

Supplementary Table 1A: Source databases and corresponding ICD-9 or -10 codes defining mental health visits in each respective study setting.

| Hospitalization/emergency department visit for any mental health condition | |
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| ICD-9 codes (OMHRS - DSM IV) | Any OMHRS (including missing, excluding 290.x, 294.x in primary diagnosis) Exclude if Dxcode missing and provisional=2 |
| ICD-10 codes (NACRS/DAD) | DX10CODE1= F09-F99 DX10CODE2-25 = X60-X84, Y10-Y19, Y28 when DX10CODE1 ne F06-F99 |
| Outpatient (primary care/psychiatrist/pediatrician) visit for any mental health condition | |
| ICD-9 codes (OHIP) | 291-293, 295-319 Psychiatrist [SPEC=19] and outpatient (LOCATION: O, L, H) and non-lab service [substr(FEECODE,1,1) ne 'G'], <i>OR</i> FP/GP [SPEC=00] and MHA diagnosis code [DXCODE] and outpatient (LOCATION: O, L, H) and non-lab service [substr(FEECODE,1,1) ne 'G'], <i>OR</i> Paediatrician [SPEC=26] and undefined location (LOCATION =U) and MHA diagnosis code [DXCODE] and fee code (FEECODE=K122 or K123 or K704). Paediatrician fee code description: K122 Developmental and/or behavioural care - individual developmental and/or behavioural care K123 Developmental and/or behavioural care - family developmental and/or behavioural care K704 Paediatric out-patient case conference |

Abbreviations: ICD International Classification of Disease; DSM Diagnostic and Statistical Manual of Mental Disorders; OMHRS Ontario Mental Health Reporting System; NACRS National Ambulatory Care Reporting System; DAD Distract Abstract Database; OHIP Ontario Health Insurance Plan; FP Family physician; GP General practitioner; Dxcode Diagnosis code

Supplementary Table 1B: Detailed breakdown of CCHS-derived covariate categorizations used in regression models.

| Focal Exposure | Source and classification details |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Life satisfaction | <p>Source: CCHS</p> <p>Question: Using a scale of 0 to 10, where 0 means "Very dissatisfied" and 10 means "Very satisfied", how do you feel about your life as a whole right now? (Response options: 0-10)</p> <p>Analytic classification:</p> <ul style="list-style-type: none"> (1) <i>Very satisfied/satisfied (6,7,8/9,10)</i> (2) <i>Neither (5)</i> (3) <i>Dissatisfied (2,3,4)</i> (4) <i>Very dissatisfied (0,1)</i> |
| Covariates | |
| Age | <p>Source: Registered Persons Database (contains information on persons registered under the Ontario Health Insurance Plan (OHIP))</p> <p>Analytic classification: <i>continuous, 18 and over</i></p> |
| Sex | <p>Source: Registered Persons Database</p> <p>Analytic classification:</p> <ul style="list-style-type: none"> (1) <i>Male</i> (2) <i>Female</i> |
| Immigrant status | <p>Source: CCHS</p> <p>Question: Were you born a Canadian citizen? (Response options: Yes/No)</p> <p>Analytic classification:</p> <ul style="list-style-type: none"> (1) <i>Immigrant (No)</i> (2) <i>Canadian-born (Yes)</i> |
| Household income | <p>Source: CCHS</p> <p>Question: Thinking about the total income for all household members, from which of the following sources did your household receive any income in the past 12 months?</p> <p>Analytic classification: Income deciles are determined by Statistics Canada, which are grouped by the distribution of an adjusted ratio of their total reported household income to the low income cut-off corresponding to their household and community size. It provides, for each respondent, a relative measure of their household income to the household incomes of all other respondent. We collapsed 10 categories into 5.</p> <ul style="list-style-type: none"> (1) <i>Lowest income quintile (quintile 1, 2)</i> (2) <i>Quintile 3, 4</i> (3) <i>Quintile 5, 6</i> (4) <i>Quintile 7, 8</i> (5) <i>Highest income quintile (quintile 9, 10).</i> |
| Smoking status | <p>Source: CCHS</p> <p>Question: Several variables examining the number of cigarettes smoked per day currently and formerly, a binary measure of having ever smoked 100 or more cigarettes</p> <p>Analytic classification:</p> <ul style="list-style-type: none"> (1) <i>Current smoker:</i> smokes daily (smoked at least 100 lifetime cigarettes) (2) <i>Former smoker:</i> smoked regularly or occasionally in the past and no longer does (including smoked at least 100 lifetime cigarettes) (3) <i>Never smoker:</i> has indicated no current or former smoking habits, or has smoked less than 100 lifetime cigarettes |

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|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Alcohol consumption | <p>Source: CCHS</p> <p>Question: Several variables examining frequency and amount of alcohol consumption</p> <p>Analytic classification:</p> <ul style="list-style-type: none"> (1) <i>Regular and binge drinker:</i> has consumed alcohol in the past year with a frequency ranging from once a month to daily, and has engaged in binge drinking (defined as 4 drinks for females and 5 drinks for males in one sitting) at any frequency (2) <i>Regular drinker:</i> has consumed alcohol in the past year with a frequency ranging from once a month to daily, and has never engaged in binge drinking (3) <i>Occasional:</i> has consumed alcohol in the past year with a frequency of less than once per month (4) <i>Non-drinker:</i> no alcohol consumption in the past year |
| Physical activity level | <p>Source: CCHS</p> <p>Question: This variable is based on the participants' leisure time total daily Energy Expenditure values (kcal/kg/day). <i>Energy Expenditure for each activity = (N X D X METvalue) / 365</i> N=number of times a respondent engaged in an activity over a 12 month period D= average duration in hours of the activity MET value=the energy cost of the activity expressed as kilocalories expended per kilogram of body weight per hour of activity (kcal/kg per hour)/365 (to convert yearly data into daily data); the low-intensity MET value was used for calculations.</p> <p>Analytic classification:</p> <ul style="list-style-type: none"> (1) <i>Active</i> ($EE \geq 3$) (2) <i>Moderately active</i> ($1.5 \leq EE < 3$) (3) <i>Inactive</i> ($0 \leq EE < 1.5$) |
| Body mass index (BMI) | <p>Source: CCHS</p> <p>Question: Self-reported height and weight</p> <p>Analytic classification: International standard of BMI classification (kg/m²) for adults aged 18 and over</p> <ul style="list-style-type: none"> (1) <i>Underweight</i> (<18.5) (2) <i>Normal</i> (18.5-24.9) (3) <i>Overweight</i> (25-29.9) (4) <i>Moderately obese</i> (30-34.9) (5) <i>Very obese</i> (≥ 35) |

Supplementary Table 2A: Fully adjusted rate ratios^{a,b} and 95% confidence intervals for counts of (i) hospitalization or emergency department visits, or (ii) outpatient visits for any mental health condition, excluding participants had any mental health visit three years prior to or 1 year following interview (N=84,528)

| Hospital or emergency department visit | |
|-----------------------------------------------|--------------------|
| <i>Very satisfied or satisfied</i> | Ref. |
| <i>Neither</i> | 1.51 (0.74, 3.08) |
| <i>Dissatisfied</i> | 2.23 (1.27, 3.89) |
| <i>Very dissatisfied</i> | 3.97 (0.40, 40.54) |
| Outpatient visit | |
| <i>Very satisfied or satisfied</i> | Ref. |
| <i>Neither</i> | 1.19 (0.97, 1.46) |
| <i>Dissatisfied</i> | 1.72 (1.06, 2.79) |
| <i>Very dissatisfied</i> | 2.15 (1.21, 3.83) |

Supplementary Table 2B: Fully adjusted rate ratios^{a,b} and 95% confidence intervals for counts of (i) hospitalization or emergency department visits, or (ii) outpatient visits for any mental health condition, additionally adjusting for self-rated mental health (N=131,809)

| Hospital or emergency department visit | |
|-----------------------------------------------|-------------------|
| <i>Very satisfied or satisfied</i> | Ref. |
| <i>Neither</i> | 1.45 (0.93, 2.24) |
| <i>Dissatisfied</i> | 1.46 (1.10, 1.95) |
| <i>Very dissatisfied</i> | 2.23 (1.28, 3.86) |
| Outpatient visit | |
| <i>Very satisfied or satisfied</i> | Ref. |
| <i>Neither</i> | 1.16 (1.02, 1.32) |
| <i>Dissatisfied</i> | 1.31 (1.11, 1.55) |
| <i>Very dissatisfied</i> | 1.04 (0.80, 1.34) |

Source: pooled participants of the Canadian Community Health Survey surveyed from 2005 to 2014, linked to the Registered Persons Database, Canadian Institute for Health Information Discharge Abstract Database, the Ontario Mental Health Reporting System, the National Ambulatory Care Reporting System, and the Ontario Health Insurance Plan billings databases.

^a Multivariable adjusted rate ratios from Poisson regressions (with balanced repeated replication to produce 95% confidence intervals) for a count of the number of (i) hospitalization or emergency department visits, or (ii) outpatient visits for any mental health condition, per person-days of follow-up, within 5 years following Canadian Community Health Survey interview.

^b Fully adjusted model includes self-rated mental health, age, sex, survey cycle, immigrant status, household income, having had any mental health visit in the three years prior to survey interview, smoking status, alcohol consumption, physical activity level, and body mass index with an additional adjustment for self-rated mental health.

Supplementary Table 3: Fully adjusted rate ratios^{a,b} and 95% confidence intervals for counts of (i) hospitalization or emergency department visits, or (ii) outpatient visits for any mental health condition, excluding participants who lost OHIP eligibility for more than 1 consecutive year (N=125,304).

| Hospital or emergency department visit | |
|-----------------------------------------------|-------------------|
| <i>Very satisfied or satisfied</i> | Ref. |
| <i>Neither</i> | 1.90 (1.30, 2.78) |
| <i>Dissatisfied</i> | 2.23 (1.70, 2.92) |
| <i>Very dissatisfied</i> | 3.82 (2.16, 6.73) |
| Outpatient visit | |
| <i>Very satisfied or satisfied</i> | Ref. |
| <i>Neither</i> | 1.64 (1.44, 1.86) |
| <i>Dissatisfied</i> | 2.22 (1.89, 2.61) |
| <i>Very dissatisfied</i> | 1.85 (1.42, 2.41) |

Source: pooled participants of the Canadian Community Health Survey surveyed from 2005 to 2014, linked to the Registered Persons Database, Canadian Institute for Health Information Discharge Abstract Database, the Ontario Mental Health Reporting System, the National Ambulatory Care Reporting System, and the Ontario Health Insurance Plan billings databases.

^a Multivariable adjusted rate ratios from Poisson regressions (with balanced repeated replication to produce 95% confidence intervals) for a count of the number of (i) hospitalization or emergency department visits, or (ii) outpatient visits for any mental health condition, per person-days of follow-up, within 5 years following Canadian Community Health Survey interview.

^b Fully adjusted model includes age, sex, survey cycle, immigrant status, household income, having had any mental health visit in the three years prior to survey interview, smoking status, alcohol consumption, physical activity level, and body mass index.

Supplementary Table 4: Fully adjusted rate ratios^{a,b} and 95% confidence intervals for counts of (i) hospitalization or emergency department visits, or (ii) outpatient visits for any mental health condition, with missing income observations categorized as a separate category (N=131,809).

| Hospital or emergency department visit | |
|-----------------------------------------------|-------------------|
| <i>Very satisfied or satisfied</i> | Ref. |
| <i>Neither</i> | 1.87 (1.29, 2.72) |
| <i>Dissatisfied</i> | 2.28 (1.77, 2.94) |
| <i>Very dissatisfied</i> | 3.67 (2.12, 6.38) |
| Outpatient visit | |
| <i>Very satisfied or satisfied</i> | Ref. |
| <i>Neither</i> | 1.61 (1.42, 1.83) |
| <i>Dissatisfied</i> | 2.19 (1.87, 2.56) |
| <i>Very dissatisfied</i> | 1.82 (1.41, 2.35) |

Source: pooled participants of the Canadian Community Health Survey surveyed from 2005 to 2014, linked to the Registered Persons Database, Canadian Institute for Health Information Discharge Abstract Database, the Ontario Mental Health Reporting System, the National Ambulatory Care Reporting System, and the Ontario Health Insurance Plan billings databases.

^a Multivariable adjusted rate ratios from Poisson regressions (with balanced repeated replication to produce 95% confidence intervals) for a count of the number of (i) hospitalization or emergency department visits, or (ii) outpatient visits for any mental health condition, per person-days of follow-up, within 5 years following Canadian Community Health Survey interview.

^b Fully adjusted model includes age, sex, survey cycle, immigrant status, household income, having had any mental health visit in the three years prior to survey interview, smoking status, alcohol consumption, physical activity level, and body mass index.

Supplementary Table 5: Fully adjusted rate ratios^{a,b} and 95% confidence intervals for counts of (i) hospitalization or emergency department visits, or (ii) outpatient visits for any mental health condition, stratified by age group (18-59 years/60 years and over; N=131,809).

| Hospital or emergency department visit | 18-59 years (N=83,851) | 60 years and over (N=47,958) |
|-----------------------------------------------|-----------------------------------|-----------------------------------------|
| <i>Very satisfied or satisfied</i> | Ref. | Ref. |
| <i>Neither</i> | 1.96 (1.33, 2.94) | 1.31 (0.95, 1.80) |
| <i>Dissatisfied</i> | 2.29 (1.72, 3.04) | 2.53 (1.72, 3.72) |
| <i>Very dissatisfied</i> | 3.69 (1.98, 6.89) | 3.81 (1.86, 7.83) |
| Outpatient visit | | |
| <i>Very satisfied or satisfied</i> | Ref. | Ref. |
| <i>Neither</i> | 1.68 (1.45, 1.96) | 1.33 (1.08, 1.65) |
| <i>Dissatisfied</i> | 2.26 (1.91, 2.69) | 1.44 (1.17, 1.77) |
| <i>Very dissatisfied</i> | 1.77 (1.30, 2.41) | 1.65 (1.25, 2.19) |

Source: pooled participants of the Canadian Community Health Survey surveyed from 2005 to 2014, linked to the Registered Persons Database, Canadian Institute for Health Information Discharge Abstract Database, the Ontario Mental Health Reporting System, the National Ambulatory Care Reporting System, and the Ontario Health Insurance Plan billings databases.

^a Multivariable adjusted rate ratios from Poisson regressions (with balanced repeated replication to produce 95% confidence intervals) for a count of the number of (i) hospitalization or emergency department visits, or (ii) outpatient visits for any mental health condition, per person-days of follow-up, within 5 years following Canadian Community Health Survey interview.

^b Fully adjusted model includes age, sex, survey cycle, immigrant status, household income, having had any mental health visit in the three years prior to survey interview, smoking status, alcohol consumption, physical activity level, and body mass index.