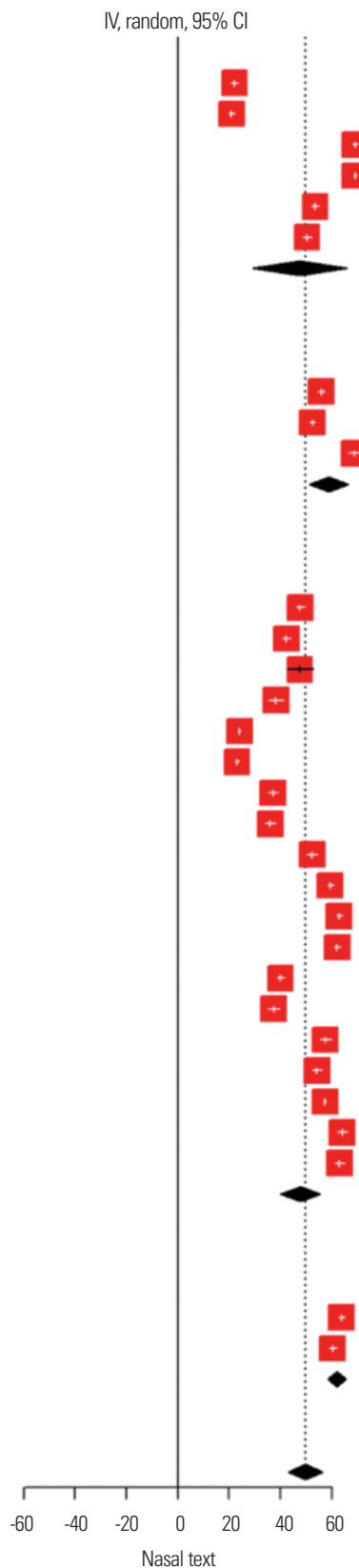


Study or subgroup	Language	Sex	95% CI
Language family= Arabic			
El-Kassabi et al. [6] (2015)	Arabic	F	22.060 (20.448–23.672)
El-Kassabi et al. [6] (2015)	Arabic	M	20.920 (19.573–22.267)
Abou-Elsaad et al. [8] (2012)	Arabic	F	69.000 (67.803–70.197)
Abou-Elsaad et al. [8] (2012)	Arabic	M	69.000 (68.072–69.928)
Khwaileh et al. [11] (2018)	Arabic	F	53.490 (51.836–55.144)
Khwaileh et al. [11] (2018)	Arabic	M	50.330 (48.376–52.284)
Total (95% CI)			47.470 (29.143–65.797)
Heterogeneity: $\tau^2 = 524.0298$, $\chi^2 = 5,429.83$, $df = 5$ ($P = 0$); $I^2 = 100\%$			
Language family= Chinese			
Kim et al. [25] (2016)	Chinese	F	55.840 (54.451–57.229)
Kim et al. [25] (2016)	Chinese	M	52.350 (51.135–53.565)
Pua et al. [26] (2019)	Chinese	All	68.730 (66.248–71.212)
Total (95% CI)			58.887 (51.382–66.391)
Heterogeneity: $\tau^2 = 43.1593$, $\chi^2 = 135.06$, $df = 2$ ($P < 0.01$); $I^2 = 99\%$			
Language family= European			
Lee et al. [7] (2013)	English	All	47.600 (45.930–49.270)
Okalidou et al. [13] (2011)	Greek	All	42.300 (40.613–43.987)
Hutchinson et al. [14] (1978)	English	F	47.500 (42.311–52.689)
Hutchinson et al. [14] (1978)	English	M	38.200 (35.194–41.206)
Seaver et al. [15] (1991)	English	F	24.000 (23.387–24.613)
Seaver et al. [15] (1991)	English	M	23.000 (22.214–23.786)
Litzaw et al. [16] (1992)	English	F	37.000 (34.976–39.024)
Litzaw et al. [16] (1992)	English	M	36.000 (33.976–38.024)
Van de Weijer et al. [17] (1991)	Dutch	All	52.300 (50.131–54.469)
Mayo et al. [18] (1996)	English	All	59.310 (58.017–60.603)
Rochet et al. [19] (1998)	English	F	62.820 (61.520–64.121)
Rochet et al. [19] (1998)	English	M	62.074 (60.544–63.605)
Rochet et al. [19] (1998)	French	F	39.959 (38.274–41.644)
Rochet et al. [19] (1998)	French	M	37.291 (35.027–39.555)
Van Lierde et al. [21] (2003)	Flemish	F	57.400 (55.217–59.583)
Van Lierde et al. [21] (2003)	Flemish	M	54.200 (52.052–56.348)
Awan et al. [24] (2015)	English	All	57.267 (56.534–58.000)
Litzaw et al. [16] (1992)	English	F	64.000 (61.976–66.024)
Litzaw et al. [16] (1992)	English	M	63.000 (60.976–65.024)
Total (95% CI)			47.642 (39.801–55.484)
Heterogeneity: $\tau^2 = 302.9651$, $\chi^2 = 10,958.18$, $df = 18$ ($P = 0$); $I^2 = 100\%$			
Language family= Ural-Altaic			
Park et al. [10] (2014)	Korean	F	63.760 (62.402–65.118)
Park et al. [10] (2014)	Korean	M	60.280 (58.754–61.806)
Total (95% CI)			62.038 (58.628–65.448)
Heterogeneity: $\tau^2 = 5.5124$, $\chi^2 = 11.15$, $df = 1$ ($P < 0.01$); $I^2 = 91\%$			
Total (95% CI)			49.701 (43.222–56.179)
Heterogeneity: $\tau^2 = 326.7877$, $\chi^2 = 19,369.16$, $df = 29$ ($P = 0$); $I^2 = 100\%$			
Residual heterogeneity: $\tau^2 = NA$, $\chi^2 = 16,534.23$, $df = 26$ ($P = 0$); $I^2 = 100\%$			



Supplement 2. Overall nasal nasometry scores and sub-group analysis based on linguistic differences. CI, confidence interval; IV, inverse variance; M, male; F, female; df, degrees of freedom; NA, not applicable.