

**Table 1** Characteristics of adults who participated in the Canadian Community Health Survey (CCHS) - Annual between 2000/2001 and 2011 (n = 289,800; weighted n = 12,071,000)

Variables	Total population (n=289,800) n (weighted%)	Males (n=129,995) n (weighted%)	Females (n=159,815) n (weighted%)	Standardized mean differences
<b>Sex (%)</b>				
Males	129,995 (48.4)	-	-	
Females	159,815 (51.5)	-	-	
<b>Age (years; mean ± SD)</b>	53.3 (12.9)	52.5 (12.4)	54.7 (13.2)	-0.16
<b>Education (%)</b>				
Secondary education or less	116235 (35.4)	49990 (33.1)	66240 (37.6)	0.06
Post-secondary education or above	170875 (64.5)	78625 (66.8)	92250 (62.3)	
<b>Household Income (%)</b>				
Lower/middle-lower income	129600 (45.0)	73045 (40.2)	79180 (49.5)	0.24
Upper/middle-upper income	144380 (54.9)	50420 (59.7)	71330 (50.4)	
<b>Obesity (%)</b>				
BMI>30 kg/m <sup>2</sup>	56670 (18.7)	26685 (19.7)	29985 (17.8)	0.03
BMI≤30 kg/m <sup>2</sup>	211190 (81.2)	95770 (80.2)	115415 (82.1)	
<b>Smoking (%)</b>				
Never/former	223255 (78.9)	96900 (76.3)	126355 (81.4)	0.11
Current	65985 (21.0)	32795 (23.6)	33185 (18.5)	
<b>Physical activity index (%)</b>				
Moderate/active	136285 (48.3)	62735 (50.2)	73550 (46.6)	0.07
Inactive	146450 (51.6)	62460 (49.7)	83995 (53.3)	
<b>CVD morbidity and mortality (%)</b>				
No	278630 (97.1)	123500 (96.2)	155130 (98.0)	0.11
Yes	11180 (2.8)	6495 (3.6)	4690 (1.9)	
<b>Diabetes (%)</b>				0.04
No	266,085 (93.3)	118,500 (92.7)	147,585 (93.9)	
Yes	22,645 (6.6)	11,020 (7.2)	11,630 (6.1)	
<b>Hypertension (%)</b>				0.09
No	216,635 (78.9)	99,965 (79.9)	116,670 (78.1)	
Yes	72,535 (21.1)	29,625 (20.1)	42, 905 (21.9)	
<b>Race/ethnicity (%)</b>				0.02
White	259920 (81.9)	116050 (81.6)	143880 (82.1)	
Non-white	29895 (18.0)	13955 (18.3)	15940 (17.8)	

BMI: Body mass index; CVD: Cardiovascular disease

**Table 2** Odds ratios of direct, indirect and total effects of socioeconomic position on cardiovascular disease morbidity and mortality mediated by modifiable risk factors among adults who participated in the Canadian Community Health Survey (CCHS) - Annual between 2000/2001 and 2011

Paths	Total population (n=287,100)		Males (n=128,615)		Females (n=158,480)	
	OR (95%CI) <sup>a</sup>	p-value	OR (95%CI) <sup>a</sup>	p-value	OR (95%CI) <sup>a</sup>	p-value
<b>Total effects of SEP</b>						
SEP	2.52 (2.28, 2.76)	<0.001	2.04 (1.78, 2.29)	<0.001	3.58 (3.00, 4.15) *	<0.001
<b>Direct effects of SEP</b>						
SEP -> CVD	1.27 (1.17, 1.37)	<0.001	1.31 (1.17, 1.46)	<0.001	1.23 (1.10, 1.38)	<0.001
<b>Indirect effects of SEP</b>						
SEP -> smoking -> CVD	1.57 (1.46, 1.68)	<0.001	1.58 (1.41, 1.76)	<0.001	1.58 (1.44, 1.73)	<0.001
SEP -> smoking -> obesity -> CVD	0.95 <sup>§</sup> (0.93, 0.97)	<0.001	0.92 <sup>§</sup> (0.88, 0.95)	<0.001	0.98 <sup>§</sup> (0.96, 1.01)	0.465
SEP -> smoking -> obesity -> hypertension -> CVD	0.92 <sup>§</sup> (0.90, 0.94)	<0.001	0.92 <sup>§</sup> (0.88, 0.95)	<0.001	0.94 <sup>§</sup> (0.91, 0.96)	<0.001
SEP -> smoking -> obesity -> diabetes -> CVD	0.90 <sup>§</sup> (0.87, 0.93)	<0.001	0.93 <sup>§</sup> (0.88, 0.97)	0.007	0.88 <sup>§</sup> (0.84, 0.92)	<0.001
SEP -> smoking -> hypertension -> CVD	0.98 <sup>*</sup> (0.97, 0.99)	0.009	0.97 <sup>*</sup> (0.95, 0.99)	0.009	0.99 (0.98, 1.01)	0.359
SEP -> physical inactivity -> CVD	1.02 (0.96, 1.07)	0.456	0.97 (0.89, 1.05)	0.539	1.06 (1.18, 1.45)	0.074
SEP -> physical inactivity -> obesity -> CVD	1.04 (1.02, 1.07)	<0.001	1.06 (1.03, 1.09)	<0.001	1.01 (0.97, 1.06)	0.464
SEP -> physical inactivity -> obesity -> diabetes -> CVD	1.10 (1.06, 1.14)	<0.001	1.05 (1.01, 1.09)	0.005	1.23 (1.15, 1.30) *	<0.001
SEP -> physical inactivity -> obesity -> hypertension -> CVD	1.08 (1.05, 1.10)	<0.001	1.06 (1.03, 1.09)	<0.001	1.10 (1.06, 1.14)	<0.001
SEP -> physical inactivity -> hypertension -> CVD	1.03 (1.02-1.05)	<0.001	1.02 (1.01, 1.04)	0.001	1.04 (1.02, 1.06)	<0.001
SEP -> physical inactivity -> diabetes -> CVD	1.04 (1.02, 1.06)	<0.001	1.03 (1.00, 1.05)	0.010	1.07 (1.04, 1.10)	<0.001
SEP -> obesity -> CVD	1.02 (1.01, 1.04)	<0.001	1.01 (0.99, 1.02)	0.393	1.01 (0.97, 1.05)	0.469
SEP -> obesity -> diabetes -> CVD	1.06 (1.03, 1.09)	<0.001	1.01 (0.99, 1.02)	0.416	1.20 (1.12, 1.28) *	<0.001
SEP -> obesity -> hypertension -> CVD	1.04 (1.03, 1.06)	<0.001	1.00 (0.99, 1.02)	0.399	1.09 (1.05, 1.13) *	<0.001
<b>Total indirect effect of SEP</b>	1.98 (1.77, 2.19)	<0.001	1.55 (1.31, 1.79)	<0.001	2.89 (2.41, 3.37) *	<0.001

Adjusted for sex, age, and race/ethnicity; CI: confidence interval; CVD: Cardiovascular disease; SEP: socioeconomic position; OR: Odds ratio

\*Significant differences between males and females (p<0.05); differences in total, indirect and direct effects between males and females were tested by multi-group GSEM analysis using bootstrapped standard errors (500 replications).

<sup>a</sup> Obtained by bootstrap resampling with 500 replications

<sup>§</sup> Smoking was associated with lower odds of obesity, hence the indirect effects of SEP through smoking and obesity had an OR <1

<sup>\*</sup> Smoking was associated with lower odds of hypertension in the total population and males, hence the indirect effects of SEP through smoking and hypertension had an OR <1