

Airflow Obstruction and Cardio-metabolic Comorbidities - Supplemental online material

Supplementary Table 1. General characteristics of included and excluded subjects (descriptive data).

	Included	Excluded
n	23623	211
Current smoker, n (%)	4498 (19.0)	27 (12.8)
Ever-smoker, n (%)	9495 (40.2)	81 (38.4)
Male, n (%)	11232 (47.5)	90 (42.6)
Age, $\pm$ SD (years)	55.1 $\pm$ 10.8	59.7 $\pm$ 12.1
Airway obstruction, n (%)	2448 (10.4)	26 (12.3)
Cardiovascular disease, n (%)	2552 (10.8)	33 (17.10)
Hypertension, n (%)	6195 (26.2)	79 (41.1)
Diabetes, n (%)	1903 (8.1)	39 (20.2)

Supplementary Table 2. Tests of heterogeneity and overall effect of the meta-analyses reporting on the association of airflow obstruction with comorbidities stratified by sex, smoking history, and gross national income, as shown in Table 2 of the article.

	Chi-squared	I-squared (%)	Tau-squared	Overall effect (Z)
Cardiovascular Disease				
Female	42.27, d.f. = 24 (p=0.012)	43.2	0.2373	0.50 (p=0.620)
Male	19.92, d.f. = 22 (p=0.588)	0.0	0.0000	0.27 (p=0.788)
Ever smoked	24.13, d.f. = 22 (p=0.340)	8.8	0.0203	0.20 (p=0.839)
Never smoked	26.58, d.f. = 23 (p=0.274)	13.5	0.0618	1.08 (p=0.279)
Low income	9.37, d.f. = 13 (p=0.744)	0.0	0.0000	0.11 (p=0.910)
High income	18.29, d.f. = 12 (p=0.107)	34.4	0.0634	0.04 (p=0.968)
Hypertension				
Female	52.09, d.f. = 31 (p=0.010)	40.5	0.1074	1.26 (p=0.208)
Male	35.96, d.f. = 31 (p=0.247)	13.8	0.0258	2.07 (p=0.039)
Ever smoked	47.40, d.f. = 26 (p=0.006)	45.2	0.1083	1.12 (p=0.262)
Never smoked	40.85, d.f. = 30 (p=0.090)	26.6	0.0447	0.96 (p=0.339)
Low income	46.73, d.f. = 18 (p=0.000)	61.5	0.1242	1.60 (p=0.109)
High income	14.91, d.f. = 12 (p=0.246)	19.5	0.0143	0.78 (p=0.435)
Diabetes				
Female	13.30, d.f. = 17 (p=0.716)	0.0	0.0000	1.36 (p=0.173)
Male	25.23, d.f. = 18 (p=0.119)	28.7	0.1312	2.45 (p=0.014)
Ever-smokers	28.76, d.f. = 20 (p=0.093)	30.5	0.1256	1.78 (p=0.075)
Never-smokers	16.97, d.f. = 14 (p=0.258)	17.5	0.0973	0.76 (p=0.447)
Low income	11.00, d.f. = 12 (p=0.529)	0.0	0.0000	3.38 (p=0.001)
High income	12.06, d.f. = 11 (p=0.359)	8.8	0.0223	1.10 (p=0.271)
I-squared: variation in effect size attributable to heterogeneity				
Tau-squared: estimate of between-study variance				

Supplementary Table 3. Sites excluded from the stratified meta-analyses, as shown in Table 2 of the article, due to a low number of subjects reporting a comorbidity or singularity in the data.

Cardiovascular Disease	
Female	Blantyre (Malawi), Ife (Nigeria), Mumbai (India), Penang (Malaysia), Pune (India), Sousse (Tunisia), Srinagar (India), Tirana (Albania)
Male	Blantyre (Malawi), Cotonou (Benin), Fes (Morocco), Guangzhou (China), Ife (Nigeria), Mumbai (India), Penang (Malaysia), Pune (India), Sousse (Tunisia), Srinagar (India)
Ever-smokers	Blantyre (Malawi), Cotonou (Benin), Fes (Morocco), Guangzhou (China), Ife (Nigeria), Mumbai (India), Penang (Malaysia), Pune (India), Sousse (Tunisia), Srinagar (India)
Never-smokers	Blantyre (Malawi), Ife (Nigeria), London (England), Mumbai (India), Penang (Malaysia), Pune (India), Sousse (Tunisia), Srinagar (India), Tirana (Albania)
Low income	Blantyre (Malawi), Ife (Nigeria), Mumbai (India), Penang (Malaysia), Pune (India), Srinagar (India)
High income	/
Hypertension	
Female	Ife (Nigeria)
Male	Ife (Nigeria)
Ever-smokers	Blantyre (Malawi), Cotonou (Benin), Ife (Nigeria), Mumbai (India), Pune (India), Srinagar (India)
Never-smokers	Ife (Nigeria), Pune (India)
Low income	Ife (Nigeria)
High income	/
Diabetes	
Female	Bergen (Norway), Blantyre (Malawi), Cotonou (Benin), Guangzhou (China), Hannover (Germany), Ife (Nigeria), Maastricht (Netherlands), Mumbai (India), NampicuanTalugtug (Philippines), Naryn (Kyrgyztan), Pune (India), Sousse (Tunisia), Srinagar (India), Sydney (Australia), Uppsala (Sweden)
Male	Blantyre (Malawi), Chui (Kyrgyztan), Cotonou (Benin), Guangzhou (China), Ife (Nigeria), Manila (Philippines), Mumbai (India), NampicuanTalugtug (Philippines), Naryn (Kyrgyztan), Pune (India), Reykjavik (Iceland), Srinagar (India), Tartu (Estonia), Uppsala (Sweden)
Ever-smokers	Blantyre (Malawi), Chui (Kyrgyztan), Cotonou (Benin), Guangzhou (China), Ife (Nigeria), Mumbai (India), NampicuanTalugtug (Philippines), Naryn (Kyrgyztan), Penang (Malaysia), Pune (India), Srinagar (India), Uppsala (Sweden)
Never-smokers	Bergen (Norway), Blantyre (Malawi), Cotonou (Benin), Guangzhou (China), Hannover (Germany), Ife (Nigeria), Lexington (USA), London (England), Maastricht (Netherlands), NampicuanTalugtug (Philippines), Naryn (Kyrgyztan), Pune (India), Reykjavik (Iceland), Sousse (Tunisia), Srinagar (India), Sydney (Australia), Tartu (Estonia), Uppsala (Sweden)
Low income	Cotonou (Benin), Guangzhou (China), Ife (Nigeria), NampicuanTalugtug (Philippines), Naryn (Kyrgyztan), Pune (India), Srinagar (India)
High income	Uppsala (Sweden)

Supplementary Table 4. Tests of heterogeneity and overall effect of the unadjusted and fully adjusted meta-analyses reporting on the association of airflow obstruction with comorbidities, as shown in Figure 5 of the article.

	Chi-squared	I-squared (%)	Tau-squared	Overall effect (Z)
Cardiovascular Disease				
< 2.5th p. unadjusted	39.19, d.f. = 26 (p = 0.047)	33.7	0.0691	4.49 (p = 0.000)
< 2.5th p. adjusted	51.45, d.f. = 26 (p = 0.002)	49.5	0.1528	0.04 (p = 0.968)
< 5th p. unadjusted	45.00, d.f. = 26 (p = 0.012)	42.2	0.0814	4.04 (p = 0.000)
< 5th p. adjusted	27.68, d.f. = 26 (p = 0.374)	6.1	0.0095	0.00 (p = 0.999)
< 0.70 unadjusted	82.35, d.f. = 26 (p = 0.000)	68.4	0.1637	6.05 (p = 0.000)
< 0.70 adjusted	48.02, d.f. = 26 (p = 0.005)	45.9	0.0543	1.10 (p = 0.273)
Hypertension				
< 2.5th p. unadjusted	109.34, d.f. = 31 (p = 0.000)	71.6	0.1839	1.98 (p = 0.048)
< 2.5th p. adjusted	51.11, d.f. = 31 (p = 0.013)	39.3	0.0564	1.68 (p = 0.093)
< 5th p. unadjusted	173.75, d.f. = 31 (p = 0.000)	82.2	0.2379	2.14 (p = 0.032)
< 5th p. adjusted	65.31, d.f. = 31 (p = 0.000)	52.5	0.0694	1.79 (p = 0.074)
< 0.70 unadjusted	215.03, d.f. = 31 (p = 0.000)	85.6	0.2635	3.34 (p = 0.001)
< 0.70 adjusted	60.46, d.f. = 31 (p = 0.001)	48.7	0.0601	1.40 (p = 0.161)
Diabetes				
< 2.5th p. unadjusted	34.49, d.f. = 24 (p = 0.076)	30.4	0.0960	0.18 (p = 0.859)
< 5th p. unadjusted	38.48, d.f. = 24 (p = 0.031)	37.6	0.0970	0.63 (p = 0.526)
< 5th p. adjusted	24.24, d.f. = 24 (p = 0.448)	1.0	0.0017	3.35 (p = 0.001)
< 2.5th p. adjusted	24.72, d.f. = 24 (p = 0.421)	2.9	0.0068	2.38 (p = 0.017)
< 0.70 unadjusted	39.20, d.f. = 25 (p = 0.035)	36.2	0.0728	1.11 (p = 0.267)
< 0.70 adjusted	29.13, d.f. = 25 (p = 0.259)	14.2	0.0248	2.89 (p = 0.004)
I-squared: variation in effect size attributable to heterogeneity				
Tau-squared: estimate of between-study variance				