

YOUTH DRUG SURVEY 2020: MECKLENBURG COUNTY

SUMMARY REPORT OF SURVEY RESULTS

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TABLE OF CONTENTS

Executive Summary	4
Methodology.....	6
Sample.....	6
Trend Analysis.....	10
Comparison with State and National Data	11
30-day Substance Use by Age and Gender	12
Tobacco.....	13
30-day tobacco use.....	13
30-day tobacco use by school level	13
30-day tobacco use by race/ethnicity	14
Tobacco use by country of birth.....	16
Tobacco use in the home.....	16
Access to tobacco and use locations for youth under 18.....	17
Parent rules and tobacco use	17
Perceptions on why youth use tobacco.....	17
E-Cigarettes	18
E-cigarette use by race/ethnicity and school level.....	18
Examining factors related to e-cigarette use	19
Alcohol.....	20
30-day alcohol use.....	20
Alcohol use by country of birth	21
Gender differences in drink type.....	21
Age of onset.....	21
30-day alcohol use: binge drinking	22
Parental influence.....	22
Access to alcohol and use locations	23
Perceptions on why youth use alcohol.....	23
Alcohol at public events	24
Examining factors related to alcohol use	24
Prescription Drugs.....	25
30-day use of prescription drugs without a prescription	26
Use of prescription drugs: reasons, access, and use patterns.....	26
Differences in prescription drug misuse by race/ethnicity and school type.....	27
Prescription drug use without a prescription by country of birth.....	27
Age and gender as a predictor of prescription drug use.....	28
Examining factors related to prescription drug use without a prescription.....	29
Marijuana	30
30-day marijuana use	30
Marijuana use type	30
Marijuana use by race/ethnicity and school type.....	31
Marijuana use by country of birth.....	32
Access to marijuana and use locations	33
Marijuana use in the home	33
Why marijuana is used	33
Examining factors related to marijuana use	34
Other Substance Use	35
Trying multiple substances	35
Youth Behavior and Perceptions	36
Access	36

Parent disapproval.....	36
Peer disapproval	37
Perceived risk	38
Perceptions of use.....	38

EXECUTIVE SUMMARY

Since 1972, The Center for Prevention Services (CPS) (Formerly Substance Abuse Prevention Services and The Charlotte Drug Education Center) has implemented a countywide survey every two to three years. These data are collected to determine the current level of incidence and prevalence of alcohol, tobacco, marijuana, and other drug use among middle and high school age youth. Due to the longitudinal nature of the research, changes in local patterns and trends can be observed. Between December 2019 and January 2020, CPS administered the self-report Youth Drug Survey instrument to 7,952 youth in grades 6, 8, 10, and 12 across 58 schools in Mecklenburg County.

Below are some of the key findings from this research:

- **Alcohol emerged as the primary substance used by youth**, with 14.3% of youth in grades 6, 8, 10, and 12 reporting using alcohol in the past 30 days.
- Gender emerged as an important predictor in the type of alcohol used. **Youth who identified as male were more likely to choose beer, youth who identified as female were more likely to choose liquor/mixed drinks, and youth who identified as other were more likely to choose wine/wine coolers.** Of all the alcohol types, liquor/mixed drinks were the main type of alcohol used by youth.
- 30-day use of traditional cigarettes is at an all-time low (2.7%), though **the rate of e-cigarette use (11.7%) remains high**, particularly among White high school youth (27.1%).
- In general, rates for use of cigarettes, alcohol, and opioids without a prescription were lower in comparison to state and national averages, though rates for use of marijuana and e-cigarettes were higher than national averages.
- For the first time, the YDS captured **more detailed race and ethnicity data**, including categories for youth identifying as **Hawaiian/Pacific Islander and Middle Eastern**. Both groups were at risk for use of particular substances, pointing to potential new areas for prevention.
- When comparing racial and ethnic differences in substance use patterns, **White youth were particularly at risk for e-cigarette, cigarette and alcohol use** in comparison to their peers.
- 30-day use for prescription drug use without a prescription remained constant across middle and high school grade levels, suggesting use does not increase with age.
- When examining risk and protective factors, **parents, peers, norms, and access were all factors that can help explain youth substance use.** In general, peers emerged as

important predictors of cigarette and e-cigarette use, parents played important roles for alcohol use, and both peer and parental approval played a primary role in use of marijuana.

We believe the findings of the 2020 Youth Drug Survey will provide community members in Mecklenburg County critical data to understand youth substance use and focus prevention efforts. We hope that the results in this report contribute to the work of professionals across disciplines and fields to engage in reducing youth substance use behaviors across the county.

METHODOLOGY

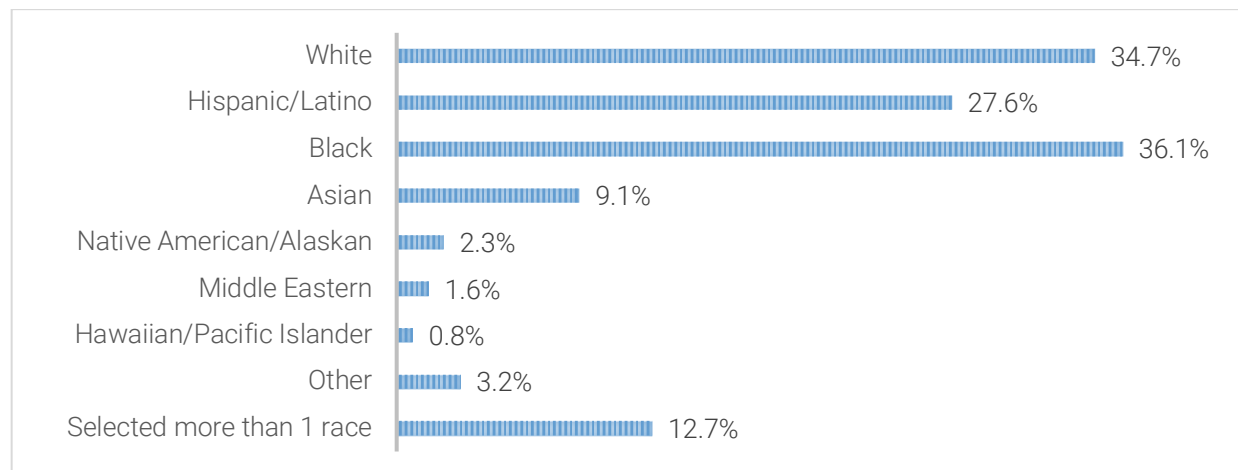
The 2020 Youth Drug Survey (YDS) is a school-based survey of youth substance use behaviors and perceptions. The target sample for the study was 20% of 6th, 8th, 10th, and 12th graders enrolled in a large metropolitan school district. The sample was obtained by surveying high school students enrolled in English/Language Arts classes and middle school students enrolled in 1st period classes of any subject across 58 schools. To protect student participants, all surveys were anonymous. As in 2018, the 2020 YDS was collected using an online survey tool. The data collection and survey design was reviewed by Solutions IRB Institutional Review Board to ensure the study met standards for ethical conduct of research, and was approved by the school district.

SAMPLE

The data shared in this report includes responses from 9,832 students. The sample was reduced to 7,952 students across 58 schools (**52.6% female, 46.3% male, 1.2% other**) to exclude responses that 1) did not complete any information on substance use behaviors, 2) were not enrolled in 6th, 8th, 10th, or 12th grade, or 3) failed response checker questions.

The sample included **25.4% 6th grade students, 25.5% 8th grade students, 26.5% 10th grade students, and 22.7% 12th grade students**. Figure 1 presents students' self-reported race and ethnicity, with youth having the option to select more than one group.

Figure 1: Sample race and ethnicity for 2020 Youth Drug Survey (n=7952)

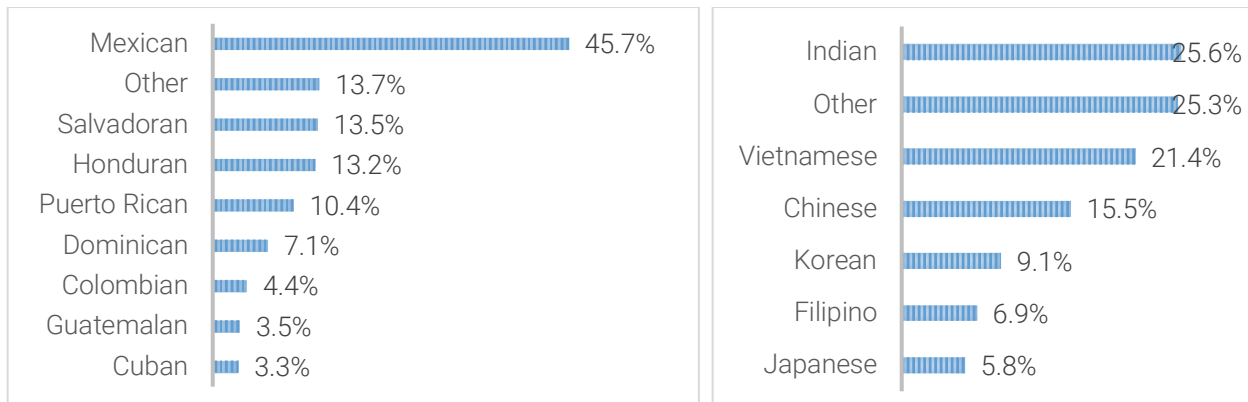


10.7% First generation immigrants

1.8% Completed the survey in Spanish

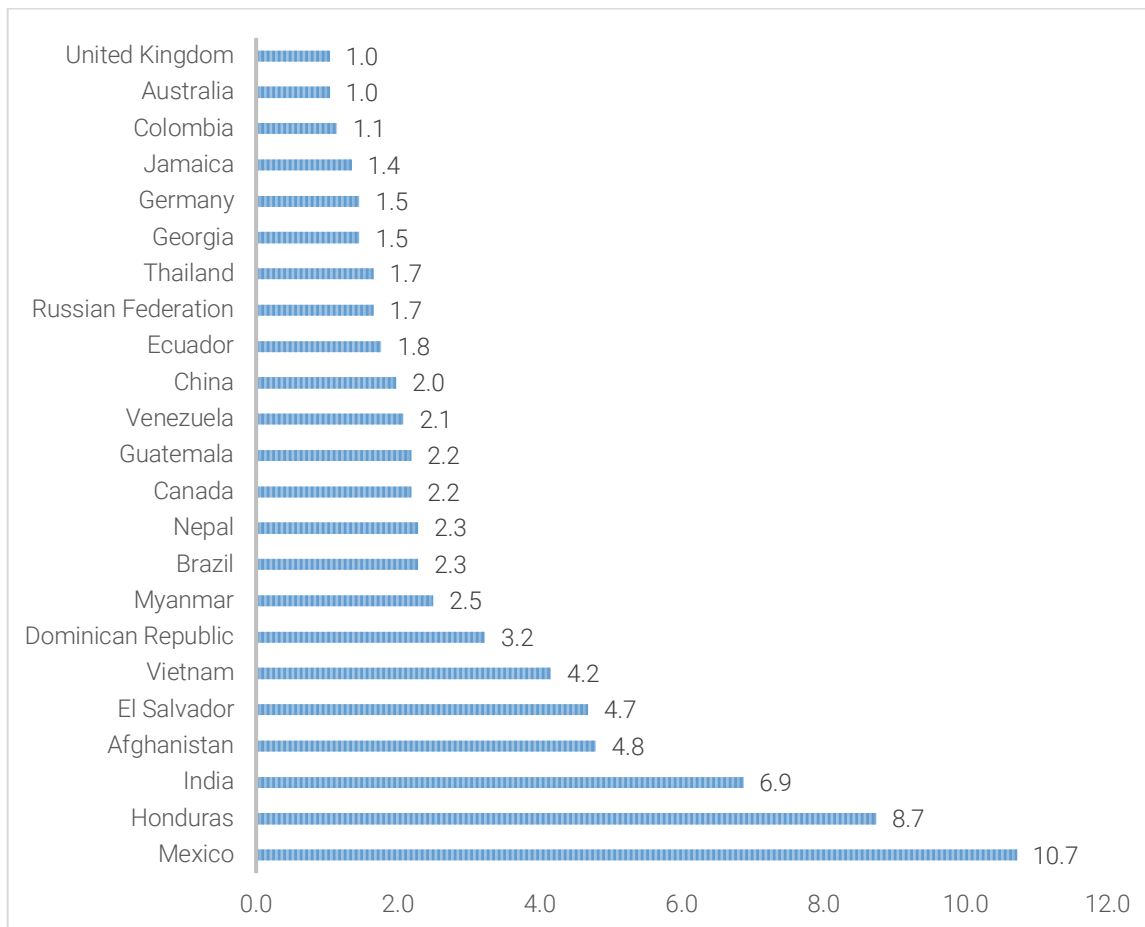
In the 2020 Youth Drug Survey, sub-samples within Asian and Latino race/ethnicities were also obtained in order to further examine racial and ethnic sub-groups. Figure 2 presents sample subgroup ethnicity for each of these groups.

Figure 2: Sample subgroup ethnicity for Latino (n=2194) and Asian (n=724) youth



First generation students reported diverse countries of origin. Table 1 presents the countries of origin in order beginning from the largest group. The largest foreign-born group reported being born in Mexico, followed by Honduras, India, Afghanistan, El Salvador, and Vietnam. Of note, more than 1 in 4 foreign-born students reported being born in one of 122 countries.

Table 1: Country of origin for foreign-born students (%)



The majority of students reported living with both their mother and father (58.0%), followed by those living with their mother only (20.3%), parent and step-parent (11.2%), with 10.8% reporting other family structures (Grandparents, father-only, child welfare involved, or other).

13.6% of respondents indicated that the highest education level reached by an adult in their home was less than a high school degree, 18.8% reported a high school degree or GED, and 67.6% reported some vocational school, college, or a college degree or higher.

11.1% percent of students reported that they receive “none” or “a little bit” of parental supervision at home. Average student grades were reported as follows: A=31.4%, B=44.2%, C=20.9%, D=3.0%, F=0.5%. 12.7% of students reported missing more than 11 days of school in the prior year.

SURVEY RESULTS

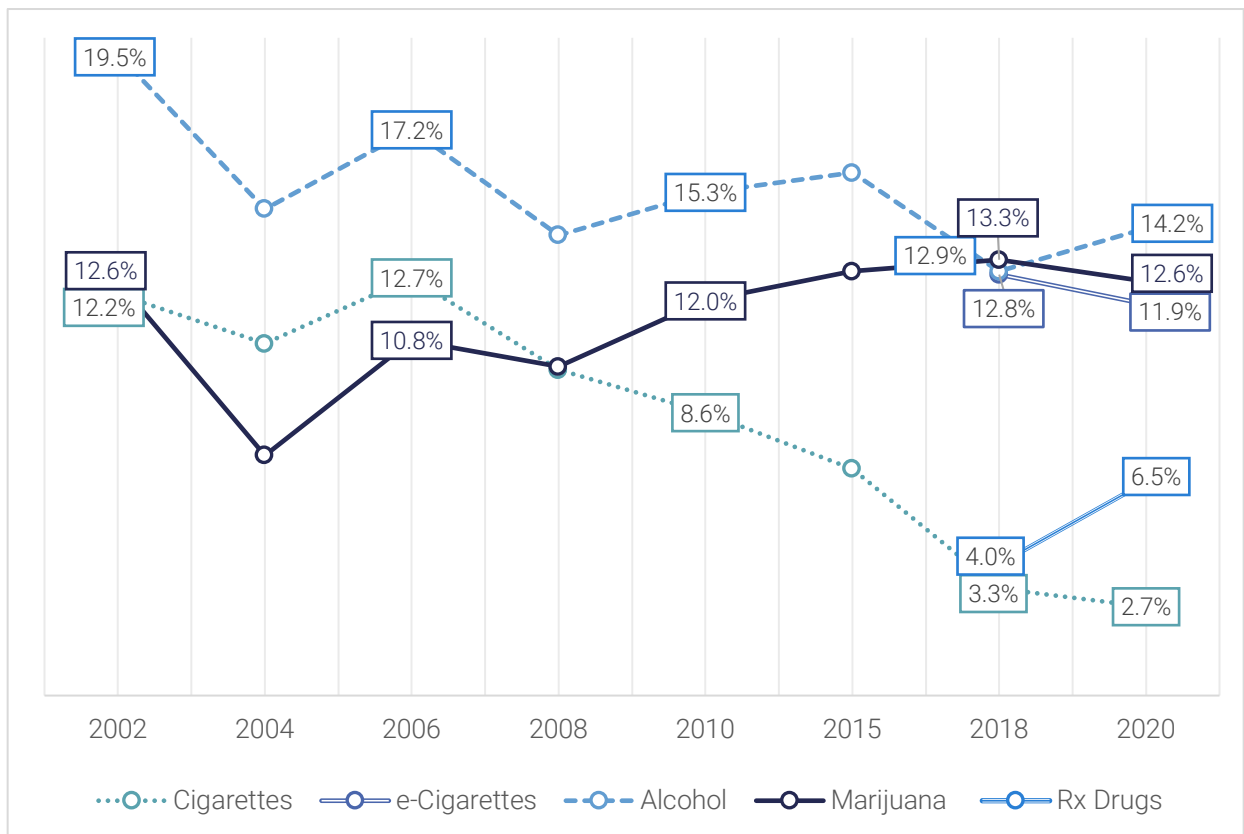
TREND ANALYSIS

Overall, trends in the data suggest that youth are using alcohol and combustible cigarettes at lower rates than in previous years. However, marijuana use has remained more or less constant since 2002. In 2020, the YDS was able to track e-cigarette use and prescription drug use without a prescription historically for the first time.

Figure 3 presents a trend analysis of 30-day use of the most commonly misused substances among Mecklenburg County youth, using data from the YDS from 2002-2018. E-cigarette use decreased (12.8 – 11.9%) since the 2018 YDS, despite adding JUUL explicitly as an E-cigarette option in the 2020 survey. While prescription drug use increased (4.0% - 6.5%) we interpret these results with caution as the 2020 survey gave a more comprehensive definition of prescription drugs that may have prompted more students to report their use.

In 2020, alcohol was the primary substance used (14.2%), followed by marijuana (12.6%) and E-cigarettes (11.9%). Use of combustible cigarettes has reached an all-time low (2.7%).

Figure 3: 30-day use trends, combined 6th, 8th, 10th, and 12th grade youth, 2002-2020¹



¹ Data points are included for the years 2002, 2006, 2010, 2018, and 2020 while data for 2004, 2008, and 2015 are included in the trend line but not shown.

COMPARISON WITH STATE AND NATIONAL DATA

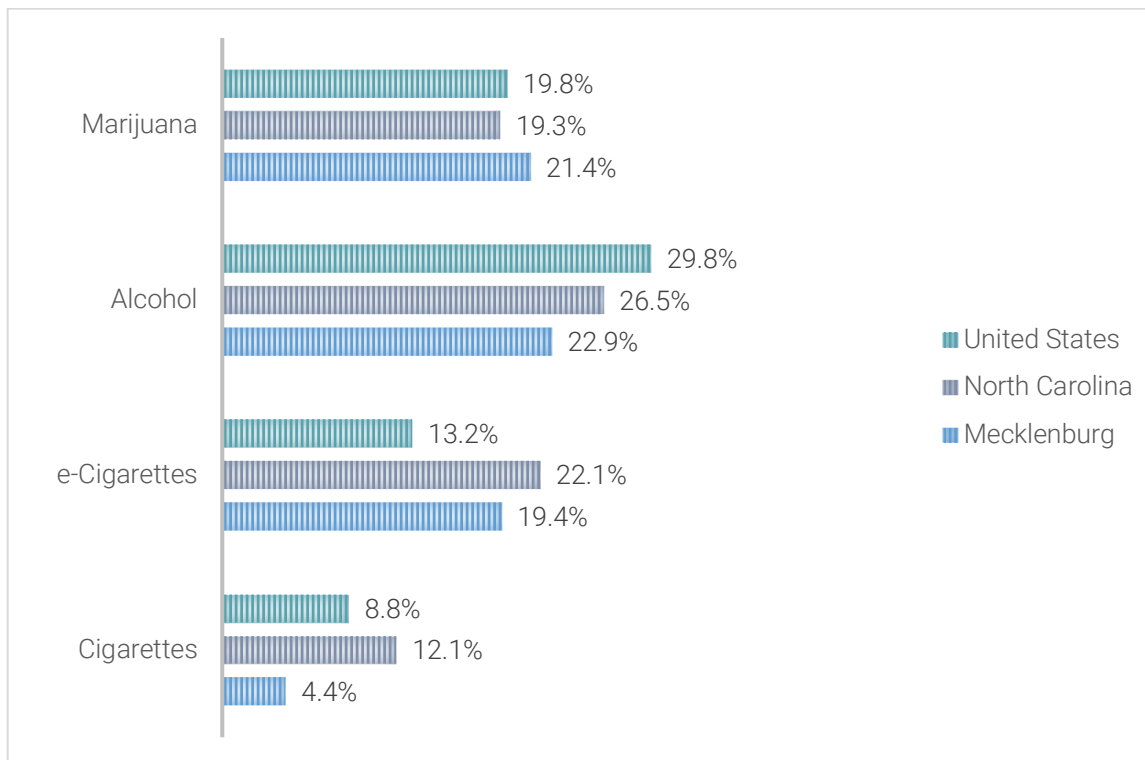
Data from the 2020 Youth Drug Survey in Mecklenburg County suggest that usage rates locally differ from state and national levels.

Rates for 30-day use from the 2020 Youth Drug Survey were compared against state (North Carolina) and national benchmarks using data from the 2017 Youth Risk Behavior Survey, a national survey of youth risk behaviors administered by the Centers for Disease Control and Prevention (see Figure 4). Aggregate data from the 2017 YRBS are available online and accessible to the public².

In general, rates for cigarette and alcohol use were lower in Mecklenburg County in comparison to these benchmarks. However, local rates for marijuana and e-cigarette use were higher than national averages.

Results should be interpreted with caution, as data at state and national levels were from three years (2017) prior to the 2020 YDS. A number of contextual factors, including changing laws, cultures, and norms across these three years may also account for some of these differences.

Figure 4: Mecklenburg, North Carolina, and US 30-day use rates for high school students

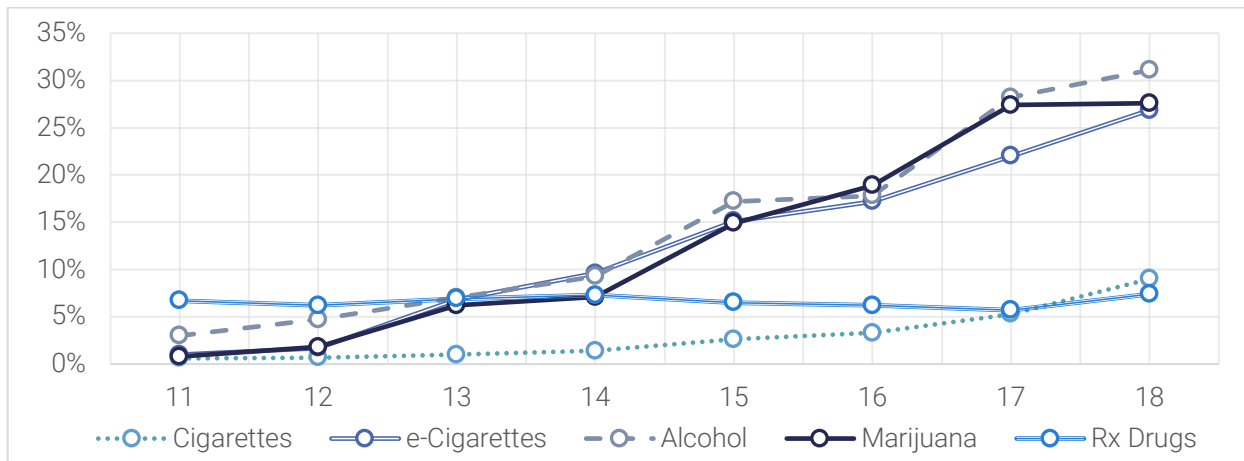


² Access is available to YRBS data at <https://nccd.cdc.gov/Youthonline>

30-DAY SUBSTANCE USE BY AGE AND GENDER

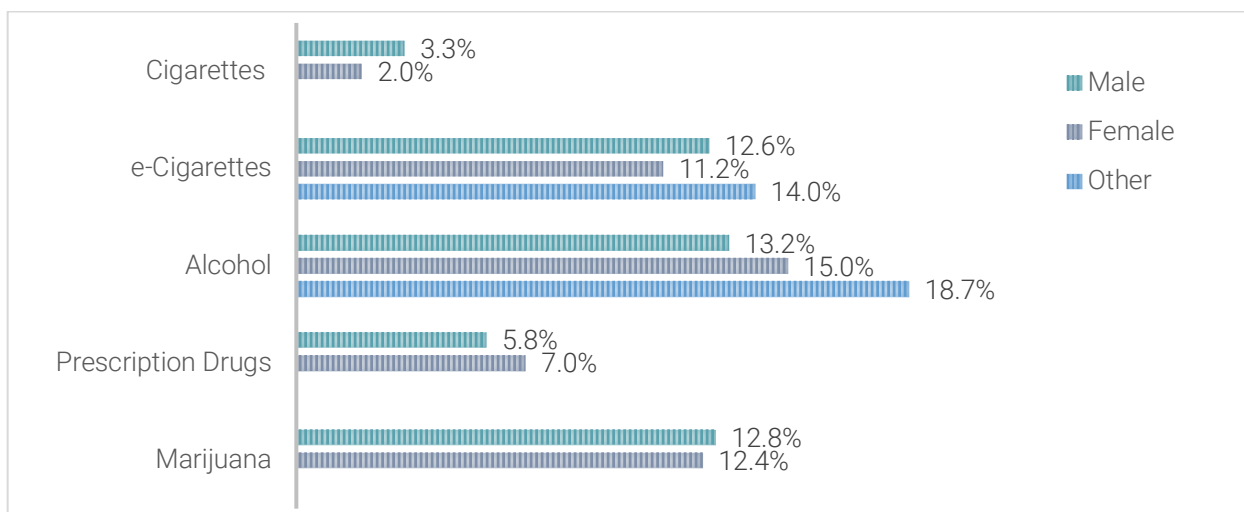
In general, youth substance use tends to increase with age across all substances. Figure 5 shows that **by age 15, 15% of youth are using alcohol, marijuana, or e-cigarettes**. By age 18, this number increases to above 25% for marijuana and e-cigarettes, and above 30% for alcohol. Cigarette use, though historically low, also increases with age, with nearly 10% of 18-year-olds using. Only the use of prescription drugs without a prescription appears to stay constant across age groups.

Figure 5: 30-Day Substance Use by Age



There were also some notable differences in substance use by gender. Female youth were significantly more likely to use alcohol as compared to male youth ($p < .05$) while male youth were more likely to use cigarettes ($p < .001$). Youth who identified as other had the highest alcohol use ($p < .05$). There were no statistically significant gender differences in e-cigarette use.

Figure 6: Gender differences in substance use*



*Cell sizes n < 10 omitted

TOBACCO

The following section shares YDS results for youth use of tobacco. Of note, on December 20 2019, the US congress passed a law raising the legal age to purchase tobacco products to 21. Because the YDS asks about use over the past 30 days, it is possible, but not likely, that these results were affected by the passage of the legislation.

30-DAY TOBACCO USE

Table 2 presents the overall results for past 30-day use for five separate tobacco products. Following recent national trends, e-cigarettes emerge as the preferred method for tobacco consumption among youth in the sample. There was a slight decrease in cigarette, cigar/cigarillo and hookah use in the past 30 days as compared to the 2018 YDS. There was also a decrease in e-cigarette use. While it is difficult to determine if this decrease represents a downward trend, it is possible that increased awareness of the health risks of e-cigarettes have led to a decline in use.

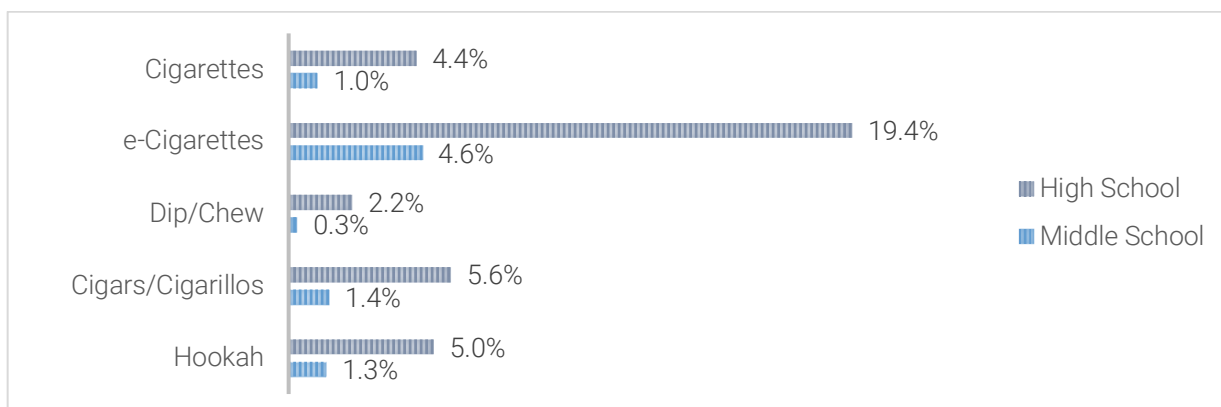
Table 2: Tobacco 30-day use, 6th, 8th, 10th, and 12th grade youth

Question: How often in the past 30 days have you used the following?				2018
	Never Used	Used, but not in the past 30 days	Used in the past 30 days	Used in the past 30 days
Cigarettes	94.1%	3.3%	2.7%	3.3%
e-Cigarettes	80.0%	8.1%	11.9%	12.8%
Dip/chew	97.6%	1.2%	1.3%	1.2%
Cigars/Cigarillos	93.6%	2.9%	3.5%	5.1%
Hookah	93.6%	3.3%	3.1%	5.8%

30-DAY TOBACCO USE BY SCHOOL LEVEL

Another notable finding is the rate of e-cigarette use among high school youth. Nearly 1 in 5 high school youth reported using e-cigarettes in the past 30 days.

Figure 7: 30-day tobacco use by school level

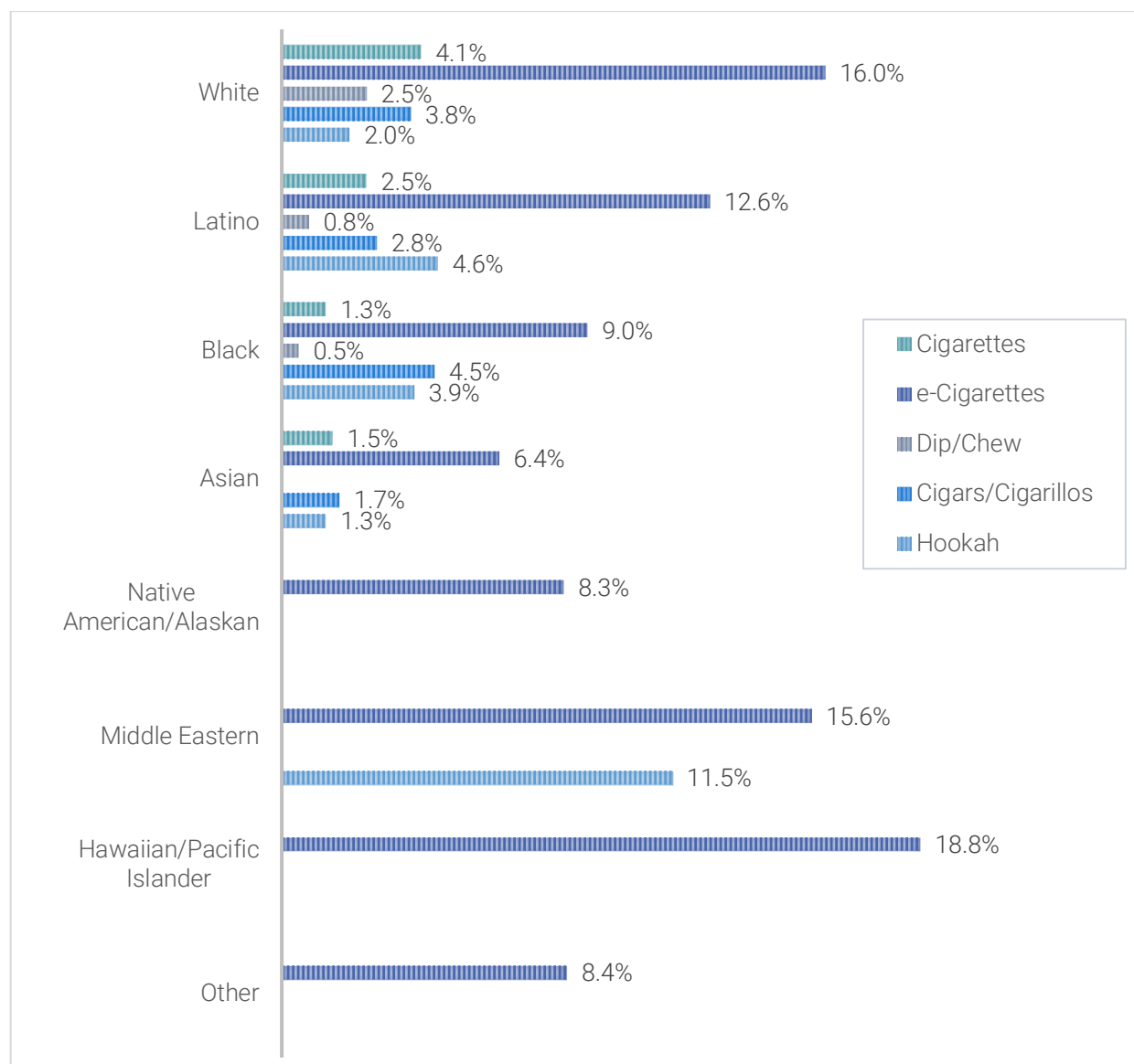


30-DAY TOBACCO USE BY RACE/ETHNICITY

There were also differences in tobacco use by race and ethnicity. Figure 8 presents these differences for all youth in the sample. In general, Asian, and to some extent Black youth, were at a lower risk for tobacco use, while White and Latino youth were at a higher risk. Because the 2020 survey used more detailed measures for race and ethnicity, additional subgroups were able to be examined, resulting in new findings. Middle Eastern youth were at high risk for both e-cigarette and hookah use, while Hawaiian/Pacific Islander youth topped the chart for e-cigarette use.

A consistent finding is that youth are using traditional cigarettes, dip, and chewing tobacco at lower rates in comparison to e-cigarettes, hookah, and cigars/cigarillos.

Figure 8: 30-day tobacco use by race/ethnicity*

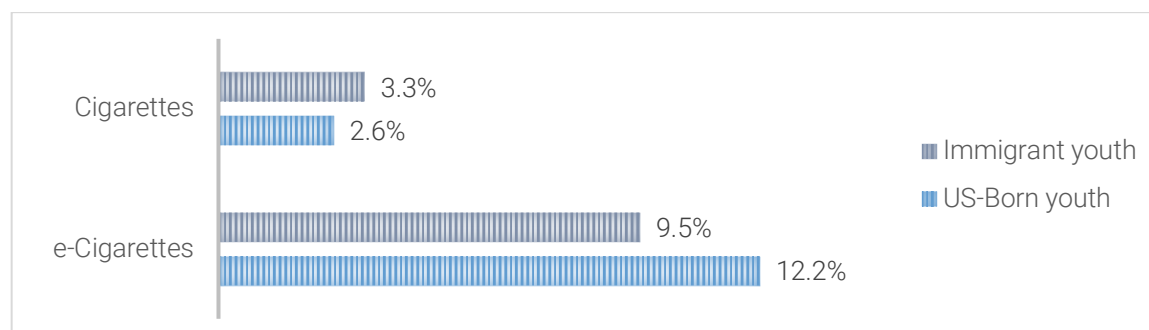


*Cell sizes $n < 10$ omitted

TOBACCO USE BY COUNTRY OF BIRTH

Tobacco use was also examined by country of birth, comparing youth born outside the US to those born inside the US. Figure 9 presents these differences. **There was a statistically significant difference in e-cigarette use ($p < .05$), with immigrant youth reporting lower levels of use compared to native-born youth.**

Figure 9: Tobacco use by country of birth

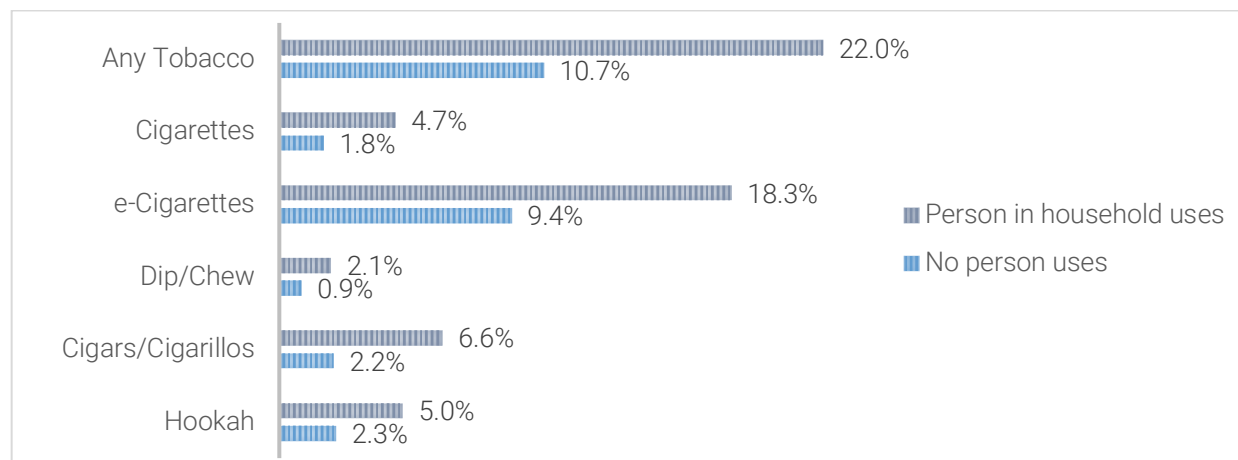


TOBACCO USE IN THE HOME

Results of the study also indicated a correlation between the use of tobacco in the home by others and an individual youth's use of tobacco. Figure 10 presents this relationship across all forms of tobacco, including use of all tobacco products combined.

Results indicate that having another person in the home using tobacco is strongly correlated with a youth's decision to use. In the case of e-cigarettes, 18.3% of youth report using e-cigarettes if someone else is using in the household, compared to 9.4% for those who report that no one else uses. The pattern is similar for other tobacco products as well. Taken together, of youth who reported that someone else in the household uses tobacco, 22% report using tobacco in some form themselves, suggesting a **strong link between household member use and youth use.**

Figure 10: Home tobacco use (any) and youth use by substance



ACCESS TO TOBACCO AND USE LOCATIONS FOR YOUTH UNDER 18

YDS data captured information on youth tobacco access as well as locations for use. Youth under 18 years old reported access to tobacco primarily through friendship networks and direct or indirect purchase.

44.7%	Got it from a friend
15.8%	Someone purchased it for them
10.6%	Got it at a party
7.0%	Purchased themselves
5.7%	Received from parents or took from home

Most youth reported using tobacco in informal social settings and with friends. Of youth tobacco users, 17.9% reported using tobacco at a friend’s house, 9.7% in a car, 9.2% at a park or outside, and 9.6% at a party. Some youth also reported using tobacco at home alone (13.7%), at home with friends (7.2%), or at home with parents (5.4%).

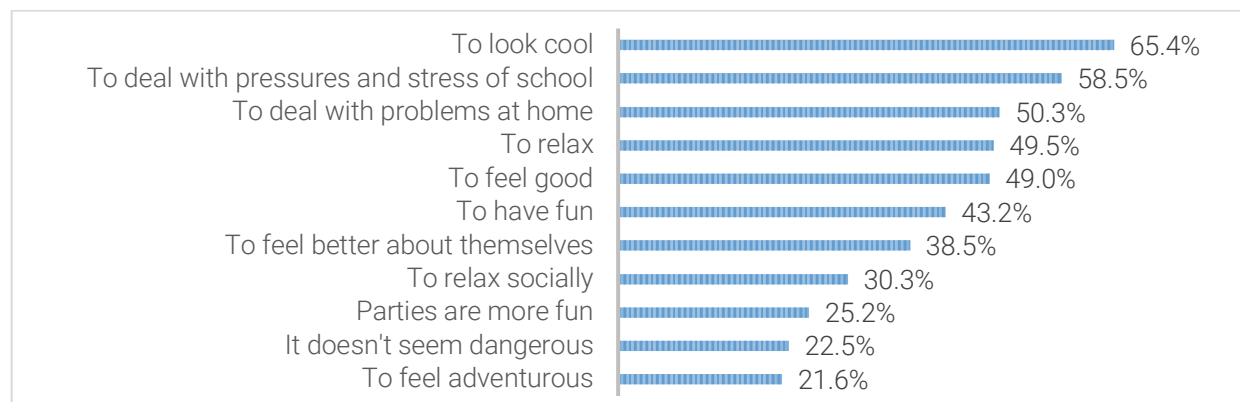
PARENT RULES AND TOBACCO USE

The YDS asked youth whether their parents had clear rules about the use of tobacco in their homes, and 75.4% of youth reported that they did. However, there was no statistically significant difference in tobacco use among youth who had parents with clear parental rules on tobacco use versus those who did not. These results should be interpreted with caution – it is possible that rules are used primarily as a response, rather than a precursor to, youth tobacco use.

PERCEPTIONS ON WHY YOUTH USE TOBACCO

Youth were invited to suggest why they thought others used tobacco products. “To look cool” was the primary reason cited by survey respondents. Youth were allowed to choose more than one response. However, the second and third reasons were dealing with the pressures and stress of school as well as to deal with problems at home, suggesting that **many youth see tobacco as a coping mechanism for the challenges they may be experiencing in their lives.**

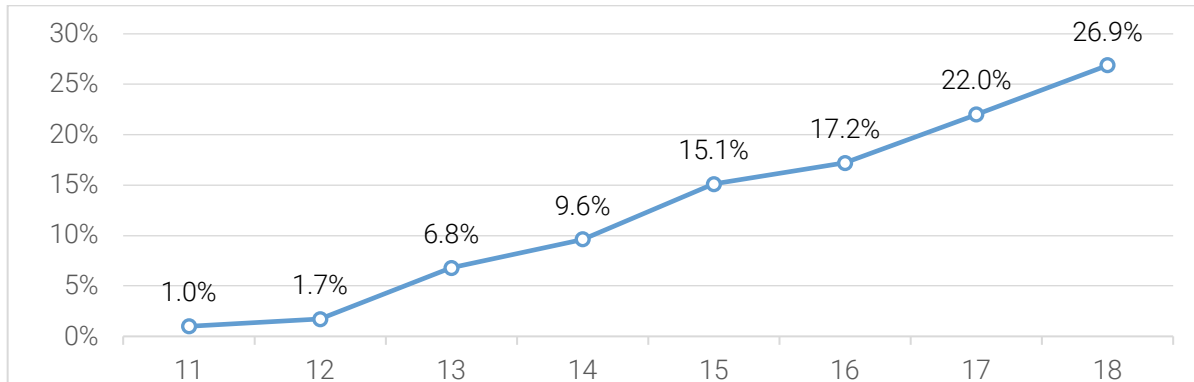
Figure 11: Reasons youth provided for others using tobacco



E-CIGARETTES

Data from the 2020 YDS are consistent with the national trend of increased e-cigarette use by youth as they get older. Figure 12 plots e-cigarette use by age. **By age 15, roughly 1 in 7 youth are using e-cigarettes.** By age 18, about 1 in 4 youth are using e-Cigarettes. Average age of onset for e-cigarette use is 14.

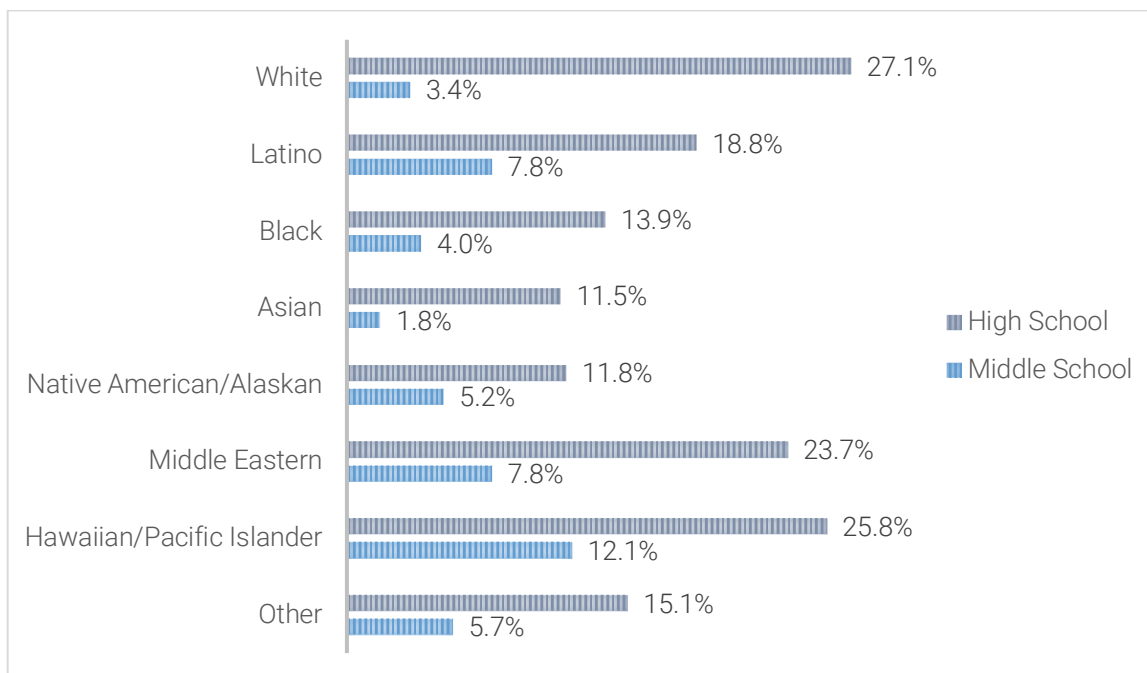
Figure 12: e-Cigarette use by age



E-CIGARETTE USE BY RACE/ETHNICITY AND SCHOOL LEVEL

There are also differences in e-cigarette use and school type. Figure 13 presents these differences. Overall, White high-school aged youth remain the group most at risk for e-cigarette use at 27.1%. Among middle school youth, Hawaiian/Pacific Islander, Middle Eastern, and Latino youth were most at risk.

Figure 13: 30-day e-cigarette use by race/ethnicity and school type



EXAMINING FACTORS RELATED TO E-CIGARETTE USE

There are a number of patterns that also emerge from the data with respect to the most salient risk and protective factors for e-cigarette use. Using multi-level logistic regression modeling techniques, the results in Figure 14 indicate the relative importance of risk and protective factors while controlling for other known covariates (norms, access) and demographic factors like age, sex, race and ethnicity, and socioeconomic status (adult's education level). Controlling for other factors:

Figure 14: Risk and protective factors for e-cigarette use

Asian youth are 60% less likely to use e-cigarettes in comparison to White youth.



Parent Education: Youth whose parents had a high school degree/GED or less than a high school degree/GED were nearly 1.5X more likely to use e-cigarettes compared to youth whose parents had higher levels of education.



Parental Disapproval: Youth who reported that their parents would say it is “wrong” or “very wrong” for them to use e-cigarettes are nearly 40% less likely to use them.



Over 18 Use: Youth who reported that someone in their home over age 18 used tobacco were 1.8X more likely to use e-cigarettes compared to those whose did not report someone over 18 using.



Perceived Risk: Youth were 50% less likely to use e-cigarettes if they thought that there was a “moderate” or “great” risk to using them.



Peer Disapproval: Youth were nearly 60% less likely to use e-cigarettes if they thought that their friends would think it was “wrong” or “very wrong” if they used them.



Access: Youth under 18 who report that it is “fairly easy” or “very easy” to access e-cigarettes are nearly 8X as likely to use them.



Though the model predicted lower levels of use among Asian youth, neither Latino ethnicity nor foreign-born status emerged as predictors of use, suggesting that these may be emerging groups of risk alongside White youth. Socioeconomic status (SES) emerged as a predictor of use, with youth whose parents had lower levels of education more likely to use. What is also notable in the data is that parental monitoring was not associated with decreased risk for use, suggesting that youth perceptions of parental norms may be more salient protective factors than explicit monitoring.

ALCOHOL

30-DAY ALCOHOL USE

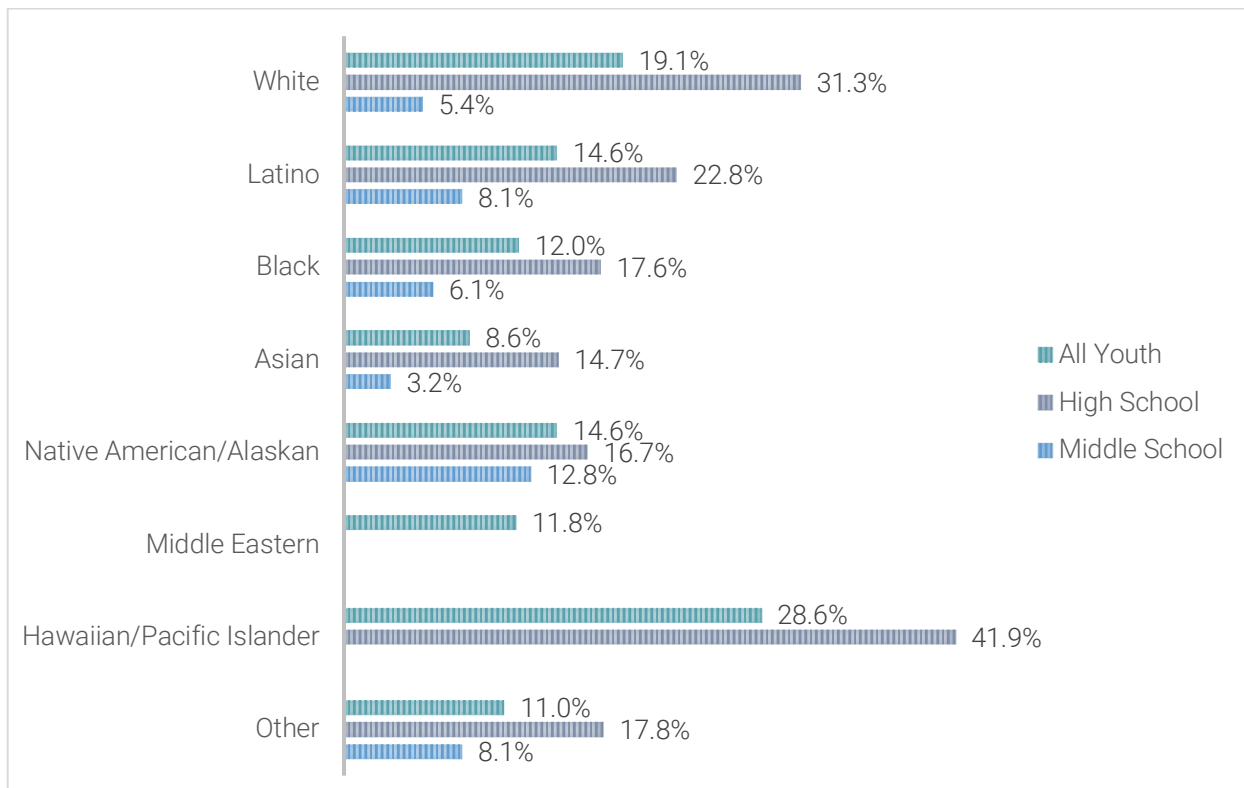
Table 3 presents the overall results for past 30-day alcohol use, defined as having one or more drinks of an alcoholic beverage (beer, wine, wine coolers, liquor).

Table 3: 30-day alcohol use, by school type

Question: How often in the past 30 days have you had one or more drinks of an alcoholic beverage (beer, wine, wine coolers, liquor)?	2018		
	Never Used	Used, but not in the past 30 days	Used in the past 30 days
Middle School	84.3%	9.9%	5.8%
High School	56.7%	20.5%	22.8%
All Respondents	70.7%	15.1%	14.2%

In addition to differences between high school and middle school youth, there were also differences across racial and ethnic lines (see Figure 15). Hawaiian/Pacific Islander and White high school youth were at greatest risk for 30-day alcohol use.

Figure 15: 30-day alcohol use by race/ethnicity and school type



Note: *Cell sizes n <10 omitted

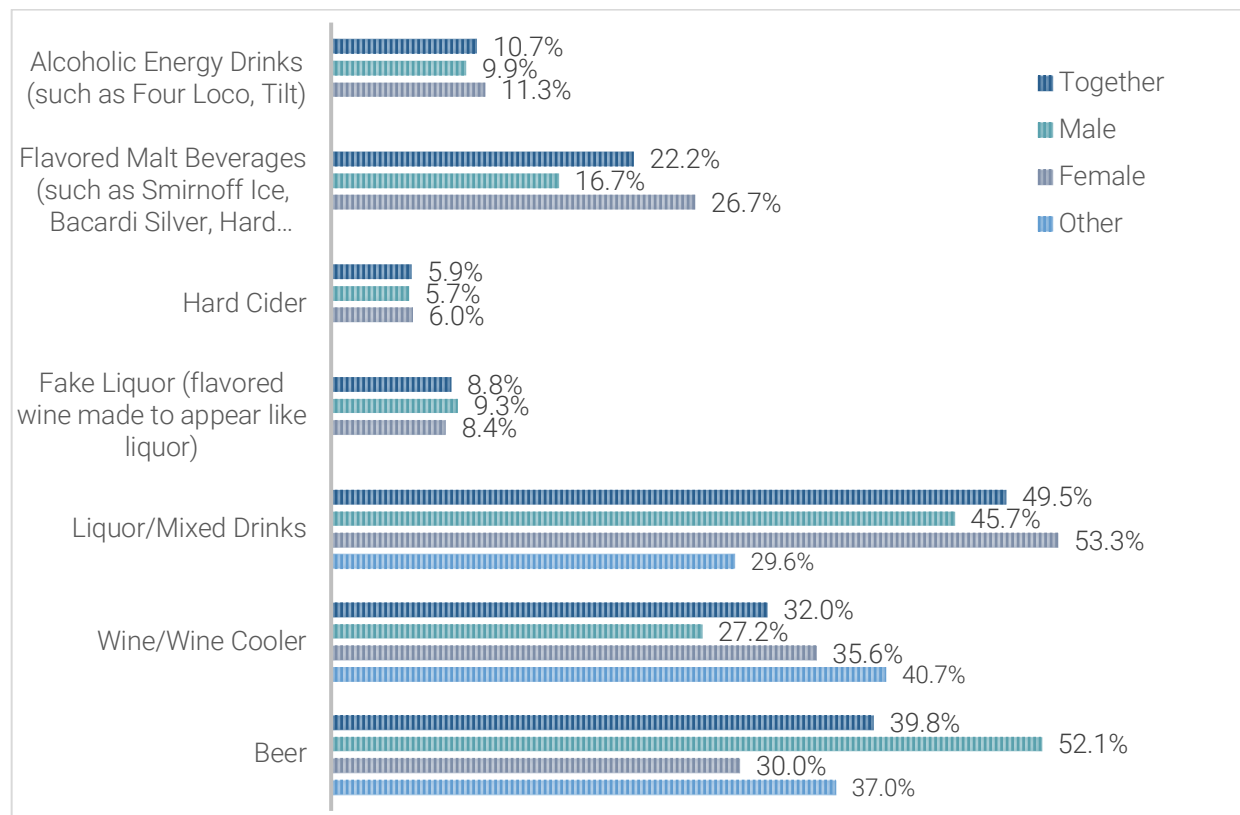
ALCOHOL USE BY COUNTRY OF BIRTH

When examining alcohol use by youth's country of birth, **fewer immigrant youth reported using alcohol in the past 30 days (11.8%) in comparison to native-born youth (14.5%).** This difference was statistically significant ($p < .001$).

GENDER DIFFERENCES IN DRINK TYPE

For the first time in the 2020 YDS, youth who used alcohol were asked to report on the type of alcohol they used. Figure 16 reports the results of these drink choices together and by gender (male, female, and other). Gender differences were statistically significant for beer ($p < .001$), wine/wine coolers ($p < .001$), liquor/mixed drinks ($p < .001$), and flavored malt beverages ($p < .001$). **Male youth were more likely to choose beer while female youth were more likely to choose liquor/mixed drinks, and youth who identified as other were most likely to choose wine/wine coolers.** Of all the alcohol types, liquor/mixed drinks were the main type of alcohol used by youth.

Figure 16: Gender differences in drink type



*Cell sizes $n < 10$ omitted

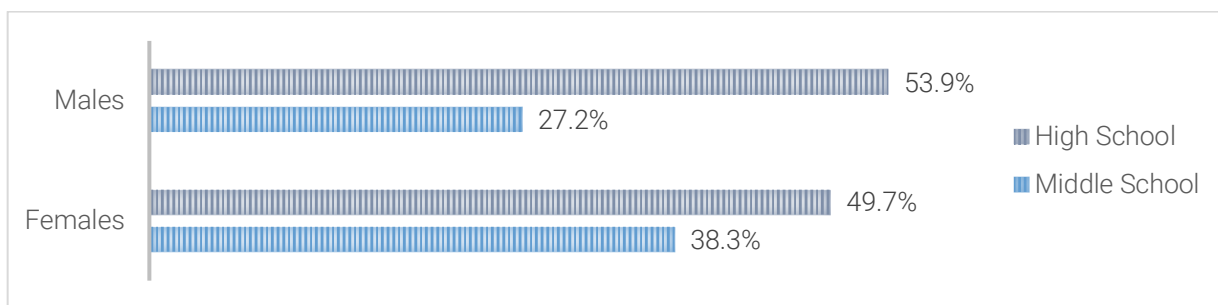
AGE OF ONSET

Youth reported on the age they first tried alcohol. The average age of onset for users was 14 years old. **Of those who reported starting alcohol use before age 14, 47% reported using alcohol in the past 30 days.**

30-DAY ALCOHOL USE: BINGE DRINKING

Survey respondents described binge-drinking behaviors, defined as having 4 or more drinks of alcohol for females or 5 or more drinks of alcohol for males, on a single occasion. On average, 7.5% of middle and high school females and 7.0% of middle and high school males reported binge drinking in the past 30 days. **Female binge drinking rates continue to rise.** Figure 17 presents binge-drinking rates among youth who reported using alcohol in the past 30 days. Among middle and high school youth, between 1 in 3 and 1 in 2 youth who report using alcohol also report engaging in binge drinking behaviors. Of youth who binge drink, most reported binge drinking 1-5 days a month.

Figure 17: Binge drinking rates among middle and high school males and females who reported using alcohol in the past 30 days

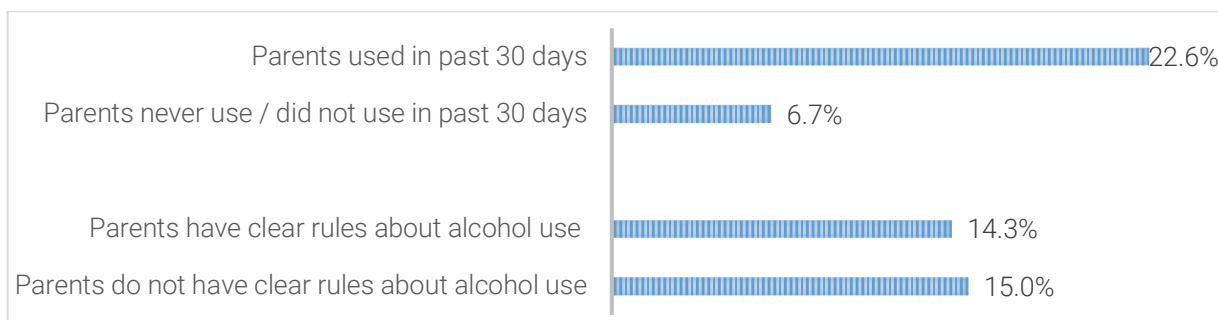


*Cell sizes youth identifying as a gender other than male or female were omitted due to small sample size.

PARENTAL INFLUENCE

A trend in the data suggests that both parental rules about alcohol use and parental use of alcohol in front of their children are related to a youth's 30-day alcohol use. Figure 18 presents these results. Middle and high school **youth who reported their parents using alcohol in front of them were roughly three times as likely to use alcohol themselves** in comparison to youth who reported their parents have never used alcohol or have not used alcohol in the past 30 days. There were no statistically significant differences between youth who reported their parents had specific rules about alcohol than those who did not, though we interpret these data with caution as it is possible that parents are more likely to be explicit with rules around child alcohol use after their child begins using.

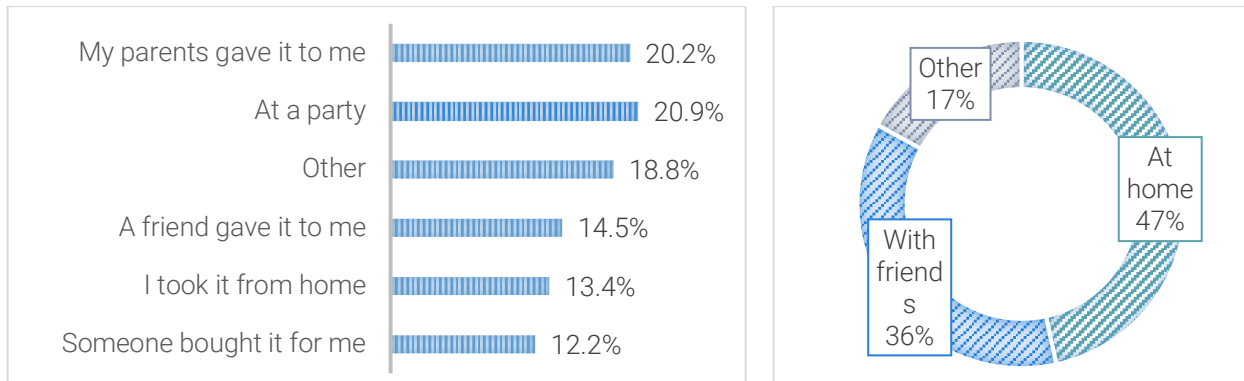
Figure 18: Parent influence and 30-day youth alcohol use



ACCESS TO ALCOHOL AND USE LOCATIONS

Youth in the YDS sample further indicated that parents were a primary source of alcohol access, and that at home with parent supervision was the primary location where youth consumed alcohol. Figure 19 presents where youth accessed alcohol the last time they got it, for those youth who used alcohol in the past 30 days. **Over a third of the sample reported that they either got alcohol from their parents or from their home**, while others accessed alcohol at a party or via peer friendships.

Figure 19: Reported location of access to alcohol during last use Figure 20: Alcohol use by location

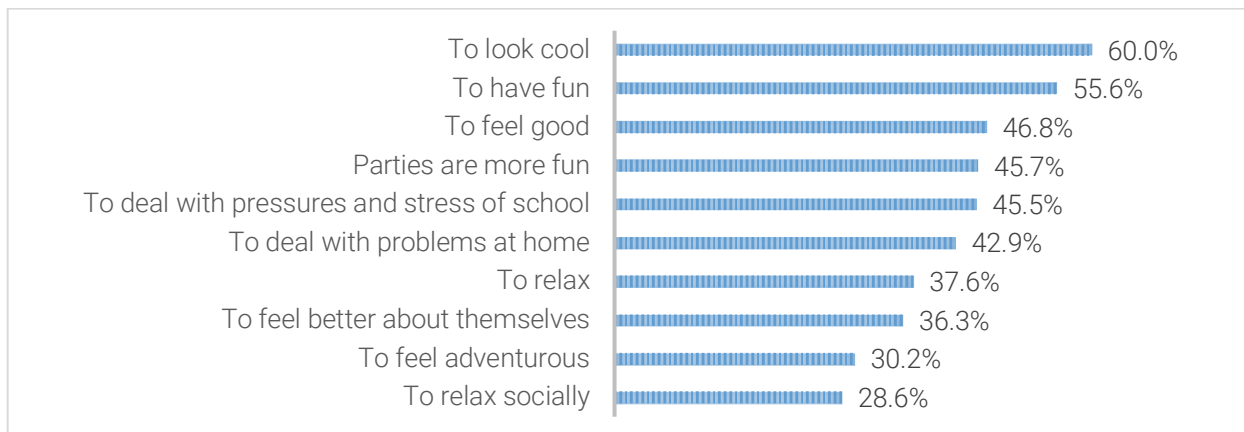


Parallel results are observed when asking youth where they used alcohol the last time they drank it (Figure 20). **The majority of youth (47%) reported that they used alcohol at home, whether with parents, with friends, or alone**, while 36% used it with friends, and 17% selected other locations, including parks, restaurants, in a car, concerts and events, or other locations. Among those who reported using alcohol at home, the majority reported using alcohol with their parents.

PERCEPTIONS ON WHY YOUTH USE ALCOHOL

Figure 21 presents results of why youth thought others use alcohol, with “to look cool” as the #1 choice.

Figure 21: Reasons youth provided for others using alcohol



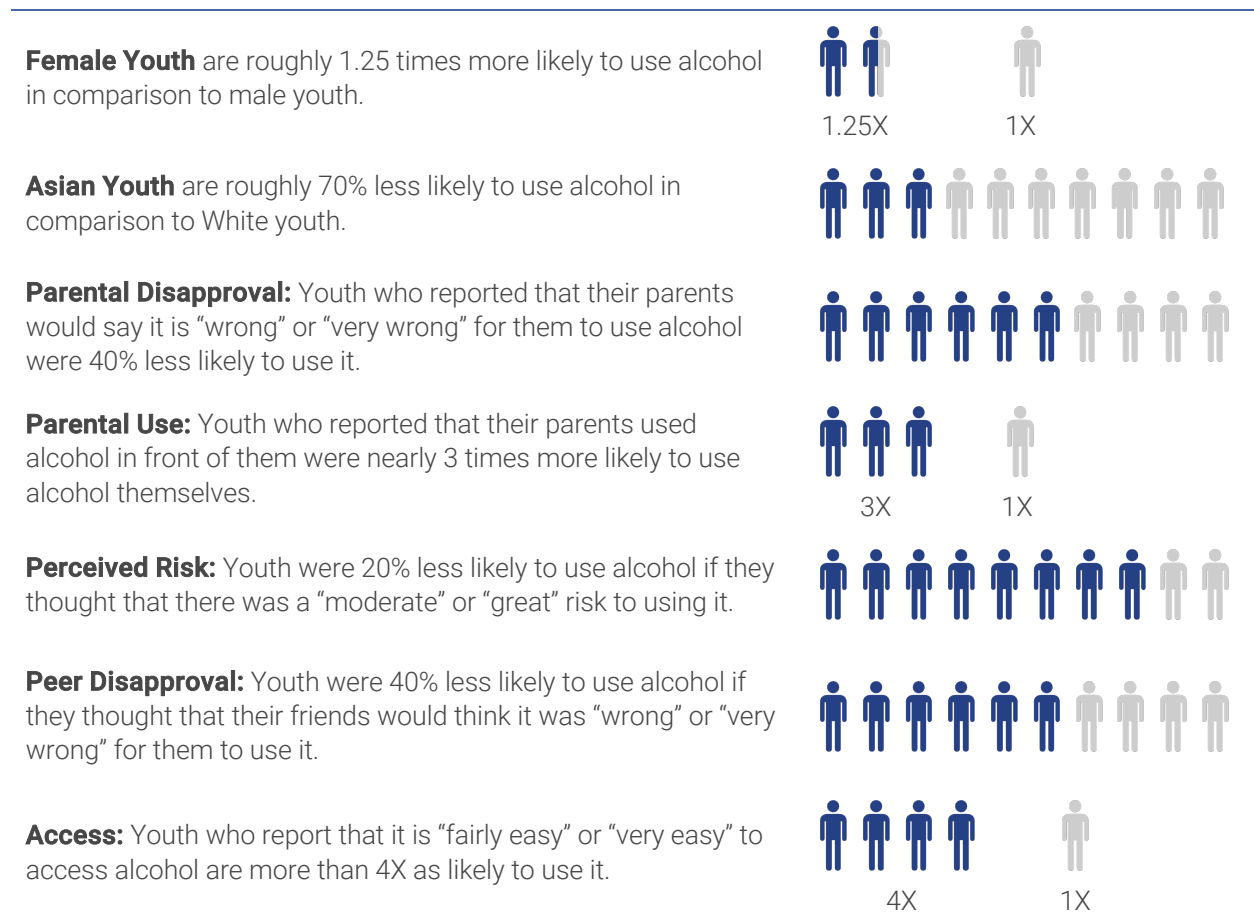
ALCOHOL AT PUBLIC EVENTS

The YDS asked youth about use of alcohol at concerts or festivals as well as at sporting events. Of youth who reported using alcohol in the past 30 days, 25.8% had used alcohol at a concert or festival sometime in the past and 10.6% had used alcohol at a professional sporting event sometime in the past. These rates indicate that **while access through public events continue to be a concern, these rates may be trending downward when compared to 2018 YDS results.**

EXAMINING FACTORS RELATED TO ALCOHOL USE

Patterns also emerged from the data concerning risk and protective factors for alcohol use using regression modeling techniques. Controlling for other factors:

Figure 22: Risk and protective factors for alcohol use



Parents emerged as a critical factor predicting youth use, with disapproval providing protection against underage drinking and parent use serving as a risk factor. In addition, access, perceived risk, and peer disapproval were each predictive factors, suggesting that **changing norms around use of alcohol and restricting access to alcohol may play a critical role in reducing underage drinking.**

PRESCRIPTION DRUGS

Increasing attention has been given to the rise of prescription drug use and its relationship to the opioid epidemic. The YDS asked youth to report their own use as well as attitudes and behaviors toward prescription drug misuse. Results indicate that roughly 1 in 4 youth have a medication prescription, while 6.5% report using a prescription medication without a prescription.

23.1% have a prescription
6.5% have used prescription drugs without a prescription

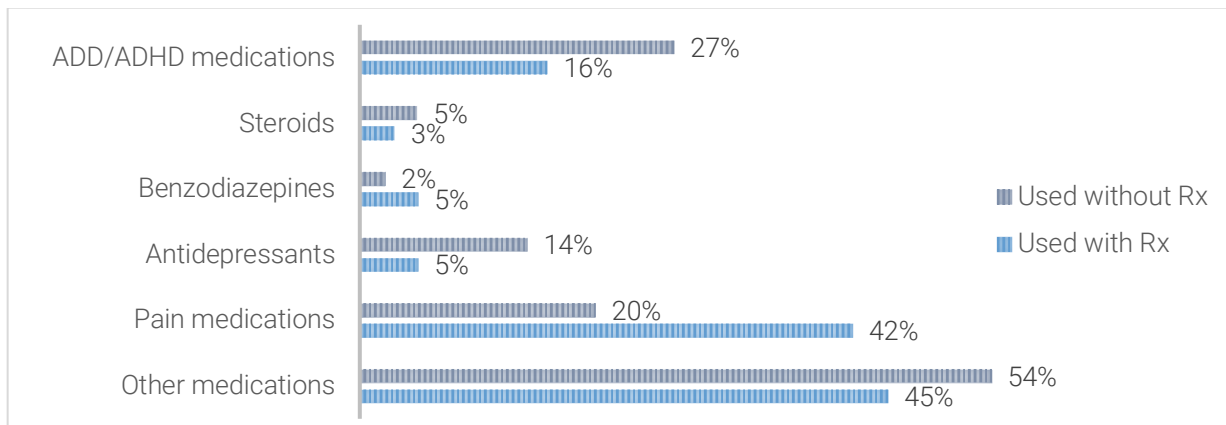
For all prescription drug questions, each category of prescription drug was defined as follows:

A prescription drug is a medicine or drug that is dispensed legally from a pharmacy. Some examples of these drugs include pain medications (e.g. Hydrocodone, OxyContin, Vicodin), ADD/ADHD medications (e.g. Adderall, Ritalin), steroids (e.g. Cortisone, Prednisolone, Androstenedione), Benzodiazepines or "Benzos" (e.g. Valium, Xanax), and antidepressants (e.g. Zoloft, Prozac, Celexa, Lexapro).

The YDS also asked both youth using prescription medications with a prescription and those using them without a prescription to report on the types of medications they use (Figure 23). Of note, **42% of youth using a prescription medication had a prescribed pain medication**, and 20% of youth using prescription medications without a prescription were using a pain medication. These results indicate that youth are using and misusing pain medications at higher rates relative to other medications.

A slightly different pattern emerged with steroids and antidepressants. Though 16% of youth had a prescription for an ADD/ADHD medication, an additional 27% of youth used an ADD/ADHD medication without a prescription. For antidepressants, the pattern was 5% and 14%, respectively. Taken together, these results indicate that prescription drug use and misuse patterns vary based on the type of prescription drug used.

Figure 23: Youth report of drug type use with and without a prescription



Respondents were also asked questions related to misuse and sharing of drugs prescribed to them. Of youth who reported having a prescription for the five drug categories in the survey, **2.6% reported having sold their medication to others and 8.7% reported having taken more than prescribed.**

30-DAY USE OF PRESCRIPTION DRUGS WITHOUT A PRESCRIPTION

Table 4 presents 30-day youth use of prescription drugs without a prescription, including all medication categories. In general, rates of misuse among middle school youth were slightly higher than those among high school youth. While prescription drug use increased between 2018 and 2020, we interpret these results with caution as the 2020 survey gave a more comprehensive definition of prescription drugs that may have prompted more students to report their use.

Table 4: 30-day use of prescription drugs without a prescription, by school type

Question: How often in the past 30 days have you used prescription drugs <i>not prescribed to you</i> (such as Ritalin, Adderall, Hydrocodone, OxyContin, Vicodin)?				2018
	Never Used	Used, but not in the past 30 days	Used in the past 30 days	Used in the past 30 days
Middle School	86.4%	6.8%	6.8%	2.7%
High School	84.4%	9.4%	6.2%	5.1%
All Respondents	85.4%	8.1%	6.5%	4.0%

USE OF PRESCRIPTION DRUGS: REASONS, ACCESS, AND USE PATTERNS

Youth in the YDS were asked to report on the reasons they use prescription drugs without a prescription, how they access these substances, and where they use them.

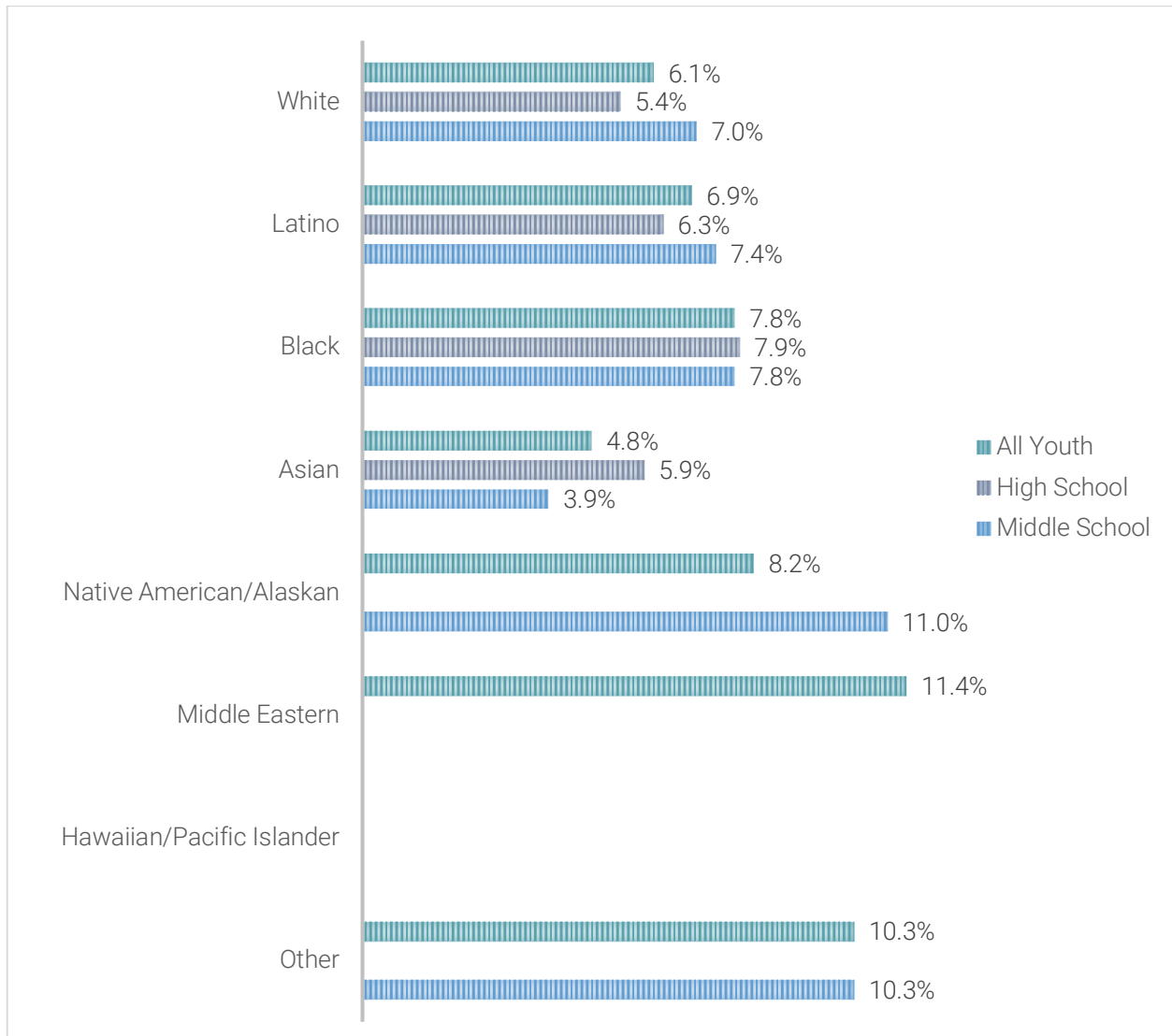
- 51.0%** To deal with the pressures and stress of school
- 47.0%** To relax
- 46.2%** To deal with problems at home
- 38.9%** To look cool
- 36.9%** To feel better about themselves

Regarding access, **most youth obtained prescription drugs from their parents (46.1%)**, followed by taking it from home (18.5%), receiving it from a friend (13.0%), buying it from a store (5.8%), or another reason (11.0%). Most youth reported using them at home with a parent (60.1%) or at home alone (18.2%). When examining bivariate relationships, there was no statistically significant relationship between parental rules about prescription drug use without a prescription and youth reported 30-day use.

DIFFERENCES IN PRESCRIPTION DRUG MISUSE BY RACE/ETHNICITY AND SCHOOL TYPE

There were modest differences in 30-day use of prescription drugs without a prescription by race/ethnicity and school type. Figure 24 presents these differences, suggesting that **Middle Eastern, Native American/Alaskan, and Latino youth** had the highest rates of use.

Figure 24: 30-day non-prescribed Rx drug use by race/ethnicity and school type*



*Cell sizes n <10 omitted

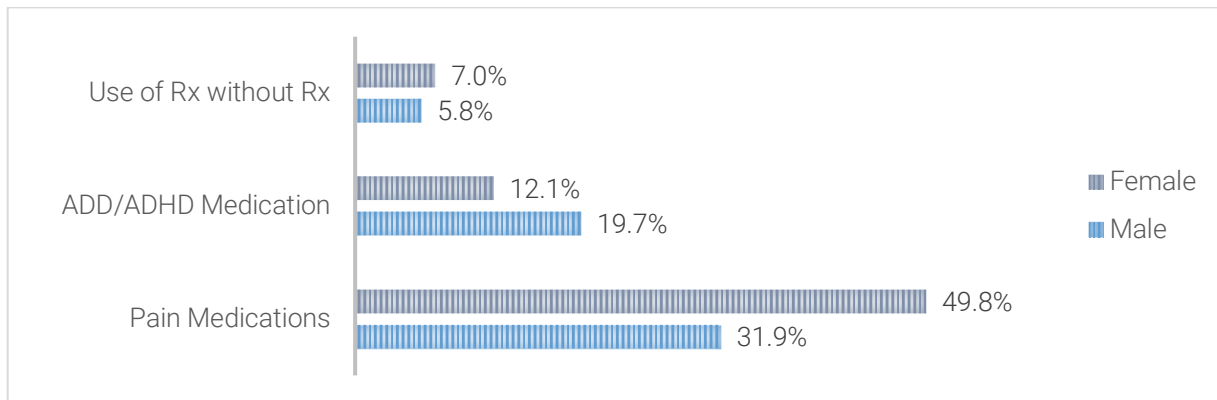
PRESCRIPTION DRUG USE WITHOUT A PRESCRIPTION BY COUNTRY OF BIRTH

When examining prescription drug use without a prescription by youth's country of birth, **fewer immigrant youth reported using prescription drugs without a prescription in the past 30 days (4.6%) in comparison to native-born youth (6.7%)**. This difference was statistically significant ($p < .05$).

AGE AND GENDER AS A PREDICTOR OF PRESCRIPTION DRUG USE

A number of patterns emerged between gender and prescription drug use (see Figure 25). Though there was a 1.2% difference in the 30-day use of prescription drugs without a prescription, this difference was not statistically significant. However, among users, youth who identified as female were more likely to use pain medications and youth who identified as male were more likely to use ADD/ADHD medication. Using chi-squared analyses, these relationships emerged as statistically significant ($p < .001$), suggesting that **gender may be an important predictor of the type of drug used among non-medical users of prescription drugs.**

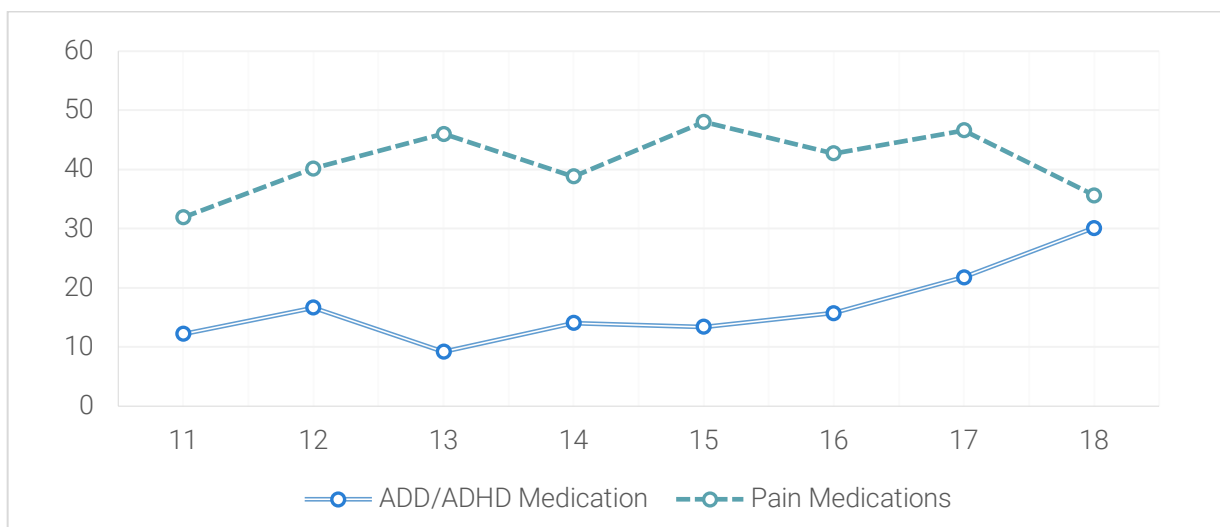
Figure 25: Gender and Rx use without Rx*



*Cell sizes for youth identifying as other than male or female were omitted due to small sample size.

Figure 26 presents the relationship between age and prescription drug use, suggesting that **pain medications are used consistently from age 13 on**, while use of ADD/ADHD medications is lower in early adolescence and begins to increase in ages 16-18.

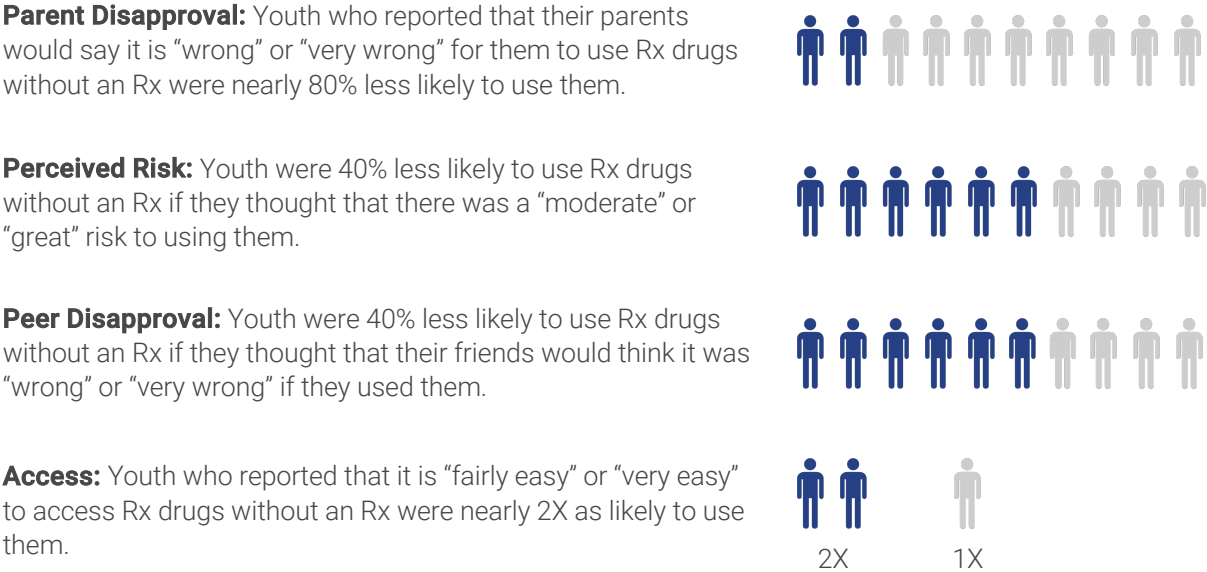
Figure 26: Age and % of users of Rx drugs without an Rx by medication type



EXAMINING FACTORS RELEATED TO PRESCRIPTION DRUG USE WITHOUT A PRESCRIPTION

Patterns also emerged from the data concerning risk and protective factors for use of prescription drugs without a prescription using regression modeling techniques. Controlling for other factors:

Figure 27: Risk and protective factors for use of prescription drugs without a prescription



There were no demographic factors (e.g. gender, race, or socioeconomic status) that were predictive of prescription drug use when including other behavioral factors in the model. In addition, neither parental rules nor parental monitoring emerged as predictors of use, suggesting that **direct access, parent and peer norms, and youths’ perceived risk may play primary roles in prevention of nonmedical use of prescription drugs.**

MARIJUANA

30-DAY MARIJUANA USE

Table 5 presents the results for past 30-day marijuana use for middle school, high school, and all youth. Results indicate that a little more than 1 in 5 high school youth reported using marijuana in the past 30 days.

Table 5: Marijuana 30-day use, by school type

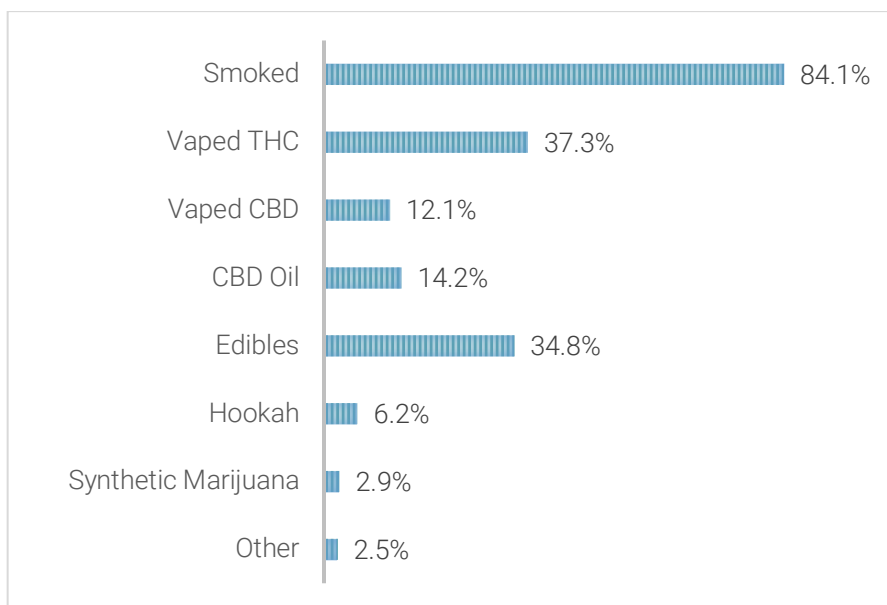
Question: How often in the past 30 days have you used marijuana (weed, pot, grass)?				2018	
	Never Used	No times in the past 30 days	Used in the past 30 days	Used in the past 30 days	
Middle School	92.4%	3.6%	4.0%	4.2%	21.1%
High School	64.4%	14.2%	21.4%	13.3%	
All Respondents	78.6%	8.8%	12.6%		

MARIJUANA

USE TYPE

Youth were asked to report on the types of marijuana they used, and had the option to select more than one type. Of youth who used marijuana in the past 30 days, the majority smoked it, though **more than half (51.9%) reported using more than one form of marijuana**. In the 2020 YDS, questions related to vaping of THC and CBD were included for the first time, with Vaped THC emerging as one of the top forms of marijuana use alongside edibles.

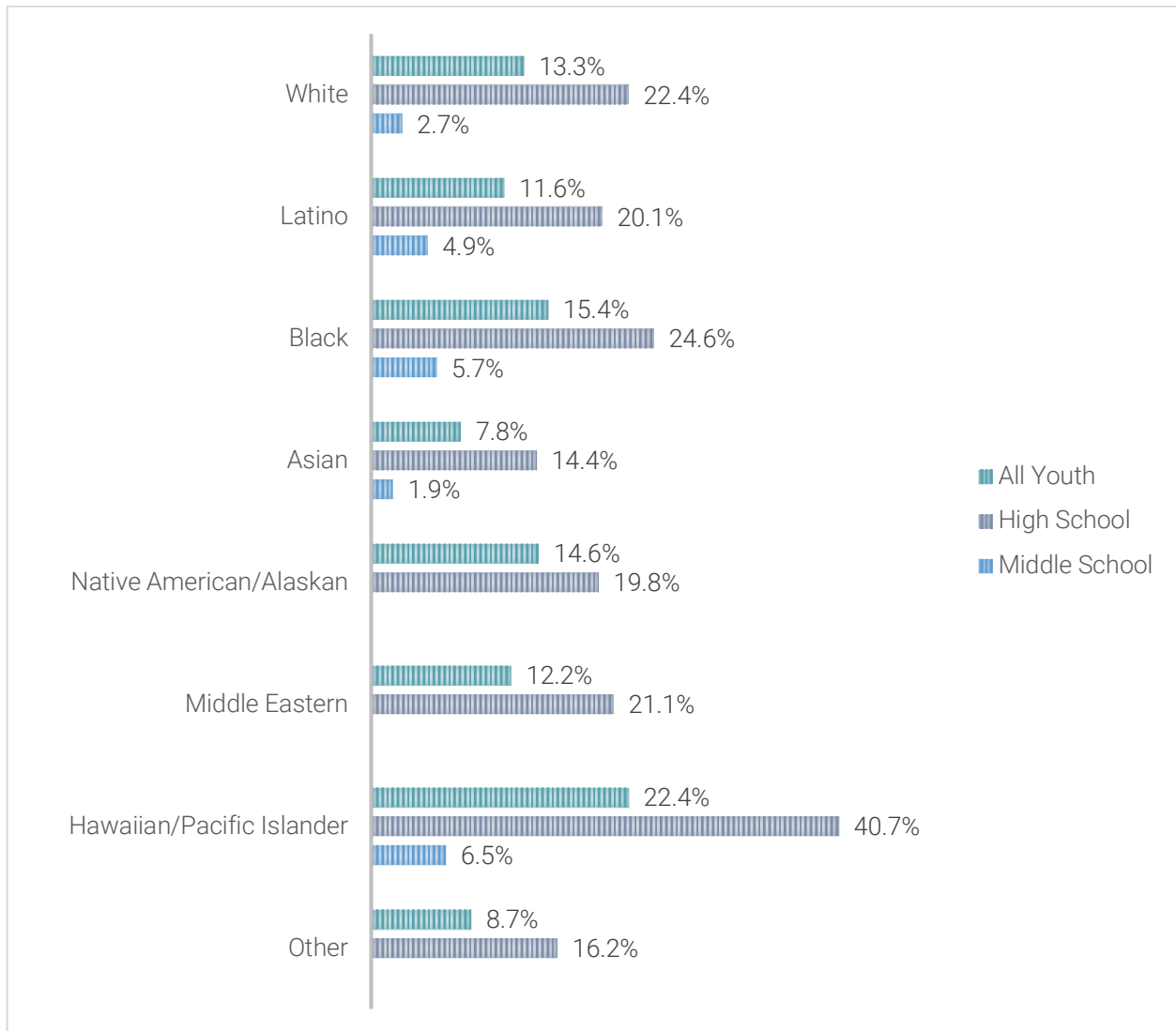
Figure 28: Marijuana use by type



MARIJUANA USE BY RACE/ETHNICITY AND SCHOOL TYPE

In addition to differences between high school and middle school youth, there were also modest differences in marijuana use across racial and ethnic groups. Figure 29 illustrates these racial and ethnic differences by school type. **Asian youth were at least risk, while Hawaiian/Pacific Islander, Native American/Alaskan, and Black youth were at greatest risk for 30-day marijuana use.**

Figure 29: Marijuana use by race/ethnicity and school type*



*Cell sizes n <10 omitted

MARIJUANA USE BY COUNTRY OF BIRTH

When examining marijuana use by youth's country of birth, fewer immigrant youth reported using marijuana in the past 30 days (6.9%) in comparison to native-born youth (13.2%). This difference was statistically significant ($p < .001$).

ACCESS TO MARIJUANA AND USE LOCATIONS

Youth were asked to report how they access marijuana. Of those who reported ever using marijuana:

50.7% Got it from a friend
5.3% Got it at a party

Smaller groups of youth reported accessing marijuana through other means.

Youth also reported on where they used marijuana the last time they used it. The primary use locations included at a friend's house (19.5%), at home alone (16.8%), at a park or outside (14.3%), and in a car (11.6%). Approximately 6.0% of youth also indicated that they used marijuana at a party – whether at their own, a friend, or a stranger's home.

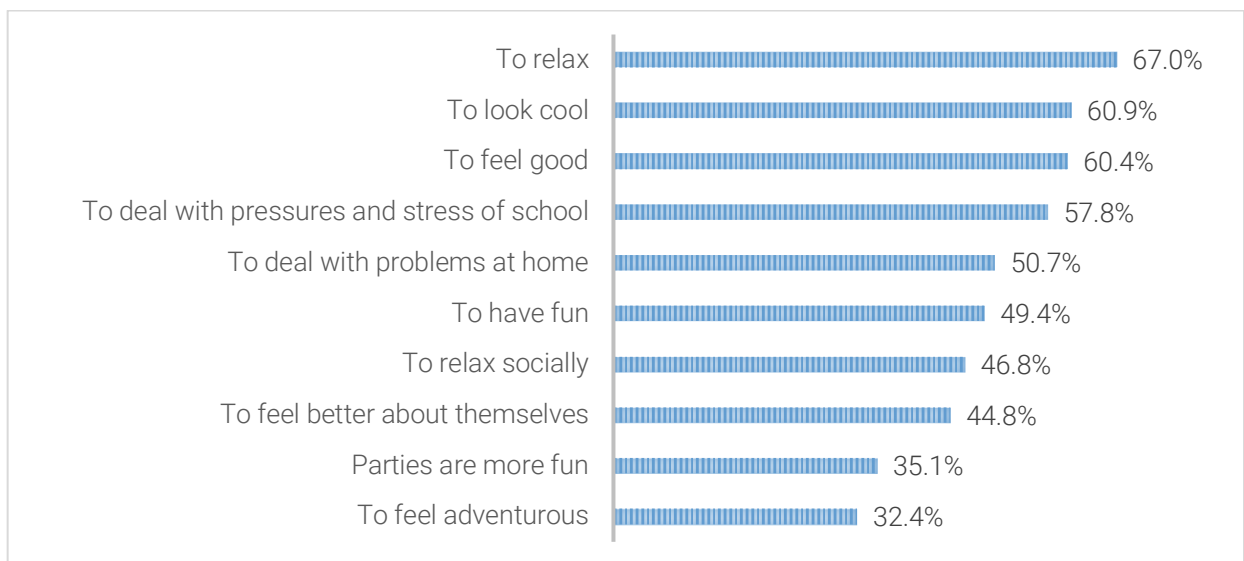
MARIJUANA USE IN THE HOME

A relationship was found between the use of marijuana in the home by others and an individual youth's use of marijuana. Of interest, when both someone over and under 18 years of age uses marijuana in the home, on average 43.2% of youth use marijuana themselves, compared to only 8.8% of youth who do not report another user in the household. Taken together, **these findings suggest a strong relationship between home use by others (parents, siblings, and others) and a youth's decision to use marijuana.**

WHY MARIJUANA IS USED

Figure 30 presents results of youth sharing why they believe others use marijuana. "To relax," "to look cool," and "to feel good" were the top three reasons selected.

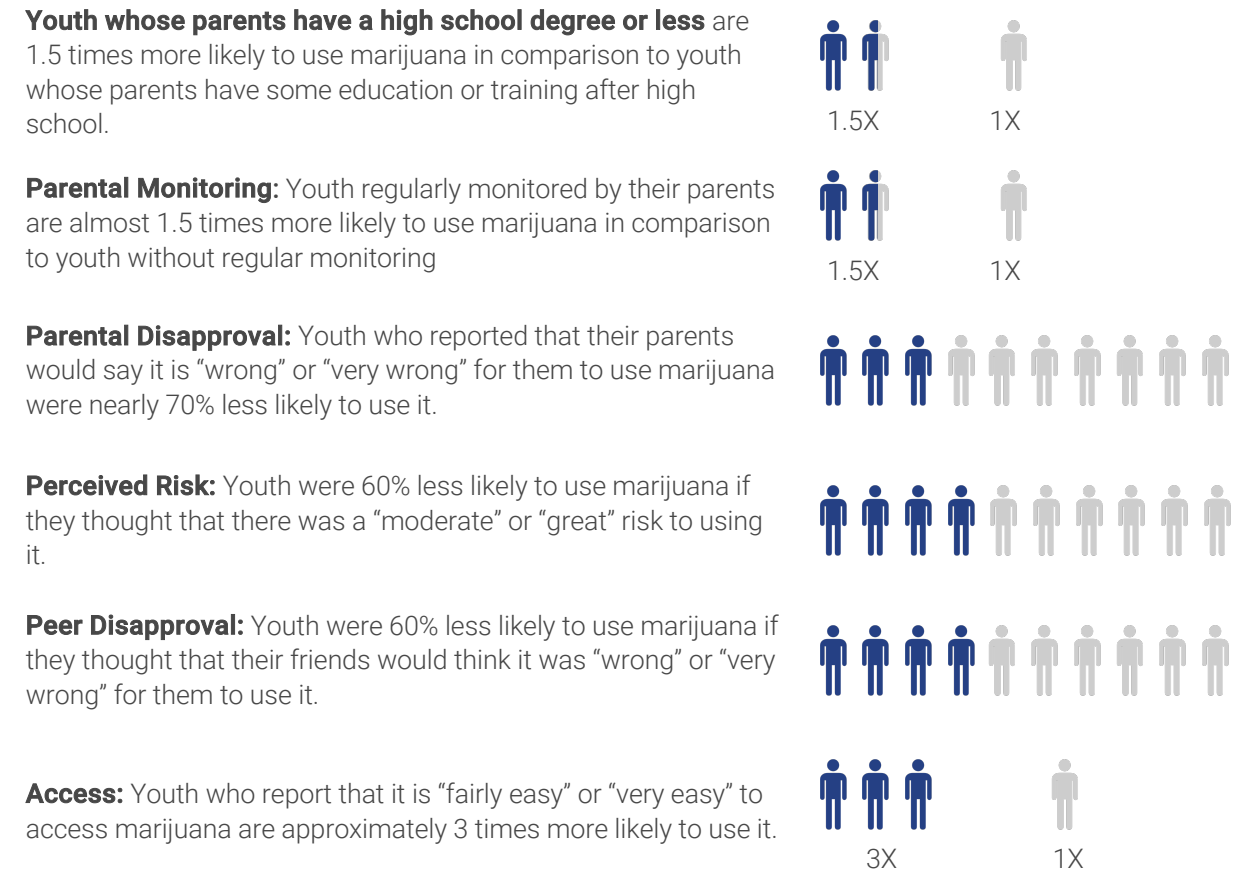
Figure 30: Reasons youth provided for others using marijuana



EXAMINING FACTORS RELATED TO MARIJUANA USE

Patterns also emerged from the data concerning risk and protective factors for marijuana use using regression modeling techniques. Controlling for other factors:

Figure 31: Risk and protective factors for marijuana use



In addition, youth whose parents had clear rules about use were 75% more likely to use marijuana ($p < .001$), controlling for other covariates. As previously discussed, it is possible that causality is reversed: that after parents discover their child is using marijuana, they may put into place clear rules about its use. It may also be possible that parents use with their children and have rules around this use – in both cases, further research is required to better understand what may explain this phenomenon.

OTHER SUBSTANCE USE

Table 6 presents results of other drug use, including the reported percentage of youth ever using the drug as well as the median age of onset for each drug. No substances were used by more than 3% of youth. Inhalants (2.7%) and OTC drugs (2.4%) were the most frequently reported drugs used other than alcohol, tobacco, prescription drugs and marijuana.

Table 6: Substance use frequency

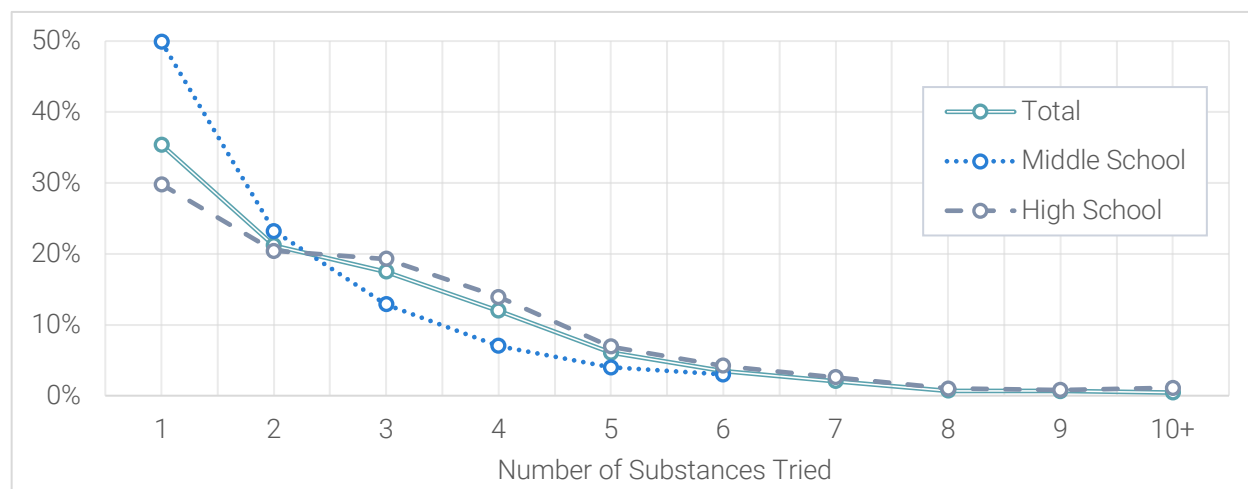
Question: For the following table, mark how often you have used each substance in the past 30 days, if at all. If you have used it, at what age (in years) did you first try it?	Median age of Onset	% Ever Used	% Ever Used (2018)
Cocaine (powder, crack, freebase)	16	1.0%	0.6%
Methamphetamines (speed, crystal, meth, crank, chalk, ice)	13	0.4%	0.3%
Inhalants (glue, paints or sprays, aerosol spray cans)	11	2.2%	1.2%
Hallucinogens (LSD, salvia, mushrooms, Acid, tabs)	15	2.0%	0.9%
Heroin (smack, junk, China White)	*	*	0.1%
Ecstasy (Molly, E, X, MDMA)	15	0.9%	0.3%
Synthetic Drugs (Bath salts/flakka)	12	0.8%	0.4%
Over the Counter (OTC) Drugs (cough syrup)	14	2.4%	1.1%

* Cell size fewer than n=10

TRYING MULTIPLE SUBSTANCES

Figure 32 presents data on how many substances youth have tried of those who reported substance use. Each respondent was offered 15 substances to choose from, with tobacco products making up 5 different options (e.g. combustible cigarette, e-cigarette, dip/chew, etc.). The majority of all users have only tried one or two substances. However, **roughly 50% of users in high school reported having tried 3 or more substances.**

Figure 32: Number of substances tried by total, middle, and high school youth

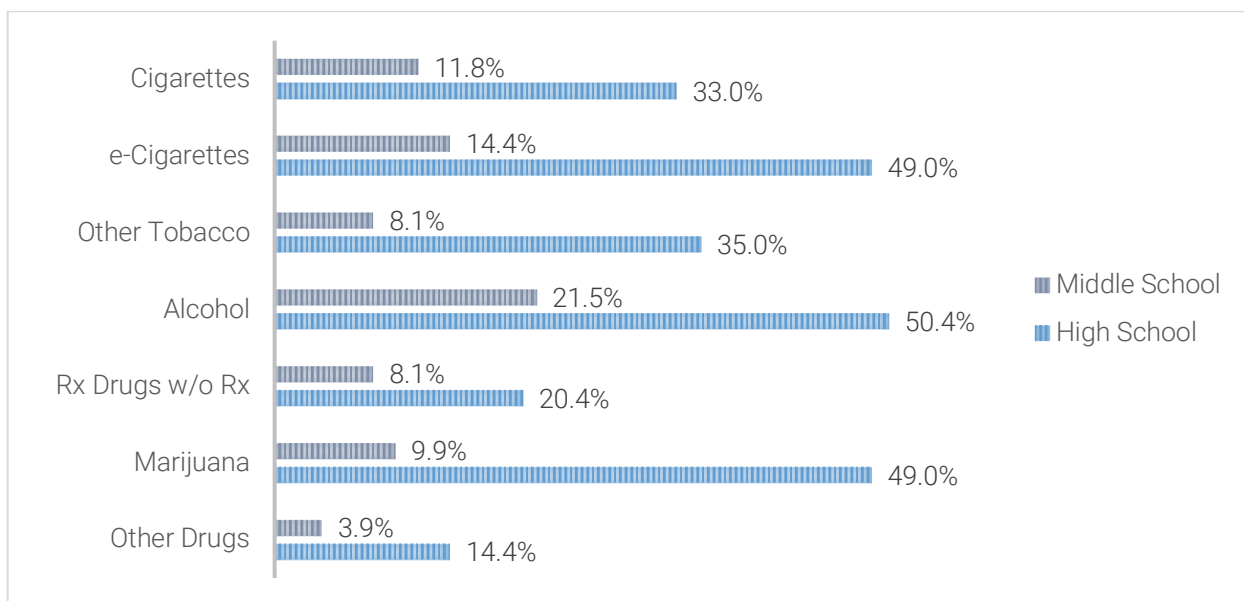


YOUTH BEHAVIOR AND PERCEPTIONS

ACCESS

Figure 33 presents how youth perceive ease of access to six substances, separated by middle and high school grade levels. For all tobacco categories, youth above 18 years of age were removed from the sample, to remove the potential effects of access through legal purchase. **E-cigarettes, alcohol and marijuana emerged as the substances that youth report as easiest to obtain**, with about half of high school youth reporting that they are “fairly easy” or “very easy” to access. The next easiest to access were other tobacco and cigarettes. The more difficult substances for youth to access were prescription drugs without a prescription and other drugs.

Figure 33: Percent of middle and high school youth who report access as “fairly easy” or “very easy”

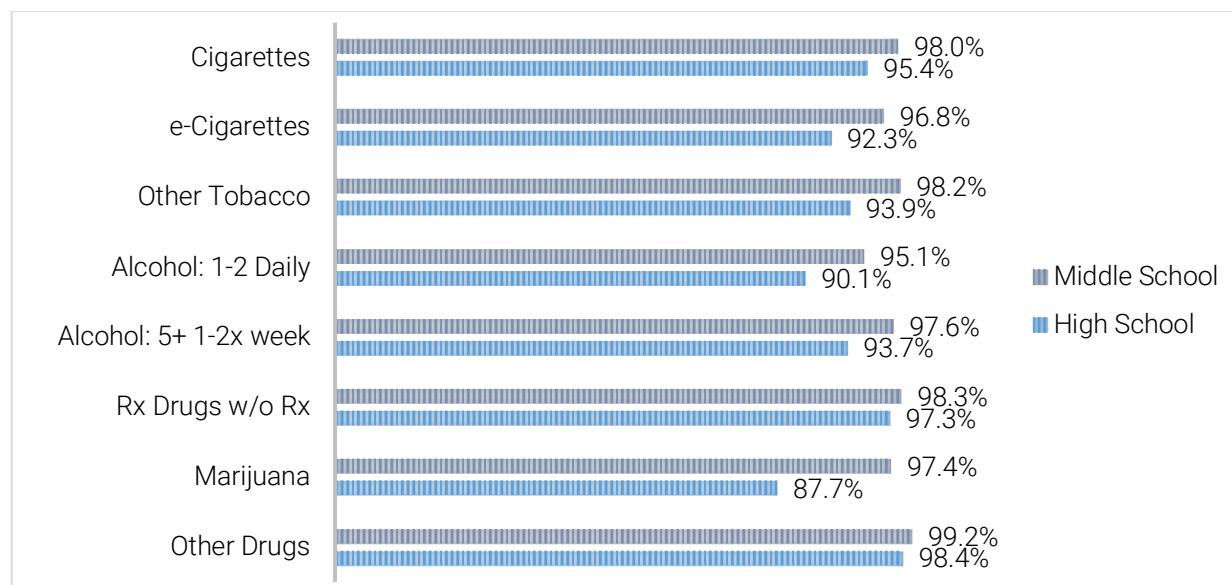


PARENT DISAPPROVAL

Youth in the survey were asked to report on their parents’ level of disapproval, responding to the question “How wrong do your parents feel it would be for you to use [substance],” with response choices “not at all wrong,” “a little bit wrong,” “wrong,” or “very wrong.” Figure 34 presents rates of parental disapproval for each substance, measured as those who reported that their parents would say that is “wrong” or “very wrong” for them to use, separated between middle and high school youth.

Across substances, the majority of youth reported consistently that their parents would disapprove of their use of substances. However, rates do vary by substance. For example, **high school youth reported that their parents would disapprove of their use of marijuana and nearly daily use of alcohol at rates lower than other substances.**

Figure 34: Parent disapproval

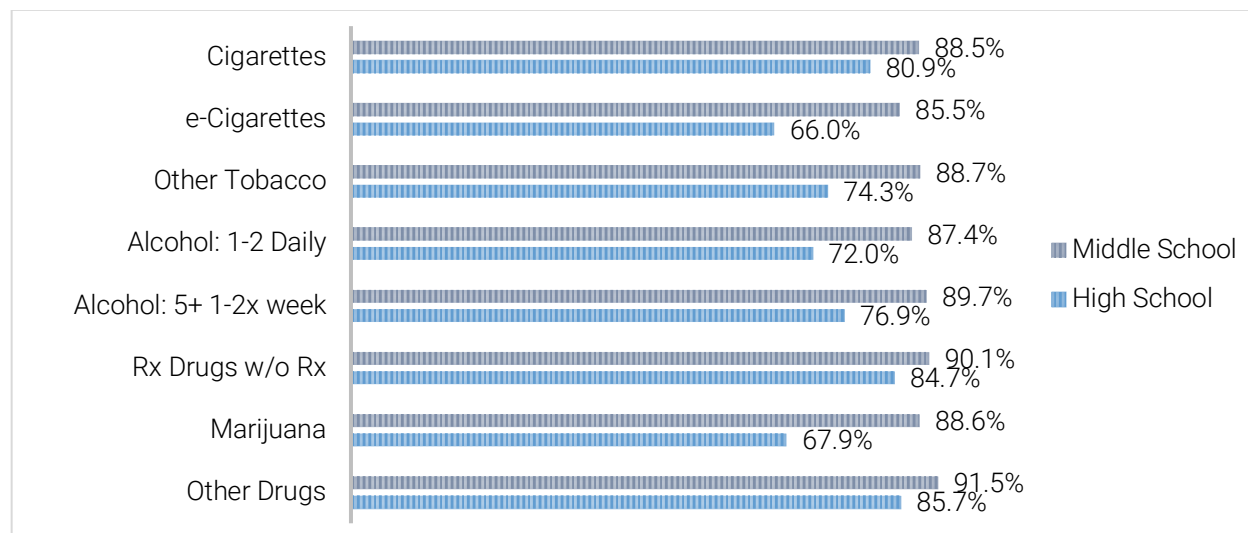


PEER DISAPPROVAL

Youth were also asked how wrong their friends would feel it would be for them to use each substance. Figure 35 presents the percentage of youth who indicated that their friends would think it would be “wrong” or “very wrong” for them to use the substance as described.

Between 3 of 4 and 4 of 5 middle school youth reported that their friends would have found it “wrong” or “very wrong” for them to use most substances. There was greater variance, however, among high school youth. In particular, fewer high school youth reported that their friends would think it was “wrong” or “very wrong” for them to use marijuana or e-cigarettes than other substances.

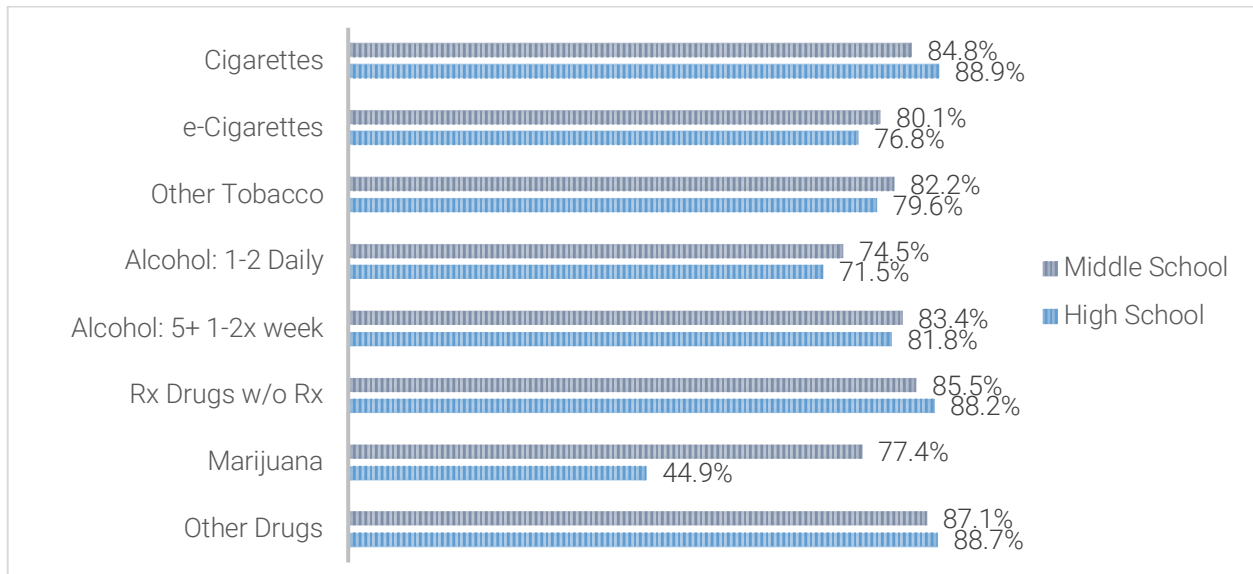
Figure 35: Peer disapproval



PERCEIVED RISK

Youth were asked to report on their own perceptions of substance use risk. Figure 36 presents the percentage of youth who reported that there was “moderate” or “great” risk to using each of the substances. Perception of risk was lowest for marijuana, with only 44.9% of high school youth indicating that there was “moderate” or “great” risk to using it.

Figure 36: Perceived Risk



PERCEPTIONS OF USE

Figure 37 presents the number of youth reporting that “several,” “many,” or “all” of their peers used the listed substance. High school youth perceived marijuana to be used by more of their friends in comparison to alcohol and e-cigarettes.

Figure 37: Percentage of youth who say “several,” “many,” or “all” of their friends use the substance

