Table S1: Data inclusion and exclusions with sample sizes for perceived mental health, symptoms of stress and sleep problems, professionally diagnosed mental illness, suicidality, substance use, and mental health service use.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Outcome** | **Data Exclusions** | **Proportion of the Total Sample (n=71,700)** | | | | | | | |
| 2011  (n=10,700) | 2012  (n=10,100) | 2013  (n=10,200) | 2014  (n=9800) | 2015  (n=7700) | 2016  (n=8100) | 2017  (n=7900) | 2018  (n=7200) |
| Perceived Mental Health | Included  (n=69,500) | 97.7% | 98.0% | 97.6% | 98.1% | 97.0% | 97.1% | 96.7% | 96.3% |
| Missing Data | 2.3% | 2.0% | 2.4% | 1.9% | 3.0% | 2.9% | 3.3% | 3.7% |
| Persistent  Sleep Problems | Included  (n=24,100) | 38.1% | 38.3% | 4.2% | 15.4% | 45.3% | 46.1% | 46.1% | 44.7% |
| Optional Content | 60.8% | 61.0% | 95.8% | 84.3% | 53.1% | 52.2% | 52.7% | 54.0% |
| Missing Data | 1.0% | 0.7% | 0.1% | 0.3% | 1.6% | 1.8% | 1.1% | 1.3% |
| Persistent Stress | Included  (n = 71,500) | 99.9% | 99.7% | 99.9% | 99.7% | 99.8% | 99.8% | 99.5% | 99.7% |
| Missing Data | 0.1% | 0.3% | 0.1% | 0.3% | 0.2% | 0.2% | 0.5% | 0.3% |
| Mood Disorder  (Professional diagnosis) | Included  (n = 71,600) | 99.8% | 99.9% | 99.9% | 99.8% | 99.5% | 99.7% | 99.8% | 99.6% |
| Missing Data | 0.2% | 0.1% | 0.1% | 0.2% | 0.5% | 0.3% | 0.2% | 0.4% |
| Anxiety Disorder  (Professional diagnosis) | Included  (n = 71,500) | 99.8% | 99.9% | 99.8% | 99.8% | 99.6% | 99.8% | 99.7% | 99.7% |
| Missing Data | 0.2% | 0.1% | 0.2% | 0.2% | 0.4% | 0.2% | 0.3% | 0.3% |
| Suicidality  (Past 12 months) | Included  (n = 16,800) | 12.2% | 12.3% | 12.3% | 12.7% | 77.3% | 76.4% | - | - |
| Optional Content | 84.2% | 84.3% | 83.5% | 83.3% | - | - | - | - |
| Age <15 years old | 3.2% | 3.1% | 3.6% | 3.4% | 20.2% | 21.3% | - | - |
| Missing Data | 0.4% | 0.3% | 0.5% | 0.6% | 2.6% | 2.3% | - | - |
| Binge Drinking  (Past 12 months) | Included  (n = 71,000) | 98.7% | 99.2% | 98.8% | 98.6% | 99.6% | 99.5% | 99.6% | 99.5% |
| Missing Data | 1.3% | 0.8% | 1.2% | 1.4% | 0.4% | 0.5% | 0.4% | 0.5% |
| Cannabis Use  (Past 12 months) | Included  (n = 23,600) | 42.6% | 42.2% | 15.5% | 13.8% | 50.0% | 50.4% | 44.2% | 44.3% |
| Optional Content | 55.7% | 56.4% | 83.9% | 85.6% | 48.2% | 47.2% | 53.7% | 53.3% |
| Missing Data | 1.7% | 1.4% | 0.6% | 0.6% | 1.8% | 2.5% | 2.1% | 2.4% |
| Illicit Drug Use  (Past 12 months) | Included  (n = 23,600) | 42.6% | 42.1% | 15.5% | 13.8% | 49.9% | 50.3% | 44.1% | 44.3% |
| Optional Content | 55.7% | 56.4% | 83.9% | 85.6% | 48.2% | 47.2% | 53.7% | 53.3% |
| Missing Data | 1.7% | 1.5% | 0.6% | 0.6% | 1.8% | 2.5% | 2.2% | 2.4% |
| Mental Health Consultations  (Past 12 months) | Included  (n=53,800) | 96.4% | 97.0% | 76.7% | 77.3% | 96.6% | 96.7% | 24.3% | 24.5% |
| Optional Content | - | - | 20.1% | 19.6% | - | - | 75.1% | 74.9% |
| Missing Data | 3.6% | 3.0% | 3.2% | 3.2% | 3.4% | 3.3% | 0.6% | 0.6% |

Table S2: Provinces that provided data on poor or fair perceived mental health, professionally diagnosed mental illness, symptoms of stress and sleep problems, suicidality, substance use, and mental health service use each year.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Outcome** | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
| Perceived Mental Health | All provinces / territories | All provinces / territories | All provinces / territories | All provinces / territories | All provinces | All provinces | All provinces | All provinces |
| Persistent Sleep Problems | NS, QB, MB , AB, YT, NWT | NS, QB, MB , AB, YT | PEI, MB | PEI, MB, AB, NWT | ON, MB, SK, | ON, MB, SK | PEI, QB, AB, BC, | PEI, QB, AB, BC |
| Persistent Stress | All provinces / territories | All provinces / territories | All provinces / territories | All provinces / territories | All provinces | All provinces | All provinces | All provinces |
| Mood Disorder  (Professional diagnosis) | All provinces / territories | All provinces / territories | All provinces / territories | All provinces / territories | All provinces | All provinces | All provinces | All provinces |
| Anxiety Disorder  (Professional diagnosis) | All provinces / territories | All provinces / territories | All provinces / territories | All provinces / territories | All provinces | All provinces | All provinces | All provinces |
| Suicidality  (Past 12 months) | NL, SK, AB, NVT | NL, SK, AB, NVT | NL, PEI, NB, BC, NVT | NL, PEI, NB, BC, NVT | All provinces | All provinces | None | None |
| Binge Drinking  (Past 12 months) | All provinces / territories | All provinces / territories | All provinces / territories | All provinces / territories | All provinces | All provinces | All provinces | All provinces |
| Cannabis Use  (Past 12 months) | ON, SK, NVT | ON, SK, NVT | NL, NB, BC, NVT | NL, BC, NVT | ON, AB | ON, AB | NB, ON, MB | NB, ON, MB |
| Illicit Drug Use  (Past 12 months) | ON, SK, NVT | ON, SK, NVT | NL, NB, BC, NVT | NL, BC, NVT | ON, AB | ON, AB | NB, ON, MB | NB, ON, MB |
| Mental Health Consultations  (Past 12 months) | All provinces / territories | All provinces / territories | NL, QB, ON, MB, BC, NWT, NVT | NL, QB, ON, MB, BC, NWT, NVT | All provinces | All provinces | NL, NS, QB | NL, NS, QB |

NL = Newfoundland; PEI = Prince Edward Island; NS = Nova Scotia; NB = New Brunswick; ON = Ontario; QB = Quebec; MB = Manitoba; SK = Saskatchewan; AB = Alberta; BC = British Colombia

Table S3: Prevalence of poor or fair perceived mental health among youth 12 to 24 years old from 2011 to 2018 (N=71,700).

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Prevalence (95%CI) | | | | | | | |
|  | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
| **Perceived Mental Health**  **(Poor)** |  |  |  |  |  |  |  |  |
| Total Sample | 0.7%  (0.4%, 0.9%) | 1.2%  (0.7%, 1.6%) | 0.9%  (0.6%, 1.1%) | 0.9%  (0.6%, 1.2%) | 0.8%  (0.5%, 1.1%) | 1.2%  (0.8%, 1.6%) | 2.2%  (1.5%, 3.0%) | 2.2%  (1.5%, 2.9%) |
| Males: 12 to 18 years | 0.6%  (0.1%, 1.0%) | 0.5%  (0.0%, 0.9%) | 0.3%  (0.1%, 0.6%) | 0.4%  (0.1%, 0.6%) | 0.4%  (0.1%, 0.6%) | 1.0%  (0.0%, 2.4%) | 0.6%  (0.3%, 1.0%) | 0.9%  (0.3%, 1.5%) |
| Females: 12 to 18 years | 0.6%  (0.2%, 1.0%) | 1.6%  (0.6%, 2.5%) | 1.3%  (0.7%, 1.9%) | 0.9%  (0.5%, 1.4%) | 0.7%  (0.2%, 1.2%) | 1.2%  (0.6%, 1.8%) | 1.7%  (1.0%, 2.4%) | 3.0%  (1.6%, 4.3%) |
| Males: 19 to 24 years | 0.8%  (0.2%, 1.4%) | 1.0%  (0.4%, 1.6%) | 0.9%  0.3%, 1.4%) | 0.8%  (0.3%, 1.4%) | 1.4%  (0.5%, 2.2%) | 1.0%  (0.5%, 1.5%) | 1.9%  (0.9%, 2.9%) | 1.9%  (0.7%, 3.1%) |
| Females: 19 to 24 years | 0.8%  (0.3%, 1.3%) | 1.7%  (0.6%, 2.8%) | 1.0%  (0.6%, 1.5%) | 1.5%  (0.8%, 2.2%) | 0.6%  (0.3%, 1.0%) | 1.5%  (0.8%, 2.2%) | 4.7%  (1.9%, 7.4%) | 3.1%  (1.2%, 5.0%) |
| **Perceived Mental Health**  **(Fair)** |  |  |  |  |  |  |  |  |
| Total Sample | 3.5%  (3.0%, 4.0%) | 3.9%  (3.2%, 4.6%) | 4.2%  (3.6%, 4.8%) | 5.2%  (4.4%, 5.9%) | 5.4%  (4.6%, 6.2%) | 6.2%  (5.3%, 7.1%) | 6.8%  (5.9%, 7.6%) | 7.7%  (6.7%, 8.8%) |
| Males: 12 to 18 years | 2.2%  (1.5%, 2.8%) | 2.2%  (1.5%, 2.8%) | 3.7%  (2.5%, 4.9%) | 3.4%  (2.2%, 4.7%) | 2.8%  (1.9%, 3.7%) | 3.2%  (2.2%, 4.3%) | 3.3%  (2.2%, 4.3%) | 4.6%  (3.1%, 6.2%) |
| Females: 12 to 18 years | 3.2%  (2.4%, 4.1%) | 3.3%  (2.4%, 4.2%) | 4.8%  (3.6%, 6.0%) | 5.5%  (4.2%, 6.8%) | 5.6%  (4.1%, 7.0%) | 5.5%  (4.2%, 6.8%) | 6.9%  (5.2%, 8.6%) | 6.5%  (4.7%, 8.4%) |
| Males: 19 to 24 years | 4.1%  (2.8%, 5.3%) | 4.2%  (2.8%, 5.6%) | 4.2%  (2.8%, 5.6%) | 4.7%  (3.3%, 6.2%) | 4.7%  (3.2%, 6.2%) | 6.5%  (4.4%, 8.6%) | 6.4%  (4.6%, 8.2%) | 7.4%  (5.3%, 9.5%) |
| Females: 19 to 24 years | 4.6%  (3.3%, 6.0%) | 5.9%  (3.5%, 8.2%) | 4.1%  (3.0%, 5.2%) | 7.1%  (5.4%, 8.8%) | 8.6%  (6.3%, 10.9%) | 9.7%  (7.3%, 12.1%) | 10.6%  (8.5%, 12.8%) | 12.5%  (9.7%, 15.3%) |

Table S4: Meta regression and meta-analysis output for the prevalence of poor and fair perceived mental health among youth 12 to 24 years old from 2011 to 2018, stratified by age and sex groups (N=71,700).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Meta-Regression Output | | Meta-Analysis Output | | |
| Mental Health Outcome | Annual % change (95%CI) | *p* | Pooled Prevalence (95%CI) | I2 | Tau2 |
| **Perceived Mental Health**  **(Poor)** | **2011 to 2018** |  |  |  |  |
| Total Sample | 0.2% (0.0%, 0.3%) | 0.036 | - | - | - |
| Males: 12 to 18 years | 0.0% (0.0%, 0.1%) | 0.249 | 0.4% (0.3%, 0.6%) | 0.0% | 0.0000 |
| Females: 12 to 18 years | 0.2% (-0.1%, 0.4%) | 0.124 | 1.2% (0.8%, 1.5%) | 67.1% | 0.0000 |
| Males: 19 to 24 years | 0.1% (0.0%, 0.3%) | 0.119 | 1.0% (0.8%, 1.3%) | 0.0% | 0.0000 |
| Females: 19 to 24 years | 0.2% (-0.1%, 0.6%) | 0.189 | 1.3% (0.8%, 1.7%) | 68.1% | 0.0000 |
| **Perceived Mental Health**  **(Fair)** | **2011 to 2018** |  |  |  |  |
| Total Sample | 0.6% (0.4%, 0.7%) | <0.001 | - | - | - |
| Males: 12 to 18 years | 0.2% (0.1%, 0.4%) | 0.015 | - | - | - |
| Females: 12 to 18 years | 0.5% (0.3%, 0.8%) | 0.002 | - | - | - |
| Males: 19 to 24 years | 0.4% (0.1%, 0.7%) | 0.014 | - | - | - |
| Females: 19 to 24 years | 1.2% (0.6%, 1.7%) | 0.002 | - | - | - |

Table S5: Prevalence of other illicit drug use, including cocaine, methamphetamine, ecstasy, and hallucinogen use among the total sample of youth 12 to 24 years old from 2011 to 2018 (N=23,600).

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Prevalence (95%CI) | | | | | | | |
| **Other Illicit Drug Use** | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
| Cocaine | 1.6%  (1.1%, 2.1%) | 2.0%  (1.1%, 2.8%) | 2.8%  (1.5%, 4.2%) | 2.0%  (1.0%, 3.0%) | 1.9%  (1.2%, 2.7%) | 2.9%  (1.9%, 3.9%) | 2.3%  (1.4%, 3.3%) | 3.6%  (2.1%, 5.2%) |
| Methamphetamine (Speed) | 0.5%  (0.2%, 0.8%) | 0.2%  (0.0%, 0.4%) | 1.0%  (0.4%, 1.5%) | 0.5%  (0.1%, 1.0%) | 0.4%  (0.1%, 0.6%) | 1.0%  (0.2%, 1.8%) | 0.7%  (0.1%, 1.4%) | 0.3%  (0.1%, 0.5%) |
| Ecstasy (MDMA) | 2.3%  (1.6%, 3.1%) | 2.1%  (1.2%, 3.0%) | 2.9%  (1.8%, 4.0%) | 3.0%  (1.6%, 4.3%) | 2.5%  (1.6%, 3.3%) | 2.6%  (1.7%, 3.6%) | 2.4%  (1.4%, 3.4%) | 1.9%  (0.9%, 2.9%) |
| Hallucinogens | 1.1%  (0.6%, 1.6%) | 0.9%  (0.4%, 1.4%) | 2.1%  (0.9%, 3.3%) | 1.6%  (0.4%, 2.8%) | 2.0%  (1.2%, 2.7%) | 2.5%  (1.7%, 3.3%) | 1.8%  (1.2%, 2.4%) | 3.1%  (1.9%, 4.2%) |

Table S6: Meta regression and meta-analysis output for the prevalence of other illicit drug use, by type of drug, among youth 12 to 24 years old from 2011 to 2018, stratified by age and sex groups (N=23,600).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Meta-Regression Output | | Meta-Analysis Output | | |
| Type of Illicit Drug | Annual % change (95%CI) | *p* | Pooled Prevalence (95%CI) | I2 | Tau2 |
| **Cocaine** |  |  |  |  |  |
| Total | 0.17% (0.01%, 0.33%) | 0.038 | - | - | - |
| Males: 12 to 18 years | 0% (-0.18%, 0.18%) | 0.995 | 0.5% (0.2%, 0.8%) | 74.1% | 0.0000 |
| Females: 12 to 18 years | 0.01% (-0.16%, 0.17%) | 0.903 | 0.5% (0.2%, 0.7%) | 38.9% | 0.0000 |
| Males: 19 to 24 years | 0.19% (-0.23%, 0.60%) | 0.31 | 4.4% (3.5%, 5.2%) | 0.0% | 0.0000 |
| Females: 19 to 24 years | 0.33% (-0.01, 0.68%) | 0.057 | 2.2% (1.5%, 2.9%) | 31.9% | 0.0000 |
| **Methamphetamine (Speed)** |  |  |  |  |  |
| Total | 0% (-0.1%, 0.1%) | 0.979 | 0.4% (0.3%, 0.6%) | 52.1% | 0.0000 |
| Males: 12 to 18 years | -0.02% (-0.06%, 0.03%) | 0.383 | 0.1% (0%, 0.2%) | 0.0% | 0.0000 |
| Females: 12 to 18 years | 0% (-0.03%, 0.03%) | 0.778 | 0.1% (0%, 0.1%) | 9.0% | 0.0000 |
| Males: 19 to 24 years | -0.02% (-0.18%, 0.14%) | 0.821 | 0.9% (0.6%, 1.2%) | 0.0% | 0.0000 |
| Females: 19 to 24 years | -0.01% (-0.06, 0.04) | 0.658 | 0.1% (0.0%, 0.2%) | 13.0% | 0.0000 |
| **Ecstasy (MDMA)** |  |  |  |  |  |
| Total | -0.02% (-0.19%, 1.6%) | 0.837 | 2.4% (2.1%, 2.7%) | 0.0% | 0.0000 |
| Males: 12 to 18 years | -0.04% (-0.21%, 0.13%) | 0.596 | 0.4% (0.2%, 0.7%) | 72.2% | 0.0000 |
| Females: 12 to 18 years | -0.11% (-0.25%, 0.03%) | 0.094 | 0.7% (0.3%, 1.1%) | 54.1% | 0.0000 |
| Males: 19 to 24 years | -0.27% (-0.66%, 0.12%) | 0.143 | 4.2% (3.4%, 5.0%) | 0.0% | 0.0000 |
| Females: 19 to 24 years | 0.13% (-0.40%, 0.65%) | 0.583 | 2.8% (2.0%, 3.6%) | 21.2% | 0.0000 |
| **Hallucinogens** |  |  |  |  |  |
| Total | 0.22% (0.06%, 0.39%) | 0.015 | - | - | - |
| Males: 12 to 18 years a | 0.17% (0.01%, 0.32%) | 0.042 | 0.6% (0.3%, 0.9%) | 63.3% | 0.0000 |
| Females: 12 to 18 years | 0.01% (-0.05%, 0.08%) | 0.636 | 0.2% (0.1%, 0.3%) | 30.3% | 0.0000 |
| Males: 19 to 24 years | 0.34% (-0.07%, 0.75%) | 0.089 | 3.9% (3.0%, 4.8%) | 12.2% | 0.0000 |
| Females: 19 to 24 years | 0.17% (-0.05%, 0.39%) | 0.109 | 0.12% (0.08%, 1.7%) | 17.8% | 0.0000 |

1. The increase in the prevalence of past year hallucinogen use among 12 to 18-year-old males (α=0.05) suggests that pooling estimates across survey years is not appropriate. However, since sex-specific annual estimates could not be presented due to sample size restrictions, the pooled prevalence is reported.

Table S7: Prevalence of poor or fair perceived mental health, professionally diagnosed mental illness, symptoms of stress and sleep problems, suicidality, substance use, and mental health service use among youth 12 to 24 years old from 2011 to 2018, stratified by age and sex groups (N=71,700).

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Prevalence (95%CI) | | | | | | | |
|  | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
| **Perceived Mental Health**  **(Poor/Fair)** |  |  |  |  |  |  |  |  |
| Total Sample | 4.2%  (3.6%, 4.8%) | 5.0%  (4.2%, 5.9%) | 5.1%  (4.4%, 5.7%) | 6.0%  (5.3%, 6.8%) | 6.2%  (5.3%, 7.0%) | 7.4%  (6.4%, 8.3%) | 9.0%  (7.9%, 10.1%) | 9.9%  (8.7%, 11.1%) |
| Males: 12 to 18 years | 2.7%  (1.9%, 3.5%) | 2.6%  (1.8%, 3.4%) | 4.0%  (2.7%, 5.2%) | 3.8%  (2.5%, 5.0%) | 3.2%  (2.3%, 4.1%) | 4.2%  (2.6%, 5.8%) | 3.9%  (2.8%, 5.0%) | 5.5%  (3.9%, 7.2%) |
| Females: 12 to 18 years | 3.8%  (2.8%, 4.8%) | 4.9%  (3.6%, 6.2%) | 6.1%  (4.7%, 7.5%) | 6.4%  (5.1%, 7.7%) | 6.3%  (4.8%, 7.7%) | 6.7%  (5.3%, 8.1%) | 8.6%  (6.7%, 10.4%) | 9.5%  (7.2%, 11.8%) |
| Males: 19 to 24 years | 4.8%  (3.5%, 6.2%) | 5.2%  (3.6%, 6.7%) | 5.1%  (3.6%, 6.5%) | 5.6%  (4.0%, 7.2% | 6.1%  (4.3%, 7.8%) | 7.5%  (5.3%, 9.7%) | 8.3%  (6.3%, 10.3%) | 9.3%  (6.9%, 11.8%) |
| Females: 19 to 24 years | 5.4%  (4.0%, 6.8%) | 7.5%  (4.9%, 10.1%) | 5.1%  (3.9%, 6.3%) | 8.5%  (6.7%, 10.3%) | 9.2%  (7.0%, 11.5%) | 11.2%  (8.8%, 13.7%) | 15.3%  (11.9%, 18.7%) | 15.6%  (12.2%, 18.9%) |
| **Persistent Sleep Problems**  **(Most / All of the time)** |  |  |  |  |  |  |  |  |
| Total Sample | 14.8%  (13.0%, 16.5%) | 14.3%  (12.5%, 16.1%) | 14.4%  (10.2%, 18.7%) | 13.8%  (11.2%, 16.3%) | 11.6%  (9.8%, 13.4%) | 14.1%  (12.1%, 16.1%) | 16.5%  (14.8%, 18.1%) | 16.4%  (14.6%, 18.2%) |
| Males: 12 to 18 years | 9.2%  (7.1%, 11.2%) | 10.9%  (8.4%, 13.4%) | 7.1%  (2.5%, 11.6%) | 9.2%  (5.6%, 12.7%) | 7.0%  (4.6%, 9.4%) | 9.3%  (5.9%, 12.8%) | 12.5%  (10.0%, 15.1%) | 11.7%  (8.7%, 14.7%) |
| Females: 12 to 18 years | 13.3%  (10.6%, 15.9%) | 14.6%  (11.2%, 18.1%) | 19.2%  (11.5%, 27.0%) | 15.4%  (10.4%, 20.3%) | 11.9%  (9.2%, 14.6%) | 15.7%  (12.1%, 19.3%) | 16.2%  (13.6%, 18.8%) | 20.8%  (17.3%, 24.4%) |
| Males: 19 to 24 years | 16.6%  (12.4%, 20.9%) | 10.3%  (6.4%, 14.1%) | 14.5%  (5.7%, 23.3%) | 10.4%  (5.6%, 15.3%) | 9.3%  (5.6%, 13.1%) | 11.2%  (7.8%, 14.6%) | 12.7%  (9.6%, 15.8%) | 11.8%  (8.3%, 15.3%) |
| Females: 19 to 24 years | 20.3%  (16.1%, 24.4%) | 21.7%  (16.8%, 26.6%) | 17.9%  (6.9%, 29.0%) | 21.0%  (14.6%, 27.5%) | 19.0%  (13.9%, 24.1%) | 20.8%  (16.0%, 25.7%) | 24.7%  (20.1%, 29.3%) | 21.8%  (17.4%, 26.3%) |
| **Persistent Stress (Most days are quite a bit / extremely stressful)** |  |  |  |  |  |  |  |  |
| Total Sample | 18.4%  (17.2%, 19.6%) | 16.8%  (15.6%, 18.0%) | 17.1%  (15.9%, 18.4%) | 19.1%  (17.8%, 20.3%) | 18.1%  (16.6%, 19.5%) | 16.0%  (14.7%, 17.2%) | 18.3%  (16.8%, 19.8%) | 17.6%  (16.2%, 19.0%) |
| Males: 12 to 18 years | 10.9%  (9.1%, 12.8%) | 10.8%  (8.8%, 12.7%) | 9.4%  (7.7%, 11.1%) | 11.0%  (9.4%, 12.6%) | 10.0%  (8.0%, 12.0%) | 9.1%  (7.2%, 10.9%) | 8.6%  (7.0%, 10.2%) | 10.5%  (8.3%, 12.7%) |
| Females: 12 to 18 years | 18.5%  (16.3%, 20.7%) | 16.2%  (14.3%, 18.2%) | 16.8%  (14.8%, 18.9%) | 18.5%  (16.4%, 20.6%) | 17.1%  (14.8%, 19.3%) | 18.3%  (16.0%, 20.7%) | 16.7%  (14.3%, 19.1%) | 19.3%  (16.8%, 21.9%) |
| Males: 19 to 24 years | 18.0%  (15.5%, 20.4%) | 16.5%  (13.8%, 19.1%) | 16.8%  (14.2%, 19.3%) | 20.3%  (17.6%, 23.1%) | 20.4%  (16.7%, 24.1%) | 13.7%  (11.4%, 16.0%) | 21.0%  (17.6%, 24.4%) | 17.5%  (14.3%, 20.6%) |
| Females: 19 to 24 years | 26.6%  (23.6%, 29.6%) | 24.2%  (21.0%, 27.4%) | 26.2%  (23.1%, 29.2%) | 26.6%  (23.3%, 29.9%) | 25.1%  (21.7%, 28.6%) | 23.3%  (20.0%, 26.7%) | 27.6%  (23.8%, 31.5%) | 23.6%  (19.9%, 27.3%) |
| **Mood Disorder**  **(Professional diagnosis)** |  |  |  |  |  |  |  |  |
| Total Sample | 4.3%  (3.8%, 4.8%) | 5.1%  (4.4%, 5.8%) | 5.2%  (4.6%, 5.8%) | 5.9%  (5.2%, 6.6%) | 7.1%  (6.1%, 8.0%) | 7.7%  (6.7%, 8.6%) | 7.5%  (6.7%, 8.3%) | 7.8%  (6.8%, 8.9%) |
| Males: 12 to 18 years | 2.1%  (1.5%, 2.7%) | 2.4%  (1.5%, 3.3%) | 3.0%  (2.2%, 3.8%) | 2.6%  (1.7%, 3.5%) | 5.7%  (4.0%, 7.4%) | 4.1%  (2.6%, 5.7%) | 2.9%  (2.1%, 3.7%) | 3.8%  (2.6%, 5.0%) |
| Females: 12 to 18 years | 3.4%  (2.5%, 4.3%) | 4.0%  (2.9%, 5.1%) | 4.8%  (3.8%, 5.9%) | 5.4%  (4.3%, 6.5%) | 6.0%  (4.7%, 7.3%) | 6.9%  (5.6%, 8.3%) | 7.1%  (5.6%, 8.7%) | 6.7%  (5.1%, 8.3%) |
| Males: 19 to 24 years | 4.2%  (3.1%, 5.3%) | 5.6%  (4.0%, 7.2%) | 4.7%  (3.6%, 5.9%) | 4.8%  (3.6%, 6.0%) | 6.1%  (4.1%, 8.2%) | 6.2%  (4.5%, 7.9%) | 6.9%  (5.3%, 8.5%) | 6.9%  (4.8%, 9.1%) |
| Females: 19 to 24 years | 7.7%  (6.2%, 9.2%) | 8.5%  (6.6%, 10.3%) | 8.5%  (6.8%, 10.3%) | 11.0%  (9.0%, 13.0%) | 10.7%  (8.4%, 12.9%) | 13.7%  (11.3%, 16.1%) | 13.6%  (11.1%, 16.1%) | 14.3%  (11.4%, 17.1%) |
| **Anxiety Disorder**  **(Professional diagnosis)** |  |  |  |  |  |  |  |  |
| Total Sample | 6.0%  (5.3%, 6.7%) | 6.7%  (5.9%, 7.5%) | 7.1%  (6.3%, 7.8%) | 8.2%  (7.3%, 9.1%) | 10.2%  (9.0%, 11.3%) | 11.1%  (10.0%, 12.2%) | 10.9%  (9.8%, 12.1%) | 12.9%  (11.8%, 14.1%) |
| Males: 12 to 18 years | 3.9%  (3.0%, 4.8%) | 4.7%  (3.5%, 6.0%) | 5.9%  (4.6%, 7.3%) | 4.9%  (3.7%, 6.0%) | 7.8%  (6.0%, 9.6%) | 7.3%  (5.5%, 9.2%) | 5.6%  (4.5%, 6.7%) | 7.8%  (6.2%, 9.5%) |
| Females: 12 to 18 years | 5.6%  (4.1%, 7.1%) | 6.8%  (5.4%, 8.3%) | 7.0%  (5.7%, 8.3%) | 8.1%  (6.8%, 9.5%) | 10.6%  (8.8%, 12.4%) | 11.3%  (9.4%, 13.3%) | 10.9%  (9.0%, 12.8%) | 15.4%  (12.8%, 18.0%) |
| Males: 19 to 24 years | 5.8%  (4.2%, 7.3%) | 5.6%  (4.0%, 7.1%) | 5.0%  (3.8%, 6.2%) | 7.4%  (5.5%, 9.3%) | 7.1%  (5.2%, 9.0%) | 9.8%  (7.3%, 12.3%) | 8.8%  (6.7%, 10.9%) | 10.0%  (7.7%, 12.4%) |
| Females: 19 to 24 years | 8.9%  (7.4%, 10.5%) | 9.8%  (7.8%, 11.9%) | 10.7%  (8.7%, 12.7%) | 12.6%  (10.1%, 15.1%) | 15.8%  (12.5%, 19.1%) | 16.2%  (13.8%, 18.7%) | 18.9%  (15.4%, 22.4%) | 18.9%  (16.0%, 21.9%) |
| **Suicidality**  **(Past 12 months)** |  |  |  |  |  |  |  |  |
| Total Sample | 3.0%  (1.9%, 4.1%) | 5.7%  (3.8%, 7.5%) | 5.1%  (3.6%, 6.7%) | 4.6%  (3.1%, 6.1%) | 5.3%  (4.4%, 6.2%) | 5.8%  (4.9%, 6.8%) | – | – |
| Males: 12 to 18 years | 2.1%  (0.0%, 4.2%) | 5.1%  (1.1%, 4.2%) | 2.6%  (0.6%, 4.7%) | 2.7%  (0.7%, 4.6%) | 4.5%  (2.5%, 6.4%) | 3.6%  (2.4%, 4.9%) | – | – |
| Females: 12 to 18 years | 5.8%  (2.4%, 9.1%) | 12.6%  (5.5%, 19.8%) | 7.3%  (3.4%, 11.1%) | 8.2%  (3.6%, 12.8%) | 7.8%  (5.7%, 10.0%) | 7.1%  (4.9%, 9.2%) | – | – |
| Males: 19 to 24 years | 3.2%  (1.2%, 5.2%) | 2.9%  (0.9%, 4.9%) | 4.2%  (1.7%, 6.7%) | 5.4%  (2.1%, 8.7%) | 3.4%  (2.1%, 4.7%) | 5.0%  (3.3%, 6.6%) | – | – |
| Females: 19 to 24 years | 1.8%  (0.3%, 3.3%) | 4.3%  (2.0%, 6.6%) | 6.2%  (2.6%, 9.8%) | 2.8%  (0.5%, 5.2%) | 6.5%  (4.4%, 8.6%) | 7.4%  (5.3%, 9.4%) | – | – |
| **Binge Drinking**  **(Past 12 months)** |  |  |  |  |  |  |  |  |
| Total Sample | 25.5%  (24.2%, 26.8%) | 22.9%  (21.6%, 24.3%) | 23.3%  (21.9%, 24.8%) | 21.0%  (19.8%, 22.2%) | 20.7%  (19.2%, 22.3%) | 19.3%  (17.9%, 20.8%) | 19.2%  (17.8%, 20.5%) | 17.6%  (16.1%, 19.1%) |
| Males: 12 to 18 years | 11.0%  (9.4%, 12.6%) | 10.0%  (8.3%, 11.7%) | 10.1%  (8.5%, 11.7%) | 7.0%  (5.6%, 8.3%) | 8.3%  (6.4%, 10.1%) | 7.3%  (5.7%, 8.9%) | 6.7%  (5.4%, 8.0%) | 5.4%  (4.1%, 6.6%) |
| Females: 12 to 18 years | 7.7%  (6.3%, 9.1%) | 6.3%  (5.0%, 7.7%) | 7.5%  (5.8%, 9.3%) | 7.5%  (6.1%, 8.9%) | 6.6%  (4.9%, 8.2%) | 7.2%  (5.6%, 8.7%) | 6.4%  (4.8%, 8.1%) | 5.9%  (4.3%, 7.5%) |
| Males: 19 to 24 years | 51.3%  (48.1%, 54.5%) | 43.3%  (39.8%, 46.8%) | 43.1%  (39.6%, 46.5%) | 39.5%  (36.3%, 42.7%) | 36.0%  (32.1%, 39.9%) | 33.7%  (30.0%, 37.5%) | 35.3%  (31.8%, 38.8%) | 33.5%  (29.8%, 37.3%) |
| Females: 19 to 24 years | 33.6%  (30.5%, 36.6%) | 32.3%  (29.0%, 35.7%) | 32.8%  (29.4%, 36.1%) | 29.1%  (26.0%, 32.3%) | 31.1%  (27.2%, 34.9%) | 29.8%  (26.4%, 33.3%) | 28.6%  (25.2%, 31.9%) | 25.7%  (22.1%, 29.3%) |
| **Cannabis Use**  **(Past 12 months)** |  |  |  |  |  |  |  |  |
| Total Sample | 22.0%  (19.9%, 24.0%) | 20.8%  (18.7%, 22.9%) | 22.4%  (19.3%, 25.6%) | 22.3%  (18.7%, 25.9%) | 18.6%  (16.3%, 20.9%) | 20.8%  (18.5%, 23.0%) | 19.8%  (17.6%, 22.1%) | 25.7%  (22.8%, 28.6%) |
| Males: 12 to 18 years | 16.1%  (13.0%, 19.1%) | 13.2%  (10.7%, 15.7%) | 12.0%  (8.1%, 15.9%) | 11.8%  (7.9%, 15.7%) | 9.8%  (6.9%, 12.7%) | 11.4%  (8.7%, 14.1%) | 10.7%  (7.6%, 13.8%) | 16.3%  (12.1%, 20.4%) |
| Females: 12 to 18 years | 10.9%  (8.4%, 13.4%) | 11.2%  (8.3%, 14.1%) | 11.9%  (8.3%, 15.5%) | 14.8%  (10.4%, 19.3%) | 8.9%  (5.8%, 12.1%) | 8.2%  (5.5%, 11.0%) | 11.9%  (8.0%, 15.8%) | 12.8%  (8.9%, 16.8%) |
| Males: 19 to 24 years | 34.7%  (29.6%, 39.8%) | 35.3%  (30.2%, 40.5%) | 36.2%  (28.2%, 44.3%) | 32.0%  (24.1%, 39.8%) | 31.7%  (25.8%, 37.7%) | 33.9%  (28.4%, 39.5%) | 32.4%  (26.5%, 38.3%) | 41.9%  (34.9%, 48.9%) |
| Females: 19 to 24 years | 25.7%  (20.7%, 30.6%) | 24.0%  (19.6%, 28.3%) | 30.7%  (23.3%, 38.2%) | 29.6%  (20.3%, 38.9%) | 22.6%  (17.9%, 27.2%) | 28.6%  (23.0%, 34.2%) | 24.8%  (19.8%, 29.8%) | 31.4%  (24.5%, 38.3%) |
| **Other Illicit Drug Use**  **(Past 12 months)** |  |  |  |  |  |  |  |  |
| Total Sample | 4.1%  (3.1%, 5.1%) | 4.0%  (2.9%, 5.2%) | 5.8%  (4.0%, 7.5%) | 4.9%  (3.2%, 6.7%) | 4.4%  (3.4%, 5.5%) | 5.2%  (3.9%, 6.5%) | 4.2%  (3.1%, 5.4%) | 6.0%  (4.1%, 7.8%) |
| Males: 12 to 18 years | 1.6%  (0.8%, 2.4%) | 1.6%  (0.1%, 3.0%) | 2.2%  (0.8%, 3.7%) | 1.9%  (0.1%, 3.8%) | 2.7%  (1.0%, 4.4%) | 1.9%  (0.8%, 2.9%) | 1.1%  (0.1%, 2.1%) | 3.1%  (1.2%, 5.1%) |
| Females: 12 to 18 years | 1.3%  (0.4%, 2.2%) | 1.9%  (0.6%, 3.2%) | 2.7%  (0.8%, 4.6%) | 3.0%  (0.8%, 5.3%) | 1.9%  (0.6%, 3.2%) | 1.7%  (0.6%, 2.8%) | 2.8%  (0.4%, 5.2%) | 0.4%  (0.0%, 0.7%) |
| Males: 19 to 24 years | 8.7%  (6.1%, 11.3%) | 10.2%  (6.3%, 14.1%) | 12.9%  (7.4%, 18.3%) | 9.2%  (4.1%, 14.3%) | 8.8%  (5.9%, 11.8%) | 9.7%  (5.9%, 13.5%) | 7.9%  (5.2%, 10.7%) | 10.3%  (5.8%, 14.8%) |
| Females: 19 to 24 years | 4.4%  (2.1%, 6.8%) | 2.7%  (1.1%, 4.3%) | 5.8%  (2.3%, 9.3%) | 5.2%  (2.3%, 8.1%) | 3.8%  (1.9%, 5.6%) | 7.3%  (4.2%, 10.4%) | 5.2%  (2.6%, 7.9%) | 10.0%  (5.1%, 14.8%) |
| **Mental Health Consultation**  **(Past 12 months)** |  |  |  |  |  |  |  |  |
| Total Sample | 11.7%  (10.8%, 12.7%) | 11.9%  (10.8%, 13.0%) | 11.0%  (9.9%, 12.1%) | 11.5%  (10.4%, 12.7%) | 14.4%  (13.1%, 15.7%) | 15.9%  (14.6%, 17.2%) | 17.3%  (15.1%, 19.6%) | 17.0%  (14.7%, 19.4%) |
| Males: 12 to 18 years | 7.3%  (5.9%, 8.7%) | 7.3%  (6.0%, 8.7%) | 7.3%  (5.6%, 9.1%) | 8.4%  (6.5%, 10.4%) | 9.6%  (7.7%, 11.4%) | 11.3%  (9.3%, 13.3%) | 11.5%  (8.2%, 14.7%) | 7.4%  (5.0%, 9.8%) |
| Females: 12 to 18 years | 13.2%  (11.2%, 15.2%) | 12.9%  (11.0%, 14.7%) | 11.5%  (9.6%, 13.4%) | 11.8%  (9.8%, 13.7%) | 15.3%  (13.1%, 17.6%) | 17.3%  (15.1%, 19.6%) | 18.0%  (14.1%, 21.8%) | 20.1%  (15.7%, 24.5%) |
| Males: 19 to 24 years | 8.9%  (7.1%, 10.8%) | 9.1%  (7.1%, 11.2%) | 8.0%  (6.0%, 10.0%) | 8.2%  (5.8%, 10.5%) | 11.0%  (8.4%, 13.6%) | 11.1%  (8.6%, 13.6%) | 9.7%  (6.4%, 13.0%) | 14.9%  (9.8%, 20.0%) |
| Females: 19 to 24 years | 17.6%  (15.1%, 20.0%) | 18.4%  (15.5%, 21.4%) | 17.6%  (14.6%, 20.5%) | 17.9%  (14.9%, 21.0%) | 22.2%  (19.1%, 25.4%) | 24.4%  (21.2%, 27.6%) | 31.2%  (25.0%, 37.4%) | 25.6%  (19.4%, 31.8%) |

Table S8: Meta regression and meta-analysis output for the prevalence of fair/poor perceived mental health, professionally diagnosed mental illness, symptoms of stress and sleep problems, suicidality, substance use, and mental health service use among youth 12 to 24 years old from 2011 to 2018, stratified by age and sex groups (N=71,700).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Meta-Regression Output | | Meta-Analysis Output | | |
| Mental Health Outcome | Annual % change (95%CI) | *p* | Pooled Prevalence (95%CI) | I2 | Tau2 |
| **Perceived Mental Health**  **(Poor/Fair)** | **2011 to 2018** |  |  |  |  |
| Males: 12 to 18 years | 0.3% (0.1%, 0.5%) | 0.018 | – | – | – |
| Females: 12 to 18 years | 0.7% (0.4%, 1.0%) | 0.001 | – | – | – |
| Males: 19 to 24 years | 0.6% (0.2%, 0.9%) | 0.006 | – | – | – |
| Females: 19 to 24 years | 1.5% (0.8%, 2.2%) | 0.002 | – | – | – |
| **Perceived Mental Health**  **(Poor)** | **2011 to 2018** |  |  |  |  |
| Males: 12 to 18 years | 0.0% (0.0%, 0.1%) | 0.249 | 0.4% (0.3%, 0.6%) | 0.0% | 0.0000 |
| Females: 12 to 18 years | 0.2% (-0.1%, 0.4%) | 0.124 | 1.2% (0.8%, 1.5%) | 67.1% | 0.0000 |
| Males: 19 to 24 years | 0.1% (0.0%, 0.3%) | 0.119 | 1.0% (0.8%, 1.3%) | 0.0% | 0.0000 |
| Females: 19 to 24 years | 0.2% (-0.1%, 0.6%) | 0.189 | 1.3% (0.8%, 1.7%) | 68.1% | 0.0000 |
| **Perceived Mental Health**  **(Fair)** | **2011 to 2018** |  |  |  |  |
| Males: 12 to 18 years | 0.2% (0.1%, 0.4%) | 0.015 | - | - | - |
| Females: 12 to 18 years | 0.5% (0.3%, 0.8%) | 0.002 | - | - | - |
| Males: 19 to 24 years | 0.4% (0.1%, 0.7%) | 0.014 | - | - | - |
| Females: 19 to 24 years | 1.2% (0.6%, 1.7%) | 0.002 | - | - | - |
| **Persistent Sleep Problems**  **(Most / All of the time)** | **2011 to 2018** |  |  |  |  |
| Males: 12 to 18 years | 0.3% (-0.4%, 1.1%) | 0.352 | 9.7% (8.3%, 11.1%) | 49.1% | 0.0002 |
| Females: 12 to 18 years | 0.6% (-0.3%, 1.6%) | 0.148 | 15.5% (13.4%, 17.6%) | 64.2% | 0.0005 |
| Males: 19 to 24 years | -0.3% (-1.1%, 0.6%) | 0.494 | 11.8% (10.3%, 13.4%) | 15.7% | 0.0001 |
| Females: 19 to 24 years | 0.3% (-0.6%, 1.2%) | 0.418 | 21.3% (19.5%, 23.1%) | 0.0% | 0.0000 |
| **Persistent Stress (Most days are quite a bit / extremely stressful)** | **2011 to 2018** |  |  |  |  |
| Males: 12 to 18 years | -0.2% (-0.6%, 0.1%) | 0.173 | 10.0% (9.3%, 10.7%) | 6.9% | 0.0000 |
| Females: 12 to 18 years | 0.1% (-0.3%, 0.6%) | 0.482 | 17.6% (16.8%, 18.4%) | 0.0% | 0.0000 |
| Males: 19 to 24 years | 0.1% (-0.9%, 1.1%) | 0.845 | 17.8% (16.1%, 19.6%) | 68.0% | 0.0004 |
| Females: 19 to 24 years | -0.2% (-0.8%, 0.5%) | 0.484 | 25.4% (24.3%, 26.6%) | 0.0% | 0.0000 |
| **Mood Disorder**  **(Professional diagnosis)** | **2011 to 2018** |  |  |  |  |
| Males: 12 to 18 years | 0.2% (-0.1%, 0.6%) | 0.145 | 3.1% (2.5%, 3.7%) | 69.8% | 0.0001 |
| Females: 12 to 18 years | 0.6% (0.3%, 0.8%) | 0.001 | – | – | – |
| Males: 19 to 24 years | 0.4% (0.1%, 0.7%) | 0.018 | – | – | – |
| Females: 19 to 24 years | 1.0% (0.6%, 1.4%) | 0.002 | – | – | – |
| **Anxiety Disorder**  **(Professional diagnosis)** | **2011 to 2018** |  |  |  |  |
| Males: 12 to 18 years | 0.4% (0.1%, 0.8%) | 0.029 | – | – | – |
| Females: 12 to 18 years | 1.2% (0.8%, 1.5%) | <0.001 | – | – | – |
| Males: 19 to 24 years | 0.7% (0.3%, 1.1%) | 0.007 | – | – | – |
| Females: 19 to 24 years | 1.5% (1.1%, 2.0%) | <0.001 | – | – | – |
| **Suicidality**  **(Past 12 months)** | **2011 to 2016** |  |  |  |  |
| Males: 12 to 18 years | 0.3% (-0.3%, 0.9%) | 0.280 | 3.3% (2.5%, 4.1%) | 0.0% | 0.0000 |
| Females: 12 to 18 years | 0.1% (-0.9%, 1.1%) | 0.818 | 7.4% (6.2%, 8.6%) | 0.0% | 0.0000 |
| Males: 19 to 24 years | 0.3% (-0.3%, 0.9%) | 0.272 | 3.8% (3.1%, 4.6%) | 0.0% | 0.0000 |
| Females: 19 to 24 years | 1.0% (0.1%, 1.9%) | 0.040 | – | – | – |
| **Binge Drinking**  **(Past 12 months)** | **2011 to 2018** |  |  |  |  |
| Males: 12 to 18 years | -0.7% (-1.1%, -0.4%) | 0.001 | – | – | – |
| Females: 12 to 18 years | -0.2% (-0.4%, 0.1%) | 0.248 | 6.9% (6.4%, 7.5%) | 0.0% | 0.0000 |
| Males: 19 to 24 years | -2.4% (-3.3%, -1.4%) | 0.001 | – | – | – |
| Females: 19 to 24 years | -1.0% (-1.6%, -0.3%) | 0.011 | – | – | – |
| **Cannabis Use**  **(Past 12 months) a** | **2011 to 2018** |  |  |  |  |
| Males: 12 to 18 years | -0.3% (-1.2%, 0.6%) | 0.434 | 12.5% (11.0%, 14.1%) | 49.0% | 0.0003 |
| Females: 12 to 18 years | 0% (-0.8%, 0.7%) | 0.888 | 10.9% (9.6%, 12.3%) | 27.4% | 0.0001 |
| Males: 19 to 24 years | 0.2% (-1.0%, 1.3%) | 0.746 | 34.6% (32.5%, 36.7%) | 0.0% | 0.0000 |
| Females: 19 to 24 years | 0.4% (-0.9%, 1.6%) | 0.503 | 26.2% (24.0%, 28.3%) | 17.6% | 0.0002 |
| **Other Illicit Drug Use b**  **(Past 12 months)** | **2011 to 2018** |  |  |  |  |
| Males: 12 to 18 years | 0.0% (-0.2%, 0.2%) | 0.788 | 1.8% (1.3%, 2.2%) | 0.0% | 0.0000 |
| Females: 12 to 18 years | -0.1% (-0.5%, 0.2%) | 0.324 | 1.7% (0.9%, 2.5%) | 73.1% | 0.0001 |
| Males: 19 to 24 years | -0.1% (-0.7%, 0.6%) | 0.778 | 9.2% (8.0%, 10.4%) | 0.0% | 0.0000 |
| Females: 19 to 24 years | 0.5% (-0.1%, 1.2%) | 0.099 | 4.9% (3.6%, 6.3%) | 51.9% | 0.0002 |
| **Mental Health Consultation**  **(Past 12 months)** | **2011 to 2018** |  |  |  |  |
| Males: 12 to 18 years | 0.4% (-0.1%, 1.0%) | 0.114 | 8.6% (7.4%, 9.7%) | 64.7% | 0.0002 |
| Females: 12 to 18 years | 1.0% (0.2%, 1.8%) | 0.018 | – | – | – |
| Males: 19 to 24 years | 0.5% (-0.1%, 1.0%) | 0.089 | 9.5% (8.4%, 10.6%) | 36.3% | 0.0001 |
| Females: 19 to 24 years | 1.5% (0.6%, 2.5%) | 0.007 | – | – | – |

1. From 2011 to 2017, there was a significant decrease in prevalence of past year cannabis among males 12 to 18 years old: Δ = -0.8% (95%CI: -1.5%, 0.0%); p=0.043 (α=0.05).

Table S9: Meta regression and meta-analysis output for the prevalence of fair/poor perceived mental health, professionally diagnosed mental illness, symptoms of stress and sleep problems, suicidality, substance use, and mental health service use, restricted to provinces that provided data each year (N=71,700).

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Prevalence | | | | | | | | | | | | | Meta-Regression Output | | Meta-Analysis Output a | | |
|  | 2011 | 2012 | | | 2013 | 2014 | 2015 | | | 2016 | 2017 | 2018 | | Annual % change  (95%CI) | *p* | Pooled Prevalence  (95%CI) | I2 | Tau2 |
| **Perceived Mental Health and Symptoms of Depression** |  | |  |  | |  | |  |  | |  | |  |  |  |  |  |  |
| Perceived Mental Health a  (Fair/Poor) | **4.2%** | **5.0%** | | | **5.1%** | **6.0%** | **6.2%** | | | **7.4%** | **9.0%** | **9.9%** | | **0.8%**  **(0.5%, 1.0%)** | **<0.001** | – | – | – |
| Persistent Sleep Problems c  (Most / All of the time) | 18.4% | 13.9% | | | 14.3% | 13.8% | 10.2% | | | 12.1% | 15.7% | 16.7% | | -0.2%  (-1.2%, 0.9%) | 0.727 | 14.2%  (12.4%, 16.1%) | 64.6% | 0.0004 |
| Persistent Stress a (Most days are quite a bit / extremely stressful) | 18.4% | 16.9% | | | 17.1% | 19.1% | 18.1% | | | 16.0% | 18.3% | 17.6% | | 0.0%  (-0.5%, 0.4%) | 0.830 | 17.7%  (16.9%, 18.4%) | 57.8% | 0.0001 |
| **Mental Illness and Suicidality** |  | |  |  | |  | |  |  | |  | |  |  |  |  |  |  |
| Mood Disorder a  (Professional diagnosis) | **4.3%** | **5.1%** | | | **5.2%** | **5.9%** | **7.1%** | | | **7.7%** | **7.5%** | **7.8%** | | **0.6%**  **(0.4%, 0.7%)** | **<0.001** | – | – | – |
| Anxiety disorder a  (Professional diagnosis) | **6.0%** | **6.7%** | | | **7.1%** | **8.2%** | **10.2%** | | | **11.1%** | **10.9%** | **12.9%** | | **1.0%**  **(0.8%, 1.2%)** | **<0.001** | – | – | – |
| Suicidality b  (Past 12 months) | 5.1% | 2.7% | | | 3.8% | 3.7% | 7.1% | | | 5.1% | – | – | | 0.5%  (-0.5%, 1.4%) | 0.225 | 4.4%  (3.3%, 5.5%) | 15.3% | 0.0000 |
| **Substance Use** |  | |  |  | |  | |  |  | |  | |  |  |  |  |  |  |
| Binge drinking a  (Past 12 months) | **25.5%** | **22.9%** | | | **23.3%** | **21.0%** | **20.7%** | | | **19.3%** | **19.2%** | **17.6%** | | **- 1.0%**  **(-1.3%, -0.8%)** | **<0.001** | – | – | – |
| Cannabis Use d  (Past 12 months) | 22.1% | 20.7% | | | - | - | 19.5% | | | 20.9% | 20.3% | 25.8% | | 0.2%  (-0.8%, 1.2%) | 0.645 | 21.4%  (19.9%, 22.9%) | 52.7% | 0.0002 |
| Other Illicit Drug Use d  (Past 12 months) | 4.0% | 4.1% | | | - | - | 4.5% | | | 4.8% | 4.2% | 6.2% | | 0.1%  (-0.2%, 0.4%) | 0.248 | 4.4%  (3.9%, 4.9%) | 0% | 0.0000 |
| **Mental Health Service Use** |  | |  |  | |  | |  |  | |  | |  |  |  |  |  |  |
| Mental Health Consultation e  (Past 12 months) | **12.6%** | **12.2%** | | | **9.3%** | **12.2%** | **13.3%** | | | **14.8%** | **16.0%** | **16.9%** | | **0.8%**  **(0.1%, 1.5%)** | **0.025** | – | – | – |

1. All provinces (Nova Scotia, New Brunswick, Newfoundland, Prince Edward Island, Ontario, Quebec, Manitoba, Saskatchewan, Alberta, British Colombia)
2. Maritimes (Nova Scotia, New Brunswick, Newfoundland, Prince Edward Island)
3. Prairies (Manitoba, Saskatchewan, Alberta)
4. Ontario
5. Quebec