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Team

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- **Field work supervisor**: Ana M. Colón Parrilla, MA
- **Research assistant**: Joyce Cabán Reyes, MSW
- **Administration**: Mrs. Linnette Santana Morales
Objetives

- Describe patterns of substance use among students from public and public schools, from intermediate and superior level.
- Analyze trends over time of substance use from 1994 to 2018-20.
- Identify risk and protective factors associated to substance use among the individual, family, peers, school, and community.
- Describe behaviours (violence, mental health, suicidality, sexuality) from students in 7th to 12th grade of public and private schools.
Methodology
Scope of the survey

- **Sampling frame**
  - All public and private schools from Puerto Rico, including Vieques and Culebra.

- **Stratified cluster sample, by:**
  - 12 service areas from ASSMCA
  - Level: intermediate (7th – 9th) or superior (10th – 12th)
Desing and data collection instrument

- Cross-sectional survey based on school population
- Structured self-administered questionnaire
Data analysis

- Weighted sample of the total school population from intermediate levels (7th – 9th) and superior levels (10th - 12th) from Puerto Rico corresponding to the year of the Survey.
Student participation

- Participants: 8,645
- Participation: 77.7%
- Absent: 11.9%
- Rejected: 10.4%
Students from 7th to 12th grade that participated in the survey by sex and grade, Youth Population Survey 2018-20

Sex

- 50.0%
- 50.0%

Grade

<table>
<thead>
<tr>
<th>Grade</th>
<th>Intermediate</th>
<th>Superior</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>18.8%</td>
<td>10</td>
</tr>
<tr>
<td>8</td>
<td>18.8%</td>
<td>11</td>
</tr>
<tr>
<td>9</td>
<td>14.9%</td>
<td>12</td>
</tr>
</tbody>
</table>

n = 8,603
Scope of the presentation

- Prevalence and trends of substance use
  - Tobacco
  - Alcohol
    - Drink ≥5 drinks on the same occasion (*binge drinking*)
  - Pharmaceuticals without a medical prescription
  - Illicit drugs: marijuana, synthetic marijuana, inhalants, cocaine, heroin, crack, designer drugs
- Use of vaping devices
Results (Cont.)

- Mental health and personality
- Suicidal behaviour
- Risk perception
- Violence
Tobacco
Past year prevalence of tobacco use among students from 7th to 12th grade by survey wave, Youth Population Survey, 1994-2020*

- Used weights from the Youth Population Survey V (2000-02) are adjusted by absenteeism on the day of the survey. Used weights in previous surveys (I a IV) Weighted the total of the school population but are not adjusted by absenteeism on the day of the survey.
Tobacco use among students from 7th to 12th grade, Youth Population Survey 2018-20*

During the past year:
- Ever: 8.7%
- Past year: 6.1%
- Past month: 5.1%

- Overall: n = 8,603

* Includes use of cigarettes, chewed tobacco, snuff or dip, cigars, small or thin cigars, and other tobacco products.
Sources of access to tobacco during the past month among students from 7th to 12th grade, Youth Population Survey 2018-20*

<table>
<thead>
<tr>
<th>Places</th>
<th>Persons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grocery stores, gas stations, stores</td>
<td>From parents</td>
</tr>
<tr>
<td>Pubs, clubs, bars, discos</td>
<td>From other adults</td>
</tr>
<tr>
<td>Cigarette machines</td>
<td>Asked to be given as a gift</td>
</tr>
<tr>
<td>From parents</td>
<td>From brothers or friends</td>
</tr>
<tr>
<td></td>
<td>Gave money to someone</td>
</tr>
</tbody>
</table>

During the past 30 days:

- Grocery stores, gas stations, stores: 21.4%
- Pubs, clubs, bars, discos: 10.7%
- Cigarette machines: 3.9%
- From parents: 8.5%
- From other adults: 9.8%
- Asked to be given as a gift: 15.2%
- From brothers or friends: 28.6%
- Gave money to someone: 32.6%

* Among all students (4.7%) who informed they had access to the substance from any source.
Past year prevalence of tobacco use among students from 7th to 12th grade by service area from ASSMCA, Youth Population Survey 2018-20

<table>
<thead>
<tr>
<th>Service Area</th>
<th>Past Year Prevalence (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Área Metro</td>
<td>5.4</td>
</tr>
<tr>
<td>Arecibo</td>
<td>2.8</td>
</tr>
<tr>
<td>Bayamón</td>
<td>5.0</td>
</tr>
<tr>
<td>Caguas</td>
<td>12.7</td>
</tr>
<tr>
<td>Fajardo</td>
<td>7.4</td>
</tr>
<tr>
<td>Guayama</td>
<td>5.2</td>
</tr>
<tr>
<td>Mayagüez</td>
<td>5.3</td>
</tr>
<tr>
<td>Moca</td>
<td>5.1</td>
</tr>
<tr>
<td>Ponce</td>
<td>4.6</td>
</tr>
<tr>
<td>Utuado</td>
<td>7.2</td>
</tr>
<tr>
<td>Todos</td>
<td>6.1</td>
</tr>
</tbody>
</table>

n = 8,603
Alcoholic beverages
Past year prevalence of use of alcoholic beverages among students from 7th to 12th grade by survey wave, Youth Population Survey, 1994-2020*

- Used weights from the Youth Population Survey V (2000-02) are adjusted by absenteeism on the day of the survey. Used weights in previous surveys (I a IV) Weighted the total of the school population but are not adjusted by absenteeism on the day of the survey.
Use of alcoholic beverages among students from 7th to 12th grade, Youth Population Survey 2018-20

During the past year:

- Ever: 33.6%
- Past year: 32.6%
- Past month: 55.9%

n = 8,603
Sources of access to alcoholic beverages during the past month among students from 7th to 12th grade, Youth Population Survey 2018-20*

Among all students (20.3%) who informed they had access to the substance from any source.

* During the past 30 days:
  - 21.1% from brothers
  - 12.8% from other adults
  - 21.2% from friends
  - 25.8% from parents
  - 13.6% otherwise

- At parties, festivals, local holidays: 33.5%
- Pubs, clubs, bars, discos: 20.3%
- Grocery stores, gas stations, stores: 18.5%
- From Sport activities: 5.8%
- From brothers: 5.4%
- From other adults: 12.8%
- From friends: 21.2%
- From parents: 25.8%
- Otherwise: 13.6%
## Past year prevalence of alcoholic beverages use among students from 7th to 12th grade by service area from ASSMCA, Youth Population Survey VIII 2018-20

### Table

<table>
<thead>
<tr>
<th>Service Area</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Área Metro</td>
<td>31.8</td>
</tr>
<tr>
<td>Arecibo</td>
<td>25.6</td>
</tr>
<tr>
<td>Bayamón</td>
<td>31.5</td>
</tr>
<tr>
<td>Caguas</td>
<td>39.6</td>
</tr>
<tr>
<td>Fajardo</td>
<td>31.0</td>
</tr>
<tr>
<td>Guayama</td>
<td>32.7</td>
</tr>
<tr>
<td>Mayagüez</td>
<td>44.3</td>
</tr>
<tr>
<td>Moca</td>
<td>36.6</td>
</tr>
<tr>
<td>Ponce</td>
<td>35.0</td>
</tr>
<tr>
<td>Utuado</td>
<td>20.9</td>
</tr>
<tr>
<td>Todos</td>
<td>33.0</td>
</tr>
</tbody>
</table>

n = 8,603
Drink ≥5 drinks on the same occasion (binge drinking)
Students from 7th to 12th who reported drinking ≥5 drinks in the same occasion (binge drinking) during the past month, Youth Population Survey 2018-20*

- Yes: 61.2%
- No: 38.8%

n = 1,889

* Drunk 5 or more drinks in the same occasion, among those who reported drinking alcohol in the past 30 days.
Past month prevalence of drinking ≥5 drinks in the same occasion (binge drinking), among students from 7th to 12th grade by survey wave, Youth Population Survey, 1994-2020*

* Used weights from the Youth Population Survey V (2000-02) are adjusted by absenteeism on the day of the survey. Used weights in previous surveys (I a IV) weighted the total of the school population but are not adjusted by absenteeism on the day of the survey.
Pharmaceuticals without a medical prescription
Past year prevalence of pharmaceuticals without medical prescription, among students from 7th to 12th grade by survey wave, Youth Population Survey, 1990-2020*

* Used weights from the Youth Population Survey V (2000-02) are adjusted by absenteeism on the day of the survey. Used weights in previous surveys (I a IV) weighted the total of the school population but are not adjusted by absenteeism on the day of the survey.
Pharmaceuticals without medical prescription used among students from 7th to 12th grade, Youth Population Survey, 2018-20*

* Among those who had ever used.
** Includes tablets used without a doctor's prescription to take a note.
Pharmaceuticals without medical prescription among students from 7th to 12th grade, Youth Population Survey, 2018-20*

During the past year:
- Ever: 4.9%
- Past year: 3.3%
- Past month: 2.1%
- 2.0% (female)
- 4.5% (male)

During the past year:
- Seventh: 0.7%
- Eighth: 2.4%
- Ninth: 2.8%
- Tenth: 3.0%
- Eleventh: 6.9%
- Twelfth: 4.3%

n = 8,603

* Includes tablets used without a doctor's prescription to take a note.
Past year prevalence of pharmaceuticals without medical prescription among students from 7th to 12th grade by service area from ASSMCA, Youth Population Survey VIII, 2018-20

<table>
<thead>
<tr>
<th>Service Area</th>
<th>% Prevalence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Área Metro</td>
<td>2.7</td>
</tr>
<tr>
<td>Arecibo</td>
<td>2.0</td>
</tr>
<tr>
<td>Bayamón</td>
<td>3.0</td>
</tr>
<tr>
<td>Caguas</td>
<td>6.1</td>
</tr>
<tr>
<td>Fajardo</td>
<td>4.8</td>
</tr>
<tr>
<td>Guayama</td>
<td>2.5</td>
</tr>
<tr>
<td>Mayagüez</td>
<td>1.1</td>
</tr>
<tr>
<td>Moca</td>
<td>2.6</td>
</tr>
<tr>
<td>Ponce</td>
<td>2.5</td>
</tr>
<tr>
<td>Utuado</td>
<td>3.7</td>
</tr>
<tr>
<td>Todos</td>
<td>3.3</td>
</tr>
</tbody>
</table>

n = 8,603
Use of illicit drugs
Past year prevalence of any illicit drug, among students from 7th to 12th grade by survey wave, Youth Population Survey, 1990-2020*

* Illicit drugs only include use of marijuana, synthetic marijuana, inhalants, cocaine, heroin, crack and designer drugs.

** Used weights from the Youth Population Survey V (2000-02) are adjusted by absenteeism on the day of the survey. Used weights in previous surveys (I a IV) weighted the total of the school population but are not adjusted by absenteeism on the day of the survey.
Use of illicit drugs among students from 7th to 12th grade, Youth Population Survey, 2018-20*

During the past year:

- Ever: 17.2%
- Past year: 11.7%
- Past month: 6.9%

Ever: 11.3%  Intermediate: 7.4%  Superior: 16.4%

N = 34,434  N = 23,404  N = 13,790

Illicit drugs only include use of marijuana, synthetic marijuana, inhalants, cocaine, heroin, crack and designer drugs.
I illicit drugs used in the past year, among students from 7th to 12th grade, Youth Population Survey, 2018-20*

<table>
<thead>
<tr>
<th>Ilicit Drugs Used</th>
<th>Percent (%)</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marijuana*</td>
<td>9.4</td>
<td>18,521</td>
</tr>
<tr>
<td>Inhalants</td>
<td>2.9</td>
<td>5,719</td>
</tr>
<tr>
<td>Synthetic marijuana</td>
<td>2.3</td>
<td>4,550</td>
</tr>
<tr>
<td>Designer drugs**</td>
<td>1.1</td>
<td>2,265</td>
</tr>
<tr>
<td>Crack</td>
<td>0.6</td>
<td>1,094</td>
</tr>
<tr>
<td>Cocaine***</td>
<td>0.5</td>
<td>1,075</td>
</tr>
<tr>
<td>Heroin</td>
<td>0.4</td>
<td>844</td>
</tr>
</tbody>
</table>

* Includes use of kripy and hashish. Excludes medical cannabis and synthetic marijuana.
** Includes use of ecstasy, ketamine, LSD, GHB, rohypnol and methamphetamine.
*** It does not include the use of crack.
Modes of marijuana use in the past year, among students from 7th to 12th grade, Youth Population Survey, 2018-20*

* Among those who had used in the past year.
Use of marijuana among students from 7th to 12th grade, Youth Population Survey, 2018-20*

During the past year:

- Ever: 13.0%
- Past year: 9.4%
- Past month: 5.6%

During the past year:

- Seventh: 0.7%
- Eighth: 2.4%
- Ninth: 2.8%
- Tenth: 3.0%
- Eleventh: 6.9%
- Twelfth: 4.3%

n = 8,603

* Includes use of kripy and hashish. Excludes medical cannabis and synthetic marijuana.
Past year prevalence of marijuana use, among students from 7th to 12th grade by survey wave, Youth Population Survey, 1990-2020*

* Used weights from the Youth Population Survey V (2000-02) are adjusted by absenteeism on the day of the survey. Used weights in previous surveys (I a IV) weighted the total of the school population but are not adjusted by absenteeism on the day of the survey.
Past year prevalence of marijuana use, among students from 7th to 12th grade by service area from ASSMCA, Youth Population Survey VIII 2018-20

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<tr>
<th>Service Area</th>
<th>Past Year Prevalence (%)</th>
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<tr>
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<td>8.9</td>
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<td>Arecibo</td>
<td>5.3</td>
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<tr>
<td>Bayamón</td>
<td>10.6</td>
</tr>
<tr>
<td>Caguas</td>
<td>11.6</td>
</tr>
<tr>
<td>Fajardo</td>
<td>11.2</td>
</tr>
<tr>
<td>Guayama</td>
<td>8.1</td>
</tr>
<tr>
<td>Mayagüez</td>
<td>10.6</td>
</tr>
<tr>
<td>Moca</td>
<td>9.2</td>
</tr>
<tr>
<td>Ponce</td>
<td>8.3</td>
</tr>
<tr>
<td>Utuado</td>
<td>5.3</td>
</tr>
<tr>
<td>Todos</td>
<td>9.4</td>
</tr>
</tbody>
</table>

n = 8,603
Use of vaping devices
Use of vaping devices among students from 7th to 12th grade, Youth Population Survey, 2018-20*

During the past year:

- Ever: 22.7% (N = 45,080)
- Past year: 15.8% (N = 31,169)

During the past year:

- 3.8% (Seventh)
- 11% (Eighth)
- 17.2% (Ninth)
- 19.4% (Tenth)
- 23.3% (Eleventh)
- 23.1% (Twelfth)

n = 8,603

* Includes the use of electronic cigarettes.
Substances consumed through *vaping devices* among students from 7th to 12th grade, Youth Population Survey, 2018-20*

* Among those who had ever used.

** Includes use of electronic cigarettes.
Suicidal behaviour
Suicide attempts among students from 7th to 12th grade, Youth Population Survey, 2018-20

During the past year:

- Ever: 11.8%
- Past year: 7.6%

During the past year:

- Intermediate: 7.5%
- Superior: 7.7%

n = 8,603
Risk perception
Perceived risk associated with substance use among students from 7th to 12th grade, Youth Population Survey, 2018-20

- Smoking one or more packs of cigarettes a day:
  - No risk: 8.3%
  - Some risk: 9.3%
  - High risk: 82.3%

- Drinking five or more drinks in a row once or twice a week:
  - No risk: 9.7%
  - Some risk: 19.0%
  - High risk: 71.3%

- Smoking marijuana at least 1 or 2 times per week:
  - No risk: 16.6%
  - Some risk: 29.1%
  - High risk: 54.3%

n = 8,603
Acknowledgments

We thank the authorities of the participating schools, the students at those schools, as well as their parents who cooperated in the completion of this survey.

We thank our field director, research assistant, data analyst, coordinators and interviewers for their valuable work in the collection of information.
¿Any Questions?