

Supplementary material

Supplementary Table 1. Objective measure of the hypertension in the included studies

Author, publication year	Year of data collection	Measurement of the blood pressure as reported in studies
Arrey et al., 2016 [41]	2013	Two blood pressure (BP) readings were taken using an electronic BP device (OMRON M3 HEM-7200-E, Omron Matsusaka Co. Ltd., Kyoto, Japan).
Cohen et al., 2013 [42]	2007	Two BP readings (in mm Hg) were taken using an electronic BP device. The average of the two readings was used.
Cooper et al., 1997 [43]	1994	BP readings were taken using a standard mercury sphygmomanometer. Three sets of auscultatory readings were taken with 1 minute between each reading.
Dzudie et al., 2012 [44]	2011	BP readings were taken using an automated electronic BP device (OMRON M3 HEM-7200-E, Omron Matsusaka Co Ltd, Kyoto, Japan).
Ewane et al., 2011 [45]	2009	Diastolic and systolic BP readings were taken using an electronic device (Health Care Co Ltd, Kyoto, Japan).
Fezeu et al., 2010 [46]	1994	Diastolic and systolic BP readings were recorded three times on the right arm using a standard mercury sphygmomanometer and appropriate cuff sizes.
Fezeu et al., 2010 [46]	2003	Diastolic and systolic BP readings were recorded three times on the right arm using a standard mercury sphygmomanometer and appropriate cuff sizes.
Fouda et al., 2012 [47]	2010	Diastolic and systolic BP readings were recorded three times using an automated electronic BP device (Spengler TB-101).
Kamadjeu et al., 2006 [48]	2003	Three BP readings were taken using an electronic, fully automatic and clinically validated BP monitor, with a suitable sized cuff at the forearm.
Katte et al., 2014 [49]	2012	Three serial BP readings were taken using automated sphygmomanometer (OMRON M2 Basic, OMRON HEALTHCARE Co Ltd, Kyoto, Japan).
Kaze et al., 2015 [50]	2013	BP was measured using an automated sphygmomanometer (OMRON HEM705CP, Omron MatsusakaCo, Matsusaka City, Mie-Ken, Japan).

Supplementary Table 1. Objective measure of the hypertension in the included studies (continued)

Author, publication year	Year of data collection	Measurement of the blood pressure as reported in studies
Kaze et al., 2015 [51]	2014	BP was measured using an automated sphygmomanometer (OMRON HEM705CP, Omron MatsusakaCo, Matsusaka City, Mie-Ken, Japan).
Kengne et al., 2007 [52]	2004	BP was measured using an automated blood pressure device (OMRON® M4) and appropriate cuff sizes.
Kingue et al., 2015 [53]	2013	BP was measured using a standardized protocol and a validated automated BP device that were regularly calibrated to avoid erroneous measurements.
Kufe et al., 2015 [54]	2007	BP readings were taken three times using an automated calibrated Omron M3 machine. The mean of the 2 nd and 3 rd reading was considered for this study.
Kufe et al., 2016 [55]	2013	BP readings were taken using an automated calibrated Omron M3 machine. Mean blood pressure of two closest measures was obtained.
Lemogoum et al, 2018 [56]	2014-2015	Three consecutive BP measurements were taken using a validated automated sphygmomanometer (HEM-705 CP, Omron Corporation, Tokyo, Japan).
Lemogoum et al., 2018 [57]	2013-2014	Three consecutive BP measurements were taken using a validated automated sphygmomanometer (HEM-705 CP, Omron Corporation, Tokyo, Japan).
Mbouemboue et al., 2016 [58]	2014	BP was measured using a manual mercury sphygmomanometer (ADC Prosphyg model 770).
Nkondjock et al., 2010 [59]	2008	Two consecutive diastolic and systolic BP readings were taken using an electronic BP device (OMRON HEM-712-C, Japan).

Supplementary Table 2. Characteristics of included studies

Author, publication year	Year of data collection	Sample size	Area of residence	Agroecological zone	Subnational region of Cameroon	Community: City (neighbourhood) or village	Total quality score
Arrey et al., 2016 [41]	2013	733	Rural	Humid	South West	Moliwe Health Area	15
Cohen et al., 2013 [42]	2007	181	Urban	Sub-humid	Centre	Yaoundé	13
Cooper et al., 1997 [43]	1994	2828	Rural and Urban	Sub-humid	Centre	Yaoundé, rural settings	11
Dzudie et al., 2012 [44]	2011	2120	Urban	Sub-humid; Humid; Tropical highlands	Centre, Littoral, North- West, West	Yaoundé, Douala, Bamenda, Bafoussam	13
Ewane et al., 2011 [45]	2009	270	Urban	Humid	Littoral	Douala	8
Fezeu et al., 2010 [46]	1994	1762	Rural and Urban	Sub-humid	Centre	Yaoundé (Cité Verte), Evodoula	12
Fezeu et al., 2010 [46]	2003	1398	Rural and Urban	Sub-humid	Centre	Yaoundé (Cité Verte), Evodoula	12
Fouda et al., 2012 [47]	2010	552	Urban	Humid	Littoral	Douala	13
Kamadjeu et al., 2006 [48]	2003	10011	Urban	Sub-humid; Humid; Tropical highlands; Sudano-sahelian	Centre, Littoral, North- West, North	Yaoundé, Douala, Garoua, Bamenda	13
Katte et al., 2014 [49]	2012	1702	Urban	Tropical highlands	West	Bafoussam	13
Kaze et al., 2015 [50]	2013	500	Urban	Humid	Littoral	Douala (Cité des Palmiers)	12
Kaze et al., 2015 [51]	2014	439	Urban	Tropical highlands	West	Dschang Health District	16

Supplementary Table 2. Characteristics of included studies (continued)

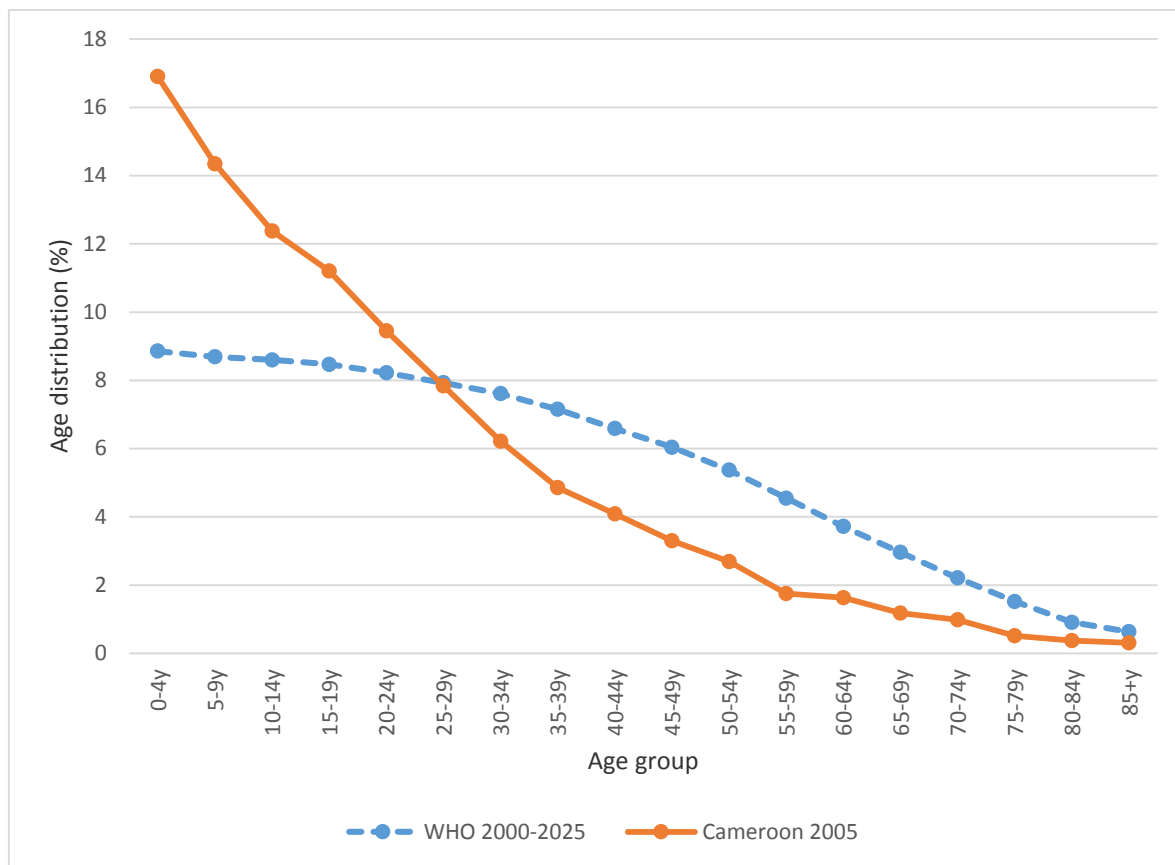
Author, publication year	Year of data collection	Sample size	Area of residence	Agroecological zone	Subnational region of Cameroon	Community: City (neighbourhood) or village	Total quality score
Kengne et al., 2007 [52]	2004	2559	Urban	Humid	Littoral	Douala (Cité des Palmiers)	10
Kingue et al., 2015 [53]	2013	15470	Urban	Sub-humid; Humid; Tropical highlands; Guinea savanna; Sudano- sahelian	National	Urban sites in all 10 regions	16
Kufe et al., 2015 [54]	2007	1623	Urban	Sub-humid	Centre	Yaoundé (Biyemassi)	15
Kufe et al., 2016 [55]	2013	1921	Rural	Sub-humid; Sudano-sahelian	East, Adamawa	Mandjou II, Guiwa Yangmou, Gom- Mana, Mazidou, Sabga	15
Lemougoum et al, 2018 [56]	2014-2015	889	Rural and urban	Sudano-sahelian	Far North	Health District of Maroua 1 and Tokombere	17
Lemougoum et al., 2018 [57]	2013-2014	300	Rural and urban	Sub-humid; Humid	Littoral and South	Douala (Cité des Palmiers) and Lolodorf Health District	18
Mbouemboue et al., 2016 [58]	2014	700	Urban	Guinea savanna	Adamawa	Ngaoundere	9
Nkondjock et al., 2010 [59]	2008	533	Urban	Sub-humid	Centre	Yaoundé	10

Supplementary Table 3. Number of data points (N) and original pooled sample (S) generated from raw data in primary studies and utilized for computing overall and subgroup statistics using random-effects meta-analysis

Distribution of separately pooled samples with raw data from included studies	Overall N (S)	Mean blood pressure N (S)	Crude hypertension Prevalence N (S)	Age-standardized hypertension Prevalence N (S)	Prevalence of hypertension awareness N (S)	Prevalence of hypertension treatment N (S)	Prevalence of hypertension control N (S)
All studies	20 (46491)	13 (29780)	20 (46491)	11 (37798)	9 (34524)	6 (17078)	4 (6178)
Period of data collection							
1994-2010	10 (21717)	5 (6439)	10 (21717)	5 (14996)	3 (13171)	2 (11634)	1 (1623)
2011-2018	10 (24774)	8 (23341)	10 (24774)	6 (22802)	6 (21353)	4 (5444)	3 (4555)
Total quality score							
< 15	13 (25116)	8 (10761)	13 (25116)	7 (17895)	5 (16993)	3 (13833)	2 (3822)
15-19	7 (21375)	5 (19019)	7 (21375)	4 (19903)	4 (17531)	3 (3245)	2 (2356)
Sample size							
< 800	9 (4208)	5 (1690)	9 (4208)	3 (1503)	2 (1172)	1 (733)	1 (733)
800 – 1999	6 (9295)	5 (7672)	6 (9295)	4 (6135)	4 (5751)	3 (4214)	2 (3325)
≥ 2000	5 (32988)	3 (20418)	5 (32988)	4 (30160)	3 (27601)	2 (12131)	1 (2120)
Sex							
Male	20 (21829)	13 (14595)	20 (21829)	9 (9213)	9 (16267)	6 (7379)	4 (2852)
Female	20 (24662)	13 (15185)	20 (24662)	9 (12582)	9 (18257)	6 (9699)	4 (3326)
Age group (in years)							
< 35	2 (1027)	0	2 (1027)	0	2 (1027)	2 (1027)	2 (1027)
35-44	2 (905)	0	2 (905)	0	2 (905)	2 (905)	2 (905)
45-54	2 (974)	0	2 (974)	0	2 (974)	2 (974)	2 (974)
≥ 55	2 (916)	0	2 (916)	0	2 (916)	2 (916)	2 (916)
Ethnic origin							
Bamileke	1 (181)	1 (181)	1 (181)	0	0	0	0
Bantu	1 (150)	1 (150)	1 (150)	0	0	0	0
Fulbe	2 (1308)	2 (1308)	2 (1308)	2 (1308)	1 (889)	1 (889)	0
Mbororo	1 (918)	1 (918)	1 (918)	1 (918)	0	0	0

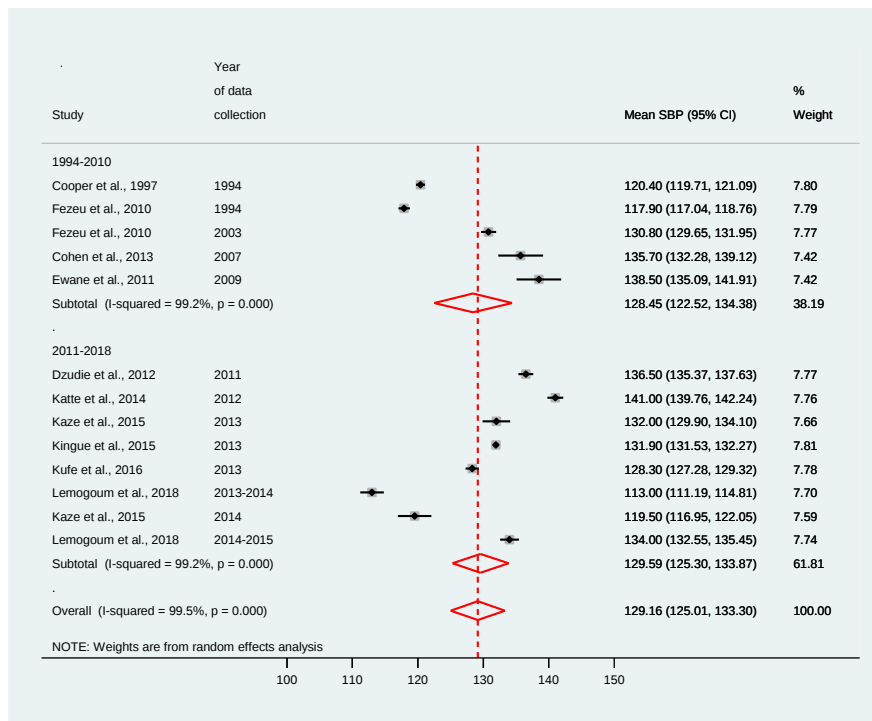
Supplementary Table 3. Number of data points (N) and original pooled sample (S) generated from raw data in primary studies and utilized for computing overall and subgroup statistics using random-effects meta-analysis (continued)

Distribution of separately pooled samples with raw data from included studies	Overall N (S)	Mean BP N (S)	Crude hypertension Prevalence N (S)	Age- standardized hypertension Prevalence N (S)	Prevalence of hypertension awareness N (S)	Prevalence of hypertension treatment N (S)	Prevalence of hypertension control N (S)
Ethnic origin							
(continued)							
Pygmy	1 (150)	1 (150)	1 (150)	0	0	0	0
Mixed	17 (43784)	17 (43784)	17 (43784)	10 (35572)	8 (33635)	5 (16189)	4 (6178)
Area of residence							
Rural	7 (6151)	7 (5418)	7 (6151)	2 (2349)	5 (2613)	2 (1161)	1 (733)
Urban	18 (40340)	18 (24362)	18 (40340)	10 (35449)	8 (31911)	5 (15917)	3 (5445)
Agroecological zone							
Guinea savannah	3 (2077)	2 (1377)	3 (2077)	2 (1411)	1 (666)	0	0
Humid	9 (12075)	5 (5728)	9 (12075)	3 (3996)	4 (8044)	3 (4403)	2 (1900)
Sub-humid	11 (20487)	8 (15828)	11 (20487)	4 (4015)	5 (13962)	3 (4775)	2 (2272)
Sudano-sahelian	3 (4724)	2 (2221)	3 (4724)	1 (889)	3 (4724)	2 (3392)	0
Tropical highlands	5 (7128)	4 (4626)	5 (7128)	2 (2006)	5 (7128)	3 (4508)	2 (2006)
Subnational region							
Adamawa	3 (2077)	2 (1377)	3 (2077)	2 (1411)	1 (666)	0	0
Centre	9 (14027)	6 (9368)	9 (14027)	3 (2805)	4 (6312)	3 (4775)	2 (2272)
East	2 (3760)	2 (3760)	2 (3760)	1 (1210)	0	0	0
Far North	2 (1555)	2 (1555)	2 (1555)	1 (889)	1 (889)	1 (889)	0
Littoral	8 (10251)	5 (4637)	8 (10251)	3 (3996)	2 (3670)	2 (3670)	1 (1167)
North	2 (3169)	1 (666)	2 (3169)	0	1 (2503)	1 (2503)	0
North-West	3 (3744)	2 (1242)	3 (3744)	0	1(2502)	1 (2502)	0
South	2 (2700)	2 (2700)	2 (2700)	0	0	0	0
South-West	2 (1824)	1 (1091)	2 (1824)	0	1 (733)	1 (733)	1 (733)
West	4 (3384)	4 (3384)	4 (3384)	1 (1702)	2 (2141)	1 (1702)	1 (1702)

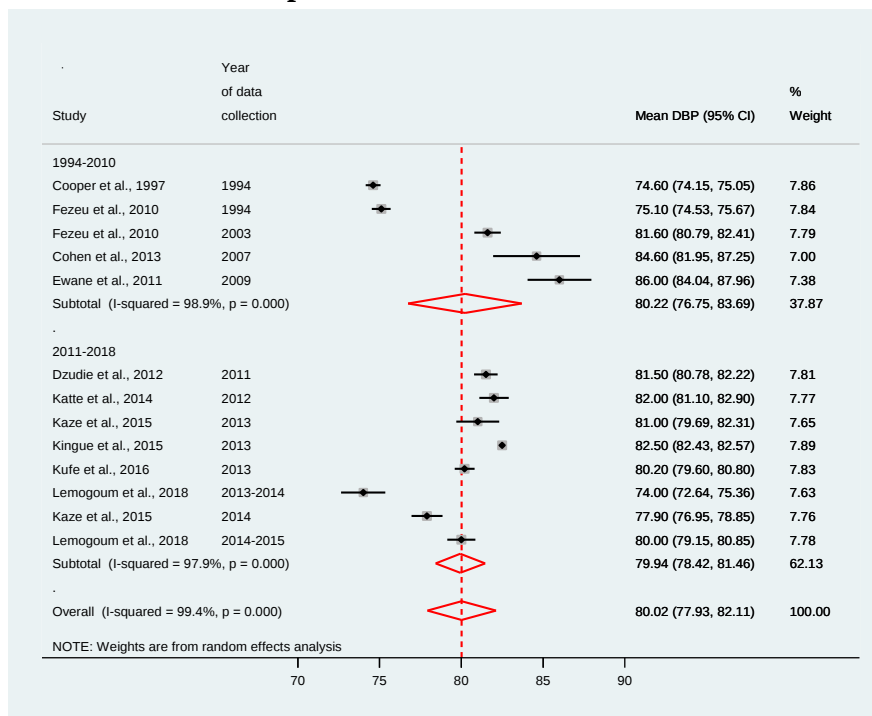


Supplementary Figure 1. Comparison of the WHO World Standard Population Distribution (%) (based on world average population between 2000-2025) and the Cameroon Population Distribution (%) (based on the 2005 Census).

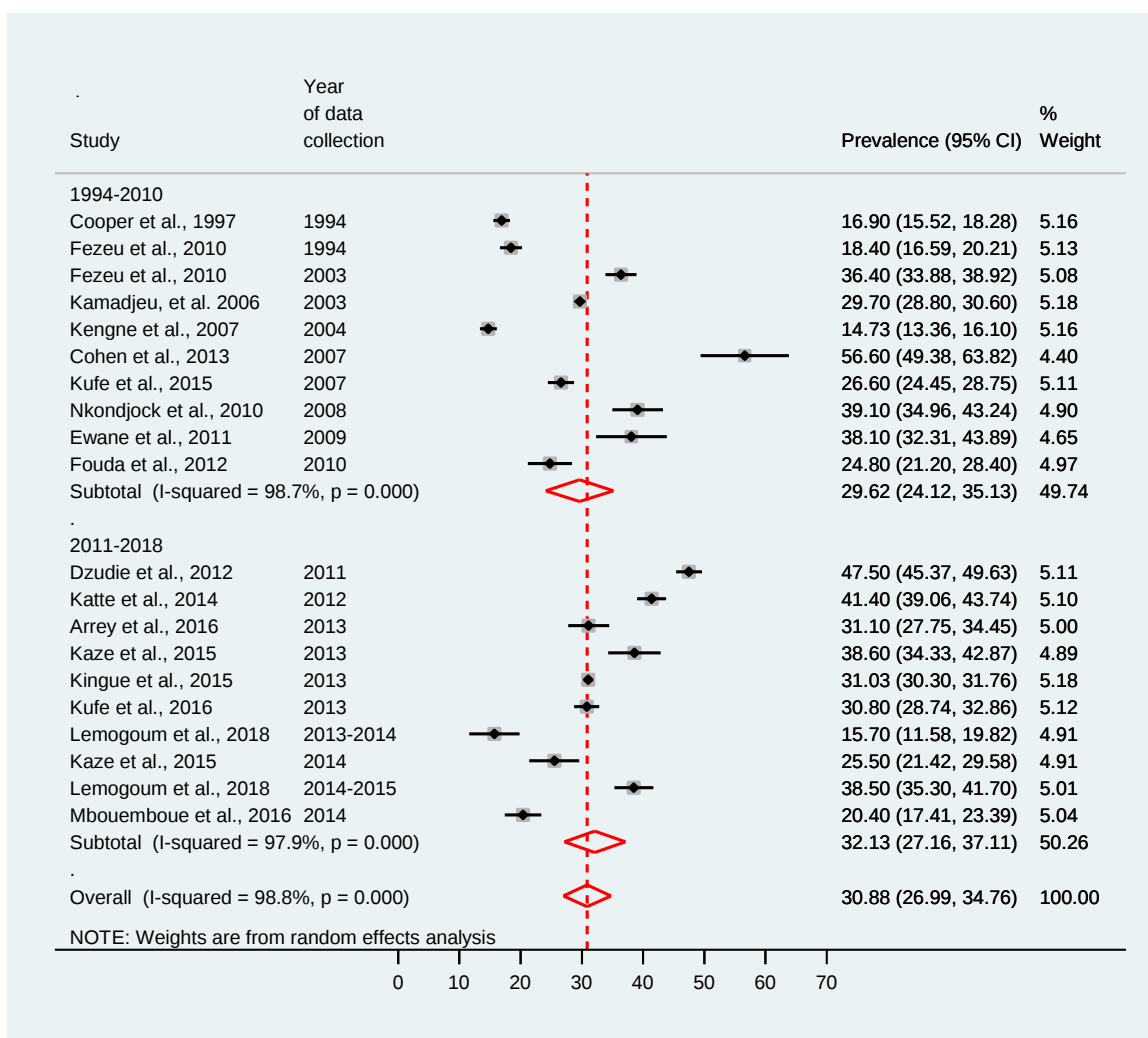
a. Mean systolic blood pressure



b. Mean diastolic blood pressure

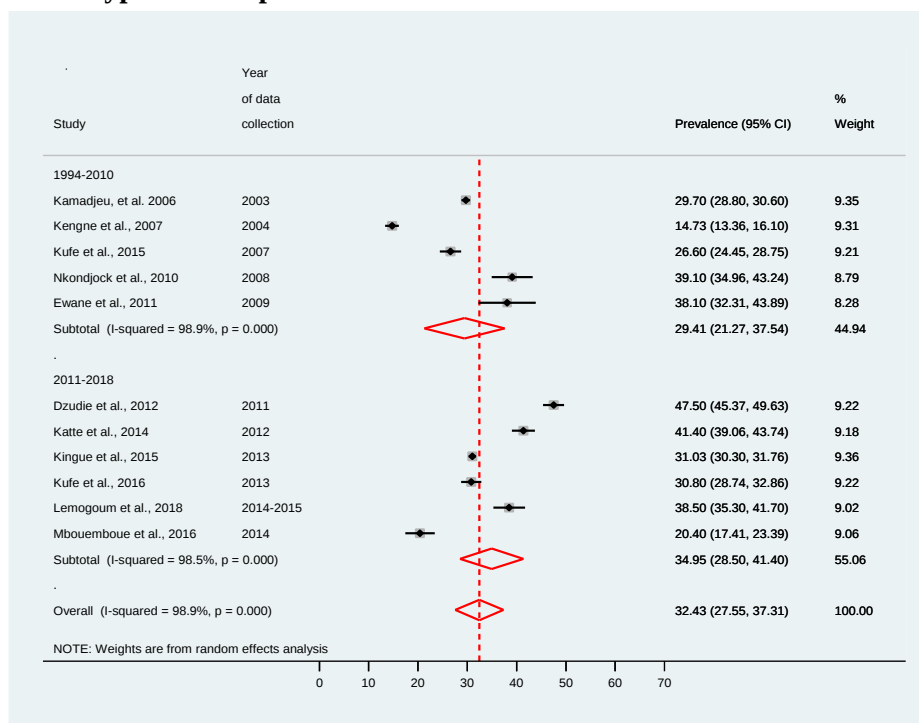


Supplementary Figure 2. Forest plots of the mean systolic blood pressure and the mean diastolic blood pressure in Cameroon by period of data collection.

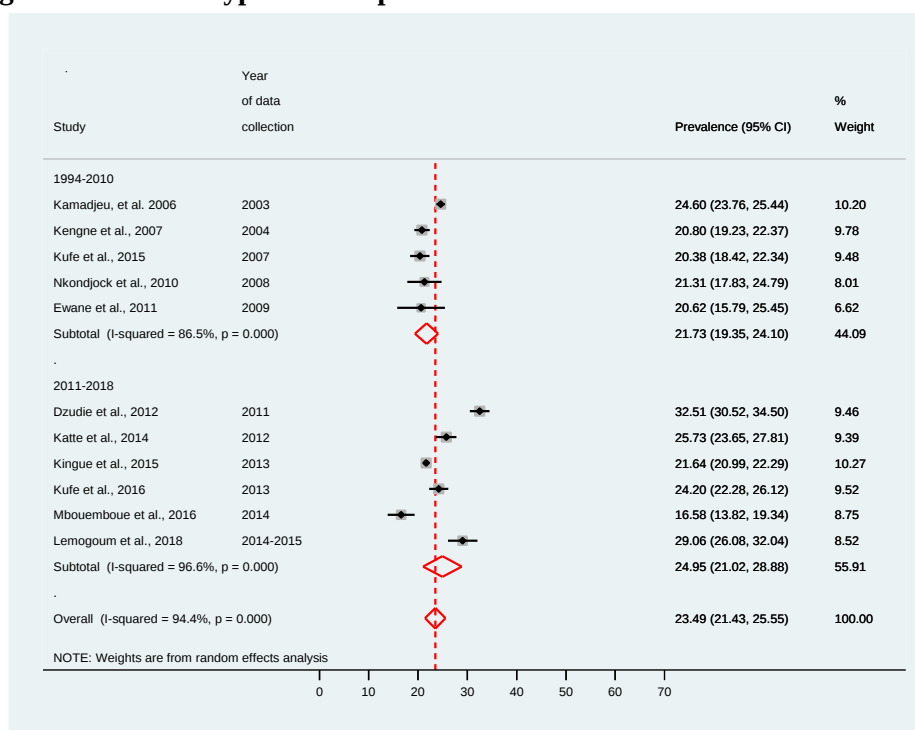


Supplementary Figure 3. Forest plot of the crude hypertension prevalence in Cameroon by period of data collection.

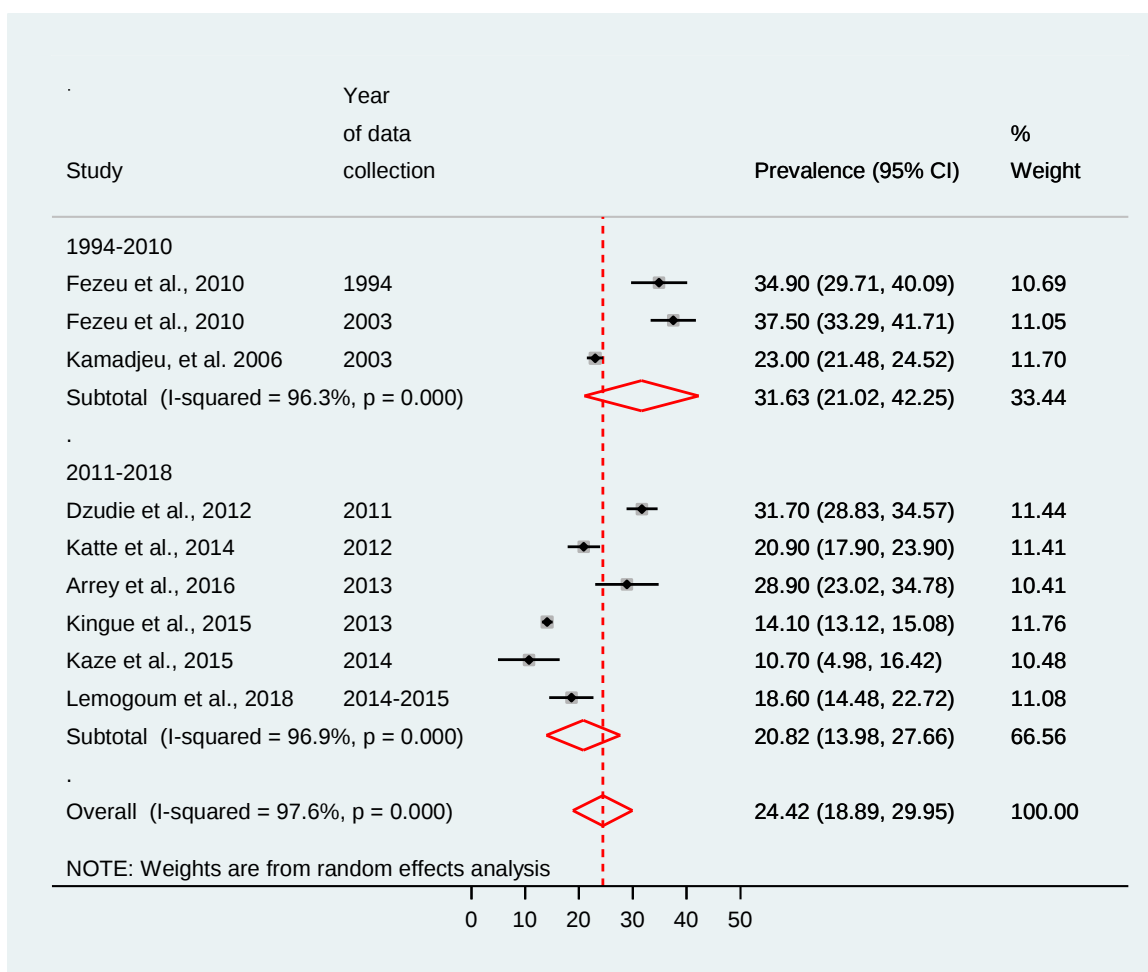
a. Crude hypertension prevalence



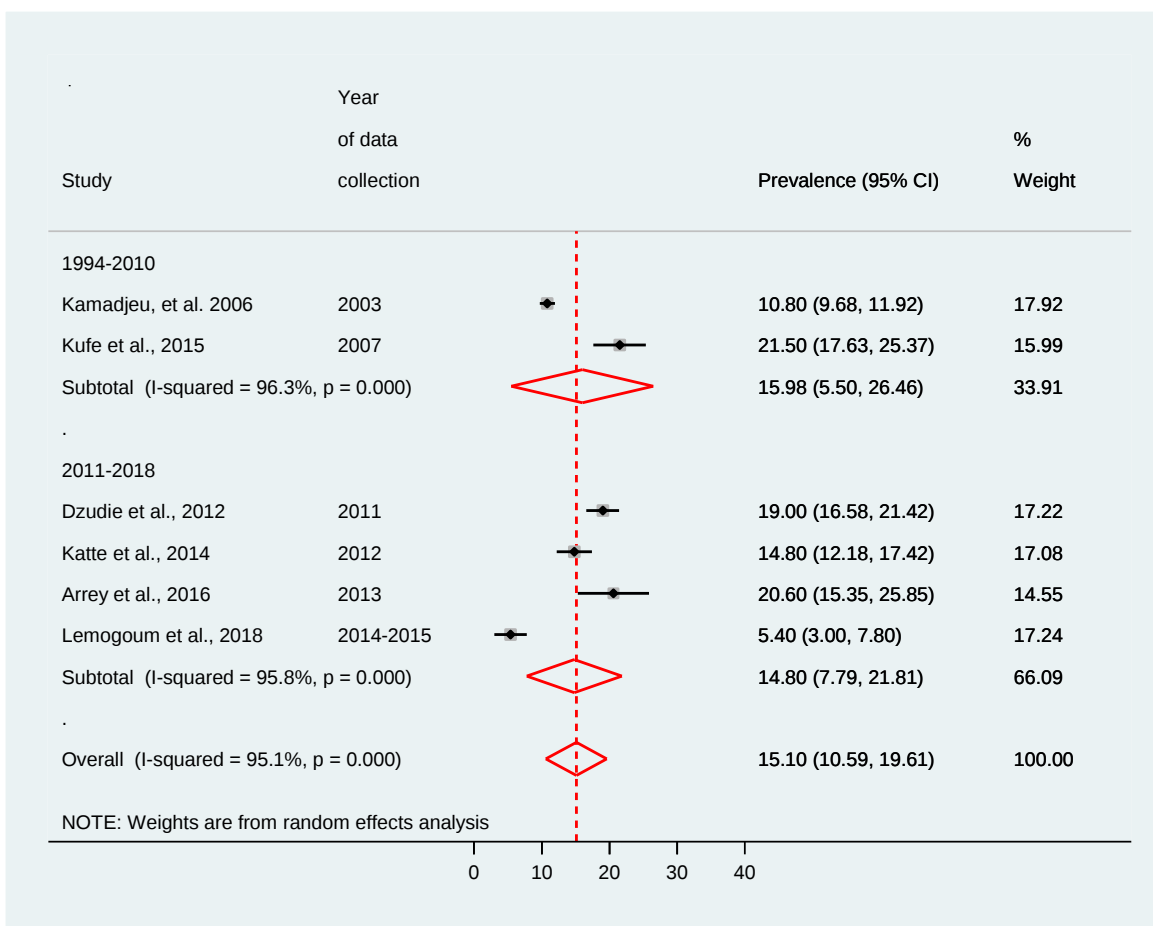
b. Age-standardized hypertension prevalence



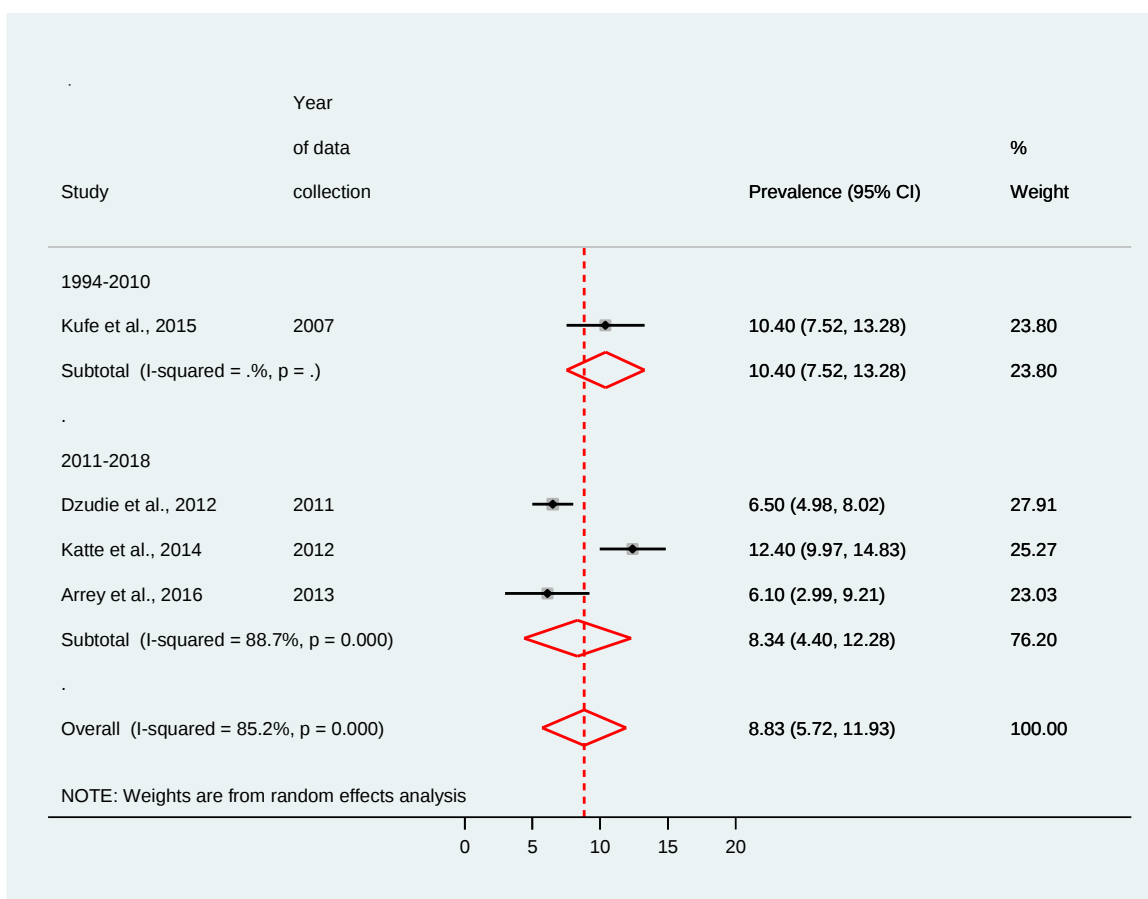
Supplementary Figure 4. Forest plots of crude and age-standardized hypertension prevalence in Cameroon by period of data collection



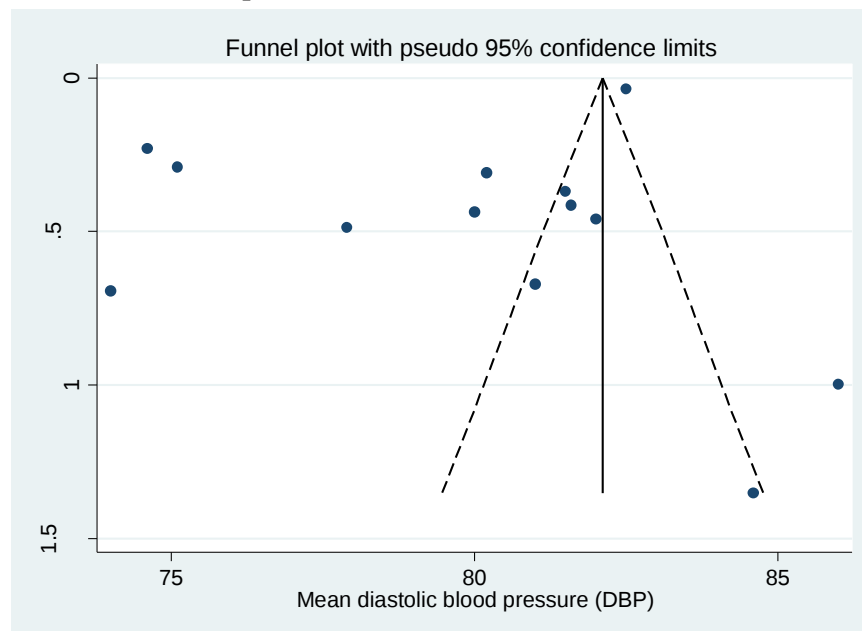
Supplementary Figure 5. Forest plot of the prevalence of awareness of hypertension in Cameroon by period of data collection.

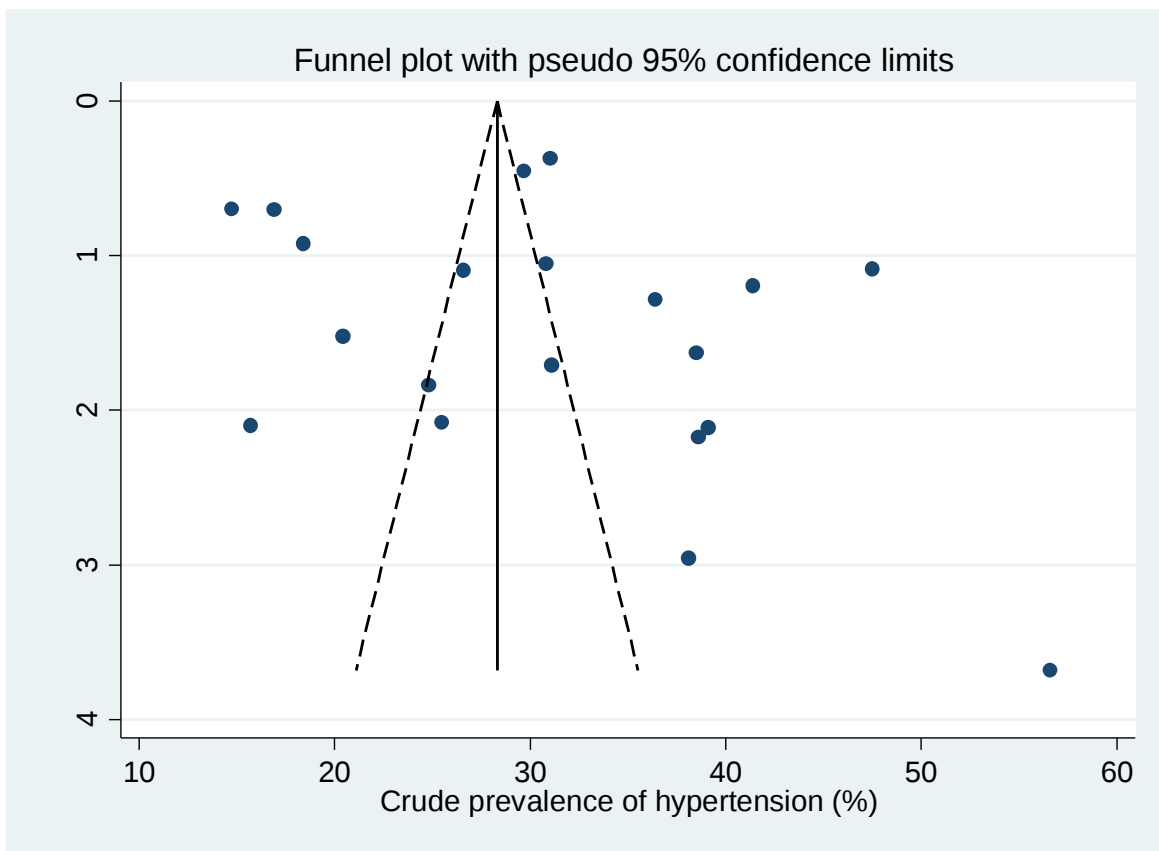


Supplementary Figure 6. Forest plot of the prevalence of treatment of hypertension in Cameroon by period of data collection.



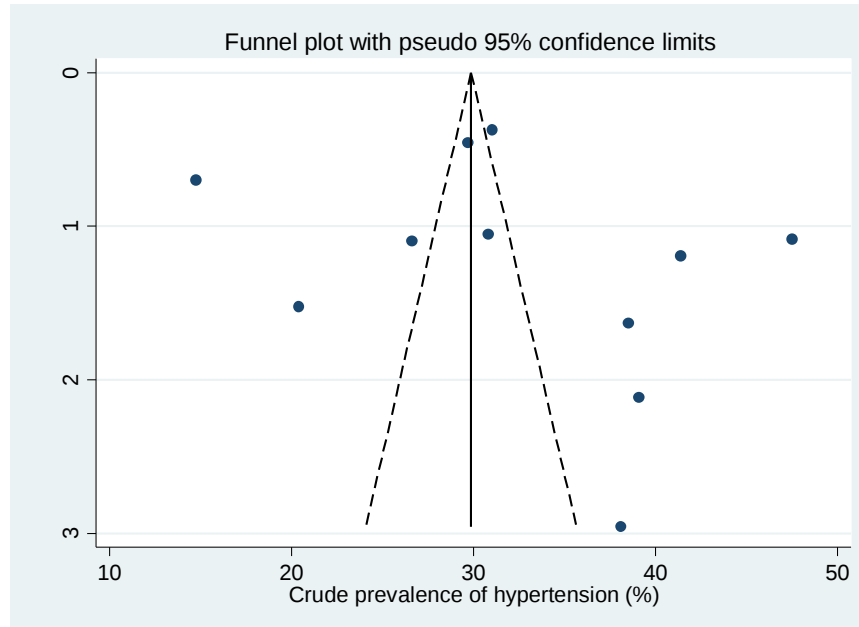
Supplementary Figure 7. Forest plot of the prevalence of controlled hypertension in Cameroon by period of data collection.



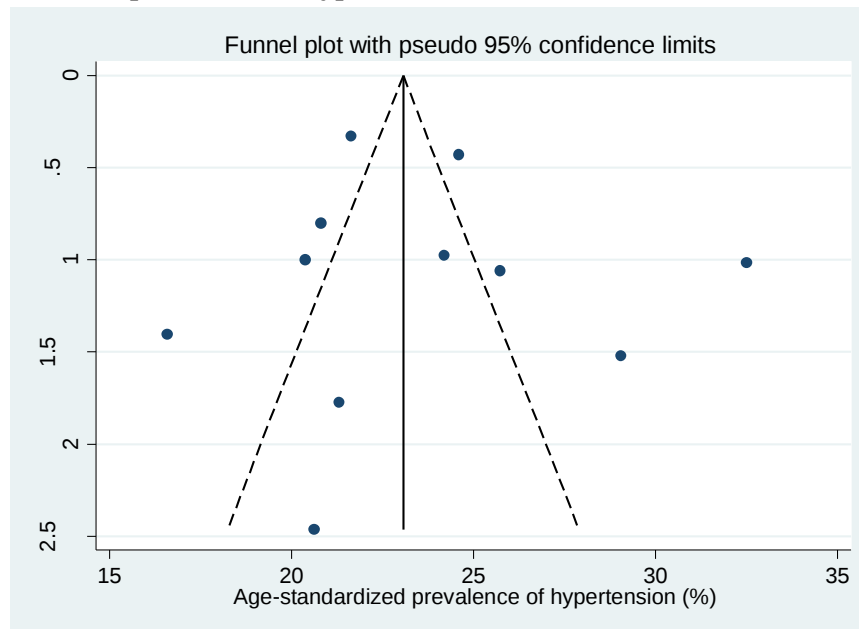


Supplementary Figure 9. Funnel plot of the crude prevalence of hypertension for data in Supplementary Figure 3.

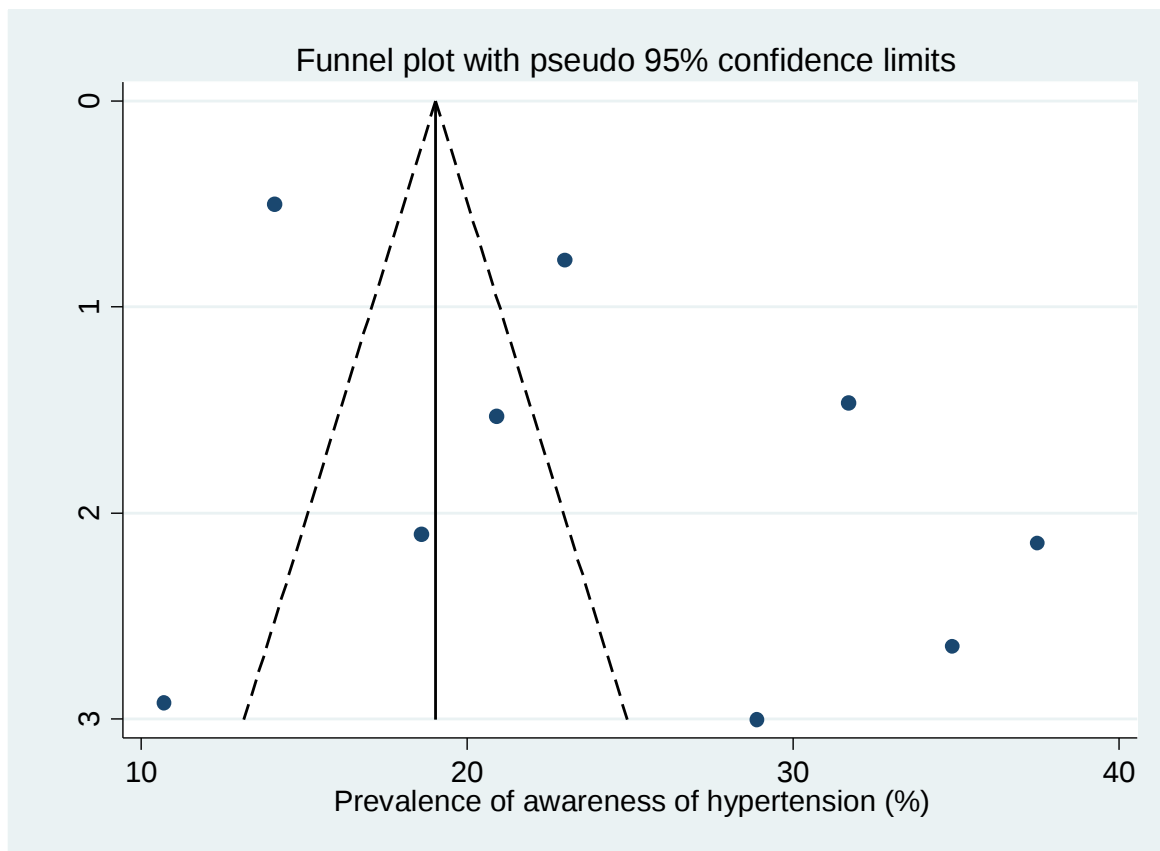
a. Crude prevalence of hypertension



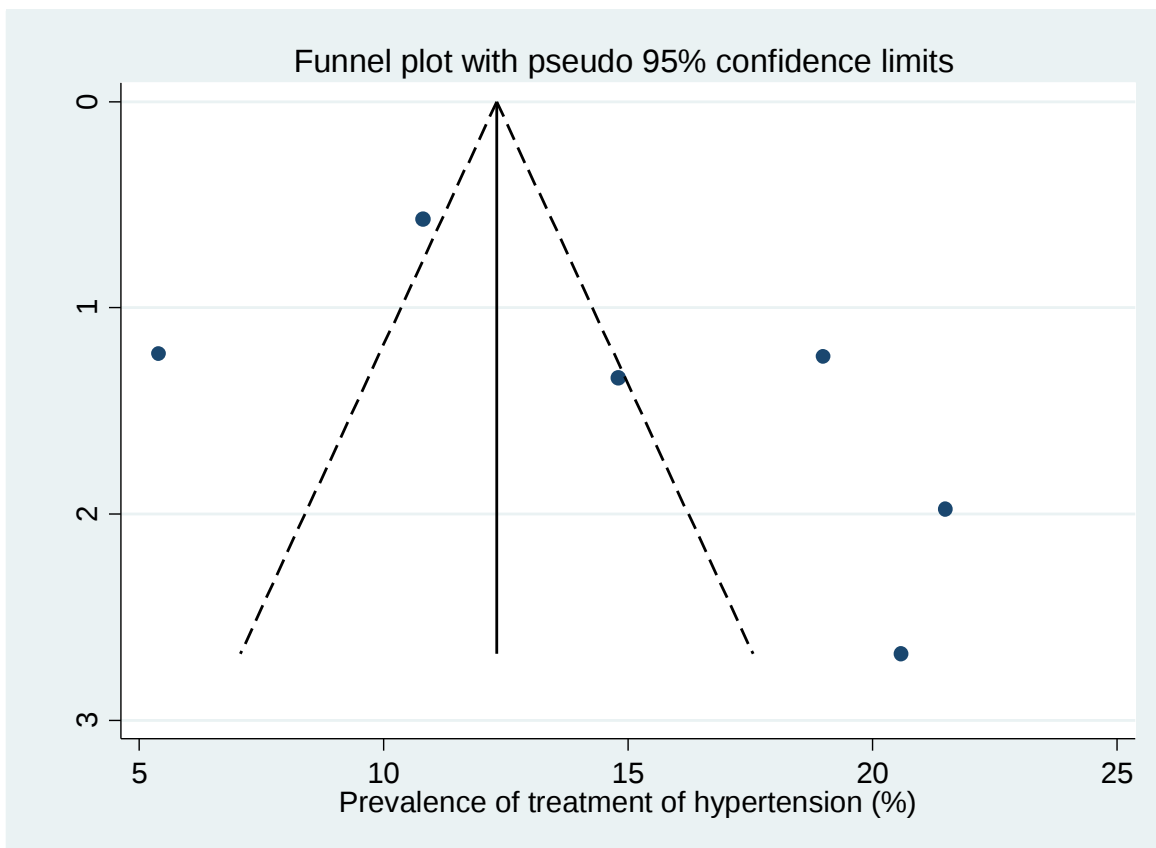
b. Age-standardized prevalence of hypertension



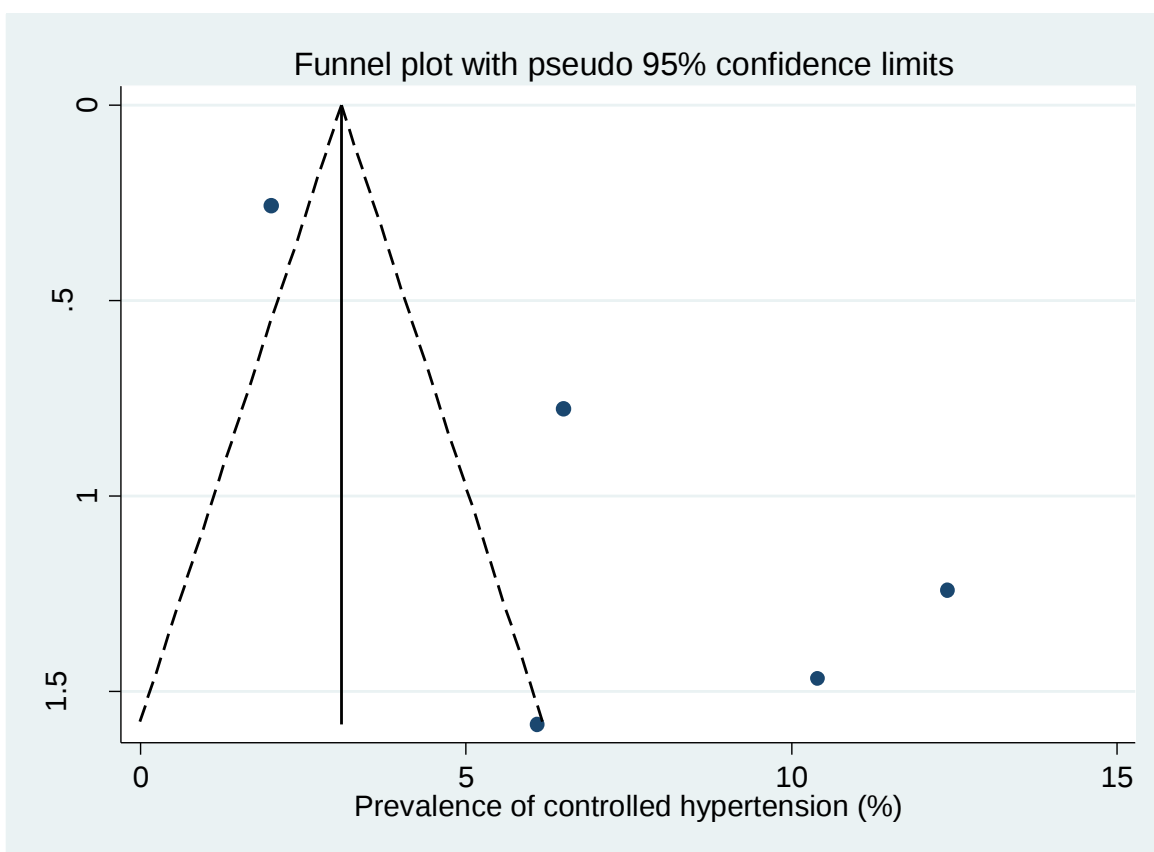
Supplementary Figure 10. Funnel plots of the crude and age-standardized prevalence of hypertension for data in Supplementary Figure 4.



Supplementary Figure 11. Funnel plot of the prevalence of awareness of hypertension for data in Supplementary Figure 5.



Supplementary Figure 12. Funnel plot of the prevalence of treatment of hypertension for data in Supplementary Figure 6.



Supplementary Figure 13. Funnel plot of the prevalence of controlled hypertension for data in Supplementary Figure 7.