

Appendix chapter 2 - The health of Antillean migrants in the Netherlands: a comparison with the health of non-migrants in both the countries of origin and destination

Table A1 Health characteristics of the given populations, by gender

Men	Antillean non-migrants (n = 907)	Antilleans migrants (n = 649)	Dutch non-migrants (n = 153.006)
Alcohol in n (weighted %)			
Alcohol user ^{a,b}	630 (71.5)	508 (82.3)	133.654 (91.3)
Excessive drinker ^{a,b,1}	32 (3.6)	42 (8.6)	14.987 (11.1)
Heavy drinker ^{a,b,2}	77 (8.8)	76 (15.9)	18.076 (17.6)
BMI (mean)	27.3	26.2	25.6
BMI in categories in n (weighted %)			
Overweight (25.0 – 30.0 kg/m ²)	314 (40.1)	247 (40.3)	67.634 (41.7)
Obesity (>30 kg/m ²) ^{a,b}	171 (24.1)	107 (17.5)	17.819 (10.9)
Physical activity n (weighted %) ^b			
Inactive ^b	-	75 (13.5)	9.406 (6.6)
Smoking in n (weighted %)			
Smoker ^{a,b}	194 (21.9)	198 (31.6)	30.797 (24.7)
Limitations in n (weighted %)			
(Severely) limited ^{a,b}	77 (5.7)	86 (13.4)	16.593 (8.2)
Mental health in n (weighted %)			
Psychological complaints ^{a,b}	30 (3.4)	67 (12.3)	9.399 (6.6)
Morbidity in n (weighted %)			
Morbidity ^{a,3}	351 (31.1)	280 (42.2)	74.042 (43.6)
Multimorbidity ^{a,b,4}	98 (7.8)	104 (12.8)	30.462 (15.8)
Diabetes ^{a,b}	114 (9.5)	57 (4.6)	13.527 (6.0)
Migraine ^{a,b}	9 (1.1)	65 (12.6)	10.279 (9.2)
Hypertension ^{a,b}	202 (16.6)	116 (13.3)	32.230 (16.7)
Self-assessed health in n (weighted %)			
(Very) bad ^a	22 (2.0)	28 (2.6)	5.534 (2.8)
Women	Antillean non-migrants (n = 1.549)	Antilleans migrants (n = 907)	Dutch non-migrants (n = 182.096)
Alcohol in n (weighted %)			
Alcohol user ^{a,b}	806 (54.7)	615 (73.8)	137.628 (80.7)
Excessive drinker ^{a,b,1}	18 (1.2)	22 (2.8)	11.615 (6.9)
Heavy drinker ^{a,b,2}	38 (3.2)	97 (13.8)	16.152 (12.3)
BMI (mean)	28.9	26.6	25.1
BMI in categories in n (weighted %)			
Overweight (25.0 – 30.0 kg/m ²) ^a	429 (35.2)	270 (30.3)	57.056 (29.9)
Obesity (>30 kg/m ²) ^{a,b}	425 (35.9)	210 (23.4)	25.131 (13.4)
Physical activity n (weighted %)			
Inactive ^b	-	120 (13.1)	14.913 (7.7)
Smoking in n (weighted %)			
Smoker ^{a,b}	153 (10.2)	146 (17.4)	29.879 (19.4)
Limitations in n (weighted %)			
(Severely) limited ^{a,b}	265 (13.6)	191 (17.1)	30.667 (13.9)
Mental health in n (weighted %)			
Psychological complaints ^{a,b}	130 (9.0)	146 (15.9)	18.158 (10.6)
Morbidity in n (weighted %)			
Morbidity ^{a,3}	786 (46.3)	482 (57.5)	100.601 (56.6)
Multimorbidity ^{a,b,4}	279 (15.2)	202 (20.2)	45.648 (23.0)
Diabetes ^a	231 (11.4)	85 (5.9)	12.968 (5.5)
Migraine ^{a,b}	86 (7.2)	204 (31.0)	28.912 (21.7)
Hypertension ^a	473 (25.7)	193 (19.7)	41.252 (19.9)
Self-assessed health in n (weighted %)			
(Very) bad ^{a,b}	44 (2.6)	47 (4.2)	6.589 (3.2)

^a Antillean non-migrants are significantly different from Antillean migrants based on the Chi-square test ($p = <0.001$). ^b Dutch non-migrants are significantly different from Antillean migrants based on the Chi-square test ($p = <0.001$), ¹ >21 (men) or >14 (women) consumptions/week, ² >5 (men) or >3 (women) consumptions on one day/week, ³ Captured by stroke, heart infarction, other severe heart disease, cancer, diabetes, migraine and/or hypertension, one or more, ⁴ Captured by stroke, heart infarction, other severe heart disease, cancer, diabetes, migraine and/or hypertension, two or more.

Table A2 Disparity between male Antillean migrants (n=649) in the Netherlands and the specified male population

Men	Antillean non-migrants (n=907)			Dutch non-migrants (n=153.006)			
	Unadjusted ^a OR (95% CI)	Model 1 ^b OR (95% CI)	Model 2 ^c OR (95% CI)	Unadjusted ^a OR (95% CI)	Model 1 ^b OR (95% CI)	Model 2 ^c OR (95% CI)	Model 3 ^d OR (95% CI)
Risk Factors							
Alcohol							
Alcohol user	0.45 (0.35, 0.58)	0.55 (0.42, 0.71)	0.59 (0.45, 0.78)	1.79 (1.44, 2.22)	2.35 (1.89, 2.93)	1.86 (1.48, 2.35)	1.76 (1.39, 2.22)
Excessive drinker ¹	0.47 (0.29, 0.76)	0.52 (0.32, 0.84)	0.52 (0.32, 0.84)	1.52 (1.11, 2.08)	1.69 (1.23, 2.33)	1.92 (1.38, 2.68)	1.94 (1.39, 2.70)
Heavy drinker ²	0.62 (0.45, 0.87)	1.03 (0.72, 1.46)	0.90 (0.62, 1.29)	0.97 (0.77, 1.24)	1.73 (1.34, 2.23)	2.18 (1.66, 2.85)	2.04 (1.56, 2.67)
BMI							
Overweight (BMI ≥25)	1.25 (1.00, 1.56)	1.01 (0.83, 1.30)	0.89 (0.70, 1.13)	0.94 (0.80, 1.10)	0.75 (0.63, 0.88)	0.66 (0.55, 0.79)	0.65 (0.55, 0.78)
Obesity (BMI ≥30)	1.35 (1.03, 1.77)	1.24 (0.94, 1.63)	1.10 (0.83, 1.45)	0.63 (0.51, 0.77)	0.56 (0.45, 0.70)	0.56 (0.45, 0.70)	0.58 (0.47, 0.73)
Physical activity							
Inactive (0 days/week)	-	-	-	0.47 (0.37, 0.60)	0.40 (0.32, 0.52)	0.50 (0.38, 0.65)	0.53 (0.41, 0.70)
Smoking							
Smoker	0.60 (0.48, 0.76)	0.74 (0.58, 0.94)	0.72 (0.56, 0.92)	0.57 (0.48, 0.67)	0.71 (0.60, 0.85)	0.88 (0.73, 1.06)	0.95 (0.78, 1.14)
Health status							
Functional limitations							
(Severely) limited in vision, hearing and/or mobility	0.56 (0.40, 0.78)	0.34 (0.24, 0.47)	0.32 (0.23, 0.46)	0.76 (0.61, 0.96)	0.43 (0.34, 0.54)	0.56 (0.43, 0.73)	0.57 (0.44, 0.75)
Mental health							
Moderate to severe psychological complaints	0.27 (0.18, 0.43)	0.26 (0.17, 0.40)	0.28 (0.17, 0.44)	0.55 (0.43, 0.71)	0.52 (0.40, 0.67)	0.84 (0.63, 1.12)	0.93 (0.70, 1.23)
Morbidity							
Morbidity ⁴ (at least one disease)	0.65 (0.53, 0.81)	0.34 (0.27, 0.43)	0.32 (0.25, 0.40)	1.23 (1.04, 1.45)	0.67 (0.56, 0.81)	0.75 (0.62, 0.91)	0.76 (0.63, 0.92)
Multimorbidity ⁴ (at least two diseases)	0.54 (0.40, 0.73)	0.31 (0.23, 0.43)	0.29 (0.21, 0.39)	1.29 (1.04, 1.59)	0.73 (0.58, 0.92)	0.80 (0.63, 1.02)	0.83 (0.65, 1.05)
Diabetes	1.42 (1.01, 1.98)	0.88 (0.62, 1.24)	0.85 (0.59, 1.22)	1.00 (0.76, 1.32)	0.55 (0.42, 0.73)	0.64 (0.47, 0.86)	0.67 (0.50, 0.91)
Migraine	0.08 (0.04, 0.15)	0.10 (0.05, 0.20)	0.10 (0.05, 0.21)	0.63 (0.49, 0.82)	0.82 (0.63, 1.07)	0.90 (0.68, 1.20)	0.92 (0.69, 1.23)
Hypertension	1.10 (0.85, 1.43)	0.67 (0.51, 0.88)	0.65 (0.49, 0.87)	1.21 (0.98, 1.48)	0.70 (0.56, 0.87)	0.72 (0.58, 0.91)	0.74 (0.59, 0.93)
Self-assessed health							
(Very) bad	0.54 (0.31, 0.95)	0.36 (0.20, 0.63)	0.44 (0.24, 0.82)	0.82 (0.56, 1.20)	0.51 (0.34, 0.74)	0.90 (0.58, 1.40)	0.97 (0.62, 1.51)

Definitions: OR=Odds ratio, CI=Confidence Interval, BMI=Body Mass Index, ^aNaïve model, ^bModel adjusted for age, ^cModel adjusted for age, marital status, educational level and employment, ^dModel adjusted for age, marital status, educational level, employment and urbanization, ¹>21 consumptions/week, ²>5 consumptions on one day/week, ³>20 cigarettes/day, ⁴captured by stroke, heart infarction, other severe heart disease, cancer, diabetes, migraine and/or hypertension.

Table A3 Disparity between female Antillean migrants (n=907) in the Netherlands and the specified female population

Women	Antillean non-migrants (n=1.549)			Dutch non-migrants (n=182.096)			
	Unadjusted ^a OR (95% CI)	Model 1 ^b OR (95% CI)	Model 2 ^c OR (95% CI)	Unadjusted ^a OR (95% CI)	Model 1 ^b OR (95% CI)	Model 2 ^c OR (95% CI)	Model 3 ^d OR (95% CI)
Risk Factors							
Alcohol							
Alcohol user	0.41 (0.34,0.49)	0.50 (0.42, 0.60)	0.54 (0.44, 0.65)	1.42 (1.22, 1.65)	1.83 (1.57, 2.13)	1.58 (1.34, 1.87)	1.61 (1.36, 1.91)
Excessive drinker ¹	0.42 (0.22, 0.78)	0.42 (0.22, 0.81)	0.52 (0.27, 1.02)	2.70 (1.77, 4.13)	2.74 (1.76, 4.27)	3.10 (1.92, 5.03)	3.27 (2.02, 5.31)
Heavy drinker ²	0.18 (0.13, 0.27)	0.30 (0.20, 0.44)	0.28 (0.19, 0.42)	0.80 (0.64, 0.98)	1.29 (1.03, 1.61)	1.66 (1.32, 2.11)	1.73 (1.37, 2.20)
BMI							
Overweight (BMI ≥25)	1.80 (1.50, 2.17)	1.46 (1.21, 1.77)	1.43 (1.18, 1.75)	0.66 (0.58, 0.76)	0.51 (0.44, 0.58)	0.51 (0.44, 0.59)	0.51 (0.44, 0.59)
Obesity (BMI ≥30)	1.62 (1.34, 1.98)	1.39 (1.14, 1.70)	1.30 (1.06, 1.60)	0.50 (0.43, 0.59)	0.42 (0.36, 0.49)	0.43 (0.36, 0.51)	0.44 (0.37, 0.52)
Physical activity							
Inactive (0 days/week)	-	-	-	0.58 (0.47, 0.70)	0.37 (0.30, 0.45)	0.53 (0.43, 0.66)	0.56 (0.45, 0.70)
Smoking							
Smoker	0.56 (0.44, 0.72)	0.72 (0.56, 0.92)	0.63 (0.48, 0.81)	1.03 (0.86, 1.23)	1.33 (1.10, 1.60)	1.61 (1.33, 1.96)	1.76 (1.44, 2.14)
Health status							
Functional limitations							
(Severely) limited in vision, hearing and/or mobility	0.70 (0.56, 0.86)	0.35 (0.28, 0.44)	0.30 (0.24, 0.38)	0.72 (0.61, 0.85)	0.32 (0.27, 0.39)	0.47 (0.38, 0.57)	0.50 (0.41, 0.60)
Mental health							
Moderate to severe psychological complaints	0.43 (0.34, 0.56)	0.40 (0.31, 0.51)	0.34 (0.26, 0.44)	0.56 (0.47, 0.67)	0.51 (0.43, 0.61)	0.71 (0.58, 0.86)	0.77 (0.64, 0.94)
Morbidity							
Morbidity ⁴ (at least one disease)	0.63 (0.53, 0.75)	0.35 (0.29, 0.42)	0.33 (0.27, 0.40)	1.03 (0.89, 1.19)	0.62 (0.53, 0.72)	0.74 (0.63, 0.88)	0.76 (0.65, 0.90)
Multimorbidity ⁴ (at least two diseases)	0.62 (0.51, 0.77)	0.34 (0.27, 0.43)	0.33 (0.26, 0.41)	1.13 (0.96, 1.33)	0.64 (0.54, 0.76)	0.77 (0.64, 0.93)	0.81 (0.67, 0.98)
Diabetes	1.60 (1.23, 2.09)	0.96 (0.73, 1.27)	0.91 (0.67, 1.23)	0.75 (0.60, 0.94)	0.39 (0.31, 0.49)	0.44 (0.33, 0.57)	0.45 (0.35, 0.59)
Migraine	0.16 (0.12, 0.21)	0.21 (0.16, 0.28)	0.20 (0.15, 0.26)	0.61 (0.52, 0.72)	0.81 (0.69, 0.96)	0.79 (0.67, 0.94)	0.82 (0.69, 0.97)
Hypertension	1.31 (1.08, 1.59)	0.69 (0.56, 0.86)	0.69 (0.55, 0.86)	1.05 (0.89, 1.24)	0.52 (0.44, 0.63)	0.54 (0.45, 0.66)	0.54 (0.44, 0.66)
Self-assessed health							
(Very) bad	0.53 (0.35, 0.80)	0.38 (0.25, 0.58)	0.42 (0.26, 0.66)	0.69 (0.51, 0.92)	0.46 (0.34, 0.62)	0.83 (0.58, 1.19)	0.91 (0.64, 1.30)

Definitions: OR=Odds ratio, CI=Confidence Interval, BMI=Body Mass Index, ^aNaïve model, ^bModel adjusted for age, ^cModel adjusted for age, marital status, educational level and employment, ^dModel adjusted for age, marital status, educational level, employment and urbanization, ¹>14 consumptions/week, ²>3 consumptions on one day/week, ³>20 cigarettes/day, ⁴captured by stroke, heart infarction, other severe heart disease, cancer, diabetes, migraine and/or hypertension.

Table A4 Disparity between 1st generation Antillean migrants (n=862) in the Netherlands and the specified population (19- to 65-year olds)

Both genders	Antillean non-migrants (n=1.678)		2 nd generation Antillean migrants (n=338)		Dutch non-migrants (n=193.946)	
	Unadjusted OR (95% CI) ^a	Adjusted OR (95% CI) ^b	Unadjusted OR (95% CI) ^a	Adjusted OR (95% CI) ^b	Unadjusted OR (95% CI) ^a	Adjusted OR (95% CI) ^b
Risk Factors						
Alcohol						
Alcohol user	0.60 (0.50, 0.73)	0.64 (0.53, 0.79)	2.22 (1.55, 3.18)	1.78 (1.23, 2.59)	2.27 (1.94, 2.67)	1.88 (1.58, 2.23)
Excessive drinker ¹	1.02 (0.59, 1.75)	0.95 (0.54, 1.66)	2.65 (1.41, 4.96)	3.54 (1.84, 6.81)	3.80 (2.44, 5.93)	4.76 (2.97, 7.61)
Heavy drinker ²	0.48 (0.35, 0.65)	0.56 (0.41, 0.77)	2.09 (1.48, 2.96)	1.88 (1.30, 2.72)	1.42 (1.14, 1.77)	2.40 (1.88, 3.05)
BMI						
Overweight (BMI ≥25)	1.39 (1.16, 1.68)	1.10 (0.90, 1.33)	0.27 (0.21, 0.36)	0.38 (0.29, 0.51)	0.50 (0.43, 0.58)	0.42 (0.36, 0.49)
Obesity (BMI ≥30)	1.40 (1.15, 1.70)	1.14 (0.93, 1.40)	0.27 (0.18, 0.41)	0.38 (0.25, 0.59)	0.41 (0.35, 0.48)	0.40 (0.34, 0.48)
Physical activity						
Inactive (0 days/week)	-	-	0.73 (0.48, 1.10)	0.81 (0.52, 1.24)	0.36 (0.30, 0.44)	0.49 (0.39, 0.61)
Smoking						
Smoker	0.63 (0.51, 0.78)	0.63 (0.50, 0.78)	1.23 (0.92, 1.65)	1.55 (1.14, 2.10)	0.95 (0.81, 1.12)	1.39 (1.17, 1.65)
Heavy smoker ³	0.60 (0.20, 1.78)	0.74 (0.22, 2.55)	0.84 (0.17, 4.19)	2.15 (0.39, 11.85)	2.17 (0.97, 4.85)	5.07 (1.89, 13.59)
Health status						
Functional limitations⁵						
(Severely) limited in vision, hearing and/or mobility	0.28 (0.22, 0.36)	0.19 (0.15, 0.25)	0.19 (0.11, 0.32)	0.37 (0.21, 0.65)	0.33 (0.28, 0.39)	0.42 (0.34, 0.50)
Mental health						
Moderate to severe psychological complaints	0.39 (0.30, 0.51)	0.38 (0.29, 0.51)	1.03 (0.73, 1.46)	1.34 (0.92, 1.94)	0.47 (0.39, 0.56)	0.78 (0.64, 0.96)
Morbidity						
Morbidity ⁴ (at least one disease)	0.47 (0.39, 0.56)	0.33 (0.28, 0.40)	0.49 (0.37, 0.64)	0.78 (0.59, 1.03)	0.70 (0.61, 0.81)	0.70 (0.60, 0.82)
Multimorbidity ⁴ (at least two diseases)	0.40 (0.32, 0.50)	0.27 (0.21, 0.34)	0.32 (0.21, 0.49)	0.64 (0.41, 1.00)	0.67 (0.56, 0.79)	0.69 (0.57, 0.84)
Diabetes	1.20 (0.89, 1.63)	0.86 (0.62, 1.19)	0.18 (0.07, 0.45)	0.57 (0.23, 1.46)	0.48 (0.38, 0.63)	0.50 (0.38, 0.67)
Migraine	0.17 (0.13, 0.22)	0.19 (0.14, 0.25)	0.97 (0.70, 1.33)	0.90 (0.65, 1.26)	0.69 (0.58, 0.83)	0.79 (0.66, 0.95)
Hypertension	0.89 (0.73, 1.10)	0.58 (0.46, 0.74)	0.20 (0.12, 0.33)	0.44 (0.26, 0.75)	0.63 (0.53, 0.75)	0.51 (0.42, 0.62)
Self-assessed health						
(Very) bad	0.32 (0.20, 0.51)	0.33 (0.20, 0.54)	0.41 (0.19, 0.89)	0.91 (0.41, 2.01)	0.41 (0.31, 0.55)	0.78 (0.55, 1.10)

Definitions: OR=Odds ratio, CI=Confidence Interval, BMI=Body Mass Index, ^aNaïve model, ^bModel adjusted for age, marital status, educational level and employment, ¹>14 consumptions/week, ²>3 consumptions on one day/week, ³>20 cigarettes/day, ⁴captured by stroke, heart infarction, other severe heart disease, cancer, diabetes, migraine and/or hypertension, ⁵Limited in vision, hearing and/or mobility.

Table A5 Disparity between Antillean migrants (n=649 men and n=907 women) in the Netherlands and the specified population

	Adjusted OR (95% CI) ^a	Adjusted OR (95% CI) ^a	Adjusted OR (95% CI) ^b
Men	Antillean non-migrants (n=907)	Dutch non-migrants (n=153.006)	
Functional limitations			
(Severely) limited in vision, hearing and/or mobility	0.24 (0.16, 0.36)	0.57 (0.43, 0.75)	0.60 (0.45, 0.81)
Mental health			
Moderate to severe psychological complaints	0.27 (0.16, 0.46)	0.96 (0.71, 1.31)	0.89 (0.65, 1.22)
Morbidity			
Diabetes	0.96 (0.65, 1.43)	0.73 (0.52, 1.02)	0.85 (0.59, 1.22)
Migraine	0.11 (0.05, 0.23)	1.04 (0.76, 1.40)	1.03 (0.75, 1.40)
Hypertension	0.68 (0.50, 0.92)	0.75 (0.58, 0.95)	0.75 (0.58, 0.97)
Self-assessed health			
(Very) bad	0.40 (0.20, 0.80)	1.15 (0.68, 1.93)	1.02 (0.63, 1.64)
Women	Antillean non-migrants (n=1.549)	Dutch non-migrants (n=182.096)	
Functional limitations			
(Severely) limited in vision, hearing and/or mobility	0.30 (0.22, 0.39)	0.56 (0.45, 0.69)	0.62 (0.49, 0.78)
Mental health			
Moderate to severe psychological complaints	0.31 (0.23, 0.42)	0.73 (0.59, 0.89)	0.76 (0.62, 0.95)
Morbidity			
Diabetes	1.02 (0.72, 1.44)	0.58 (0.43, 0.79)	0.60 (0.44, 0.82)
Migraine	0.20 (0.15, 0.27)	0.86 (0.72, 1.04)	0.85 (0.71, 1.02)
Hypertension	0.76 (0.59, 0.98)	0.70 (0.56, 0.87)	0.69 (0.55, 0.86)
Self-assessed health			
(Very) bad	0.35 (0.20, 0.60)	1.09 (0.72, 1.65)	0.96 (0.65, 1.43)

Definitions: OR=Odds ratio, CI=Confidence Interval

^a Model adjusted for demographics (age, marital status, educational level and employment) and risk factor variables (overweight, obesity, smoker, alcohol user and excessive (alcohol) user, ^b Model adjusted for demographics (age, marital status, educational level and employment) and risk factor variables (overweight, obesity, smoker, alcohol user, excessive (alcohol) user and physical inactivity).