**Supplementary Materials**

**Table S1.** Weighted demographic characteristics of the study population from 2015 to 2016 CCHS (*n* = 47521).

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| --- | --- | --- | --- |
| **Variable** | **Stroke - Yes** | **Stroke - No** | ***P*** |
| **Sample Size** (n, %) | 694 (1.00) | 46827 (99.00) |  |
| Age (n, %) |  |  | <0.001 |
| 20-29 | 8 (5.18) | 5691 (17.60) |  |
| 30-39 | 17 (2.56) | 6902 (17.83) |  |
| 40-49 | 44 (13.32) | 7101 (18.49) |  |
| 50-59 | 107 (16.58) | 8909 (19.27) |  |
| 60-69 | 187 (27.69) | 9544 (15.77) |  |
| 70-79 | 193 (21.54) | 5918 (8.03) |  |
| 80+ | 138 (13.12) | 2762 (3.02) |  |
| **Sex** - Female (n, %) | 367 (47.48) | 25677 (51.50) | 0.284 |
| **Race** (n, %) |  |  | 0.113 |
| White | 578 (78.46) | 38607 (73.45) |  |
| Non-White (Visible Minority) | 37 (15.11) | 4282 (22.59) |  |
| Aboriginal (First Nations, Mètis, Inuk) | 56 (6.43) | 2685 (3.95) |  |
| **Marital Status** (n, %) |  |  | <0.001 |
| Married/Common-in-Law | 337 (62.67) | 26979 (64.46) |  |
| Divorced/Widowed/Separated | 277 (23.03) | 10188 (12.82) |  |
| Single | 78 (14.30) | 9508 (22.72) |  |
| **Anxiety/Mood disorder** = Yes (n, %) | 157 (24.66) | 6653 (12.74) | <0.001 |
| **Alcohol use (last 12 months)** (n, %) |  |  | 0.034 |
| Less than weekly | 514 (68.20) | 27379 (57.43) |  |
| Weekly | 128 (25.62) | 15842 (36.09) |  |
| Daily | 50 (6.18) | 3428 (6.48) |  |
| **Total Household Income** (n, %) |  |  | <0.001 |
| None or less than $20,000 | 157 (15.79) | 4539 (6.97) |  |
| $20,000 - $39,999 | 238 (29.47) | 8793 (14.05) |  |
| $40,000 - $59,999 | 131 (20.95) | 7822 (14.58) |  |
| $60,000-$79,999 | 70 (11.00) | 6601 (14.77) |  |
| $80,000 or more | 96 (22.79) | 19018 (49.64) |  |
| **BMI** (n, %) |  |  | 0.086 |
| Underweight | 6 (1.23) | 359 (0.79) |  |
| Normal | 177 (29.30) | 12574 (33.43) |  |
| Overweight | 216 (31.68) | 15958 (36.44) |  |
| Obese | 252 (37.78) | 14763 (29.34) |  |
| **PHQ-9 Total Score** (mean, SD) | 4.83 (5.99) | 2.71 (3.85) | <0.001 |
| **Depression** = Yes (n, %) | 137 (19.22) | 3177 (6.37) | <0.001 |

Note. Categorical characteristics reported as unweighted frequency and weighted %; continuous characteristics are reported as weighted mean and standard deviation

**Table S2**. Association between stroke and depressive symptoms, subset by BMI incorporating survey weights.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Unadjusted models** |  | **Age- and sex-adjusted model** |  | **Multivariable adjusted models** |  |
| **Variable** | **Coef. Estm. (95% CI)** | **P value** | **aCoef. Estm. (95% CI)** | **P value** | **aCoef. Estm.† (95% CI)** | **P value** |
| Stroke - Yes (Overall) | 3.50 (2.54, 4.81) | <0.001 | 4.66 (3.20,6.78) | <0.001 | 2.95 (2.01, 4.33) | <0.001 |
| Stroke - Yes (Underweight BMI) | 3.73(0.07,190.12) | 0.512 | 2.47 (0.03, 244.54) | 0.699 | NA | NA |
| Stroke - Yes (Normal BMI) | 4.23(2.22,8.07) | <0.001 | 7.25 (3.73,14.08) | <0.001 | 5.24 (2.42,11.35) | <0.001 |
| Stroke - Yes (Overweight BMI) | 1.74(0.86,3.51) | 0.121 | 1.97 （0.84, 4.62) |  | 1.56 (0.59, 4.14) | 0.367 |
| Stroke - Yes  (Obese BMI) | 3.96 (2.43,6.45) | <0.001 | 5.22 (3.06,8.89) | <0.001 | 2.99 (1.77, 5.07) | <0.001 |

Note: aOR (adjusted odds ratio) model controlled for age, sex, smoking status, education level, and physical activity; p-values adjusted using Holm’s Method, significance is set to ≤0.05

**Table S3**. Association between depressive symptoms severity and stroke, subset by BMI incorporating survey weights.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Unadjusted models** |  | **Age- and sex-adjusted model** |  | **Multivariable adjusted models** |  |
| **Variable** | **Coef. Estm. (95% CI)** | **P value** | **aCoef. Estm. (95% CI)** | **P value** | **aCoef. Estm.† (95% CI)** | **P value** |
| Stroke - Yes (Overall) | 2.12 (1.31, 2.93) | <0.001 | 2.49 (1.64, 3.33) | <0.001 | 1.55 (0.83 2.27) | <0.001 |
| Stroke - Yes (Underweight BMI) | 4.67(-7.26,16.59) | 0.442 | 4.56 (-7.66,16.79) | 0.464 | 2.83 (-7.04,12.71) | 0.573 |
| Stroke - Yes (Normal BMI) | 2.22(0.47,3.97) | 0.013 | 2.80 ( 1.06, 4.54) | 0.002 | 1.93 ( 0.48, 3.39) | 0.009 |
| Stroke - Yes (Overweight BMI) | 0.88 (-0.11,1.86) | 0.081 | 1.07 (-0.010, 2.25) | 0.072 | 0.69 (-0.44, 1.82) | 0.233 |
| Stroke - Yes  (Obese BMI) | 2.99 (1.58,4.40) | <0.001 | 3.33 (1.90, 4.76) | <0.001 | 1.99 ( 0.84, 3.13) | 0.001 |

Note: aCoef. Estm. (adjusted odds ratio) model controlled for age, sex, smoking status, education level, and physical activity; p-values adjusted using Holm’s Method, significance is set to ≤0.05.