y	9	✓
Mekonnen et al., 2019	Y	Y	Y	Y	Y	Y	Y	Y	Y	9	✓
Meleko et al., 2017	Y	N	N	Y	Y	Y	Y	Y	Y	7	✓
Negero MG eat al., 2019	Y	Y	Y	Y	Y	Y	Y	Y	Y	9	✓
Mesfin, 2015	Y	Y	Y	Y	Y	U	Y	Y	Y	8	✓
Mohammed & Atomsa, 2013	N	Y	U	Y	Y	Y	N	Y	Y	6	✓
Mohamud et al., 2014	Y	Y	N	Y	Y	Y	U	Y	Y	7	✓
Okwaraji et al., 2012	Y	Y	Y	Y	Y	Y	U	N	Y	7	✓
Porth et al., 2020	Y	Y	Y	Y	Y	Y	U	N	Y	7	✓
Tamirat & Sisay, 2019	Y	N	Y	Y	Y	N	Y	Y	Y	7	✓
Tefera et al., 2018	N	Y	Y	Y	Y	U	Y	Y	Y	7	✓
Tesfaye et al., 2018	Y	Y	Y	Y	Y	Y	U	N	Y	7	✓
Tessema et al., 2019	Y	N	U	Y	Y	N	Y	Y	Y	6	✓
Tolera, 2014	Y	U	Y	Y	Y	Y	U	Y	Y	7	✓

Studies	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Overall score	Include
Wado et al., 2014	Y	U	U	Y	Y	Y	Y	Y	Y	7	✓
Workina et al., 2019	Y	N	N	Y	Y	Y	Y	Y	Y	7	✓
Yismaw et al., 2019	Y	Y	N	Y	Y	Y	Y	Y	Y	8	✓

Y =Yes, N= No, U= Unclear, Q= Question. Overall score is calculated by counting the number of Ys in each row

Q1 = was the sample frame appropriate to address the target population? Q2 = were study participants sampled in an appropriate way? Q3 = was the sample size adequate? Q4 = were the study subjects and the setting described in detail? Q5 = was the data analysis conducted with sufficient coverage of the identified sample? Q6 = were valid methods used for the identification of the condition? Q7 = was the condition measured in a standard, reliable way for all participants? Q8 = was there appropriate statistical analysis? Q9 = was the response rate adequate, and if not, was the low response rate managed appropriately?

Additional file 3b: Quality assessment of studies using JBI's critical appraisal tools designed for Case control and cohort studies

Studies	JBI's critical appraisal questions											Overall score	Include
	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11		
Aregawi et al., 2017	Y	Y	Y	Y	Y	Y	Y	Y	Y	N/A	N/A	9	✓
Asfaw et al., 2016	N	Y	Y	Y	Y	N	N	Y	N	N/A	N/A	8	✓
G/Mariam et al., 2018	Y	U	Y	Y	Y	Y	Y	Y	Y	N/A	N/A	8	✓
Kindie Yenit, 2015	Y	Y	Y	Y	Y	N	N	Y	Y	N/A	N/A	6	✓
Negussie et al., 2016	Y	Y	U	Y	U	N	U	U	Y	Y	Y	9	✓

Y= Yes, N= No, U= Unclear, N/A= not applicable Q Question. Overall score is calculated by counting the number of Ys in each row Q1= was sample representative of patients in the population as a whole? Q2=Are the patients at a similar point in the course of their condition /illness? Q3= has bias been minimized in relation to selection of cases and of controls? Q4=Are confounding factors identified and strategies to deal with them stated? Q5=Are out comes assessed using objective criteria? Q6=was follow up carried out over a sufficient time period? Q7=were the outcomes of people who withdrew described and included in the analysis? Q8=were out comes measured in reliable way? Q9= was appropriate statistical analysis used? Q10= were the groups/participants free of the outcome at the start of the study (or at the moment of exposure) Q11= was follow up complete, and if not, were the reasons to loss to follow up described and explored?