

Inter-American Drug Abuse Control Commission



Introduction to Adolescent Substance Use





Methodology:

Active discussion



Required Materials:

Easel Pad

Participant Manual

Notepad for each participant

Pens & Pencils



Duration: 2 hours

INTRODUCTION TO ADOLESCENT SUBSTANCE USE

INTRODUCTION TO ADOLESCENT SUBSTANCE USE

Learning Objectives:

- To prioritize adolescent substance abuse as a global public health problem.
- To understand the issue of adolescent substance use and its impact to societies.
- To learn about the prevalence of different types of substances adolescents are exposed to across the globe.
- To understand the differences between use, misuse and abuse of substances among adolescents.
- To learn about the factors that impact future adolescent substance use.

ADOLESCENT SUBSTANCE USE AS A PUBLIC HEALTH CRISIS

- Adolescent substance use is a global public health problem. The harmful use of alcohol causes disease, social and economic burdens in societies.
- Drug use and health consequences is highest among young people.
- Early use of substances increases a person's chances of developing an addiction. Drugs change brains—and this can lead to serious brain damage, drug misuse and other serious problems.

ADOLESCENT SUBSTANCE USE AS A PUBLIC HEALTH CRISIS

- Often during adolescence there is exposure to substances such as cigarettes and alcohol for the first time.
- The goal is to build international treatment capacity through training, professionalizing, and expanding the regional treatment workforce

INTERNATIONAL STANDARDS

- The United Nations' International Standards on Drug Use Prevention state that adolescents should avoid and abstain from substances to encourage health development and benefit societies.



UNITED NATIONS
Vienna, 2015

Complete the sentences...

Adolescents today are...

Adolescents today should ..

When I was an adolescent, I felt...

When I was an adolescent, I wanted...

What are my values on Adolescent AOD Use?

- Identifying personal values regarding adolescent alcohol and other drug (AOD) use is important for effective communication about these issues with your clients/





Forced Choices Exercise

DEFINITION OF SUBSTANCE ABUSE

- DSM-V Definition of *Substance Disorder*
 - Mild
 - Moderate
 - Severe
- Four major groupings
 - Impaired control
 - Social impairment
 - Risky use
 - Pharmacological criteria
- The ICD defines *Dependence Syndromes* as a cluster of physiological, behavioral and cognitive phenomena in which the use of the substance takes higher priority in an individual.
 - Drug Use: Pattern of psychoactive substance use that is causing damage to health.
 - Drug Abuse: a strong desire to have the drug.
 - Dependence: Physiological need to have the drug.

TYPES OF SUBSTANCES

Alcohol

Marihuana (Cannabis)

Tobacco & Nicotine Products

Inhalants

Cocaine Substances

Amphetamine Stimulants (Ecstasy)

Opioids (Heroin)

Controlled Prescription Drugs

Psychoactive Drugs

Energy drinks

Bath Salts

PREVALENCE BY REGION: CIGARRETES

African Region

Country	Prevalence (current)	Youth sample size of survey
Algeria	5.7%	4,023
Burundi	4.6%	1,110
Comoros	6.5%	1,551
Congo	8.2%	1,141
Côte d'Ivoire	13.7%	1,920
Eritrea	1.6%	4,813
Guinea	7.1%	1,305
Kenya	4.9%	1,326
Madagascar	8.9%	1,674
Malawi	3.5%	1,293
Mali	10.4%	2,135
Mauritania	13.1%	2,941
Mauritius	13.6%	3,076
Namibia	11.9%	1,397
Niger	3.5%	1,307
Seychelles	14.7%	1,525
Sierra Leone	3.7%	3,273
South Africa	12.7%	3,947
Tanzania	1.7%	1,041
Uganda	4.8%	2,026
Zambia	6.2%	1,964
Zimbabwe	11.2%	5,114

Middle Eastern Region

Country	Prevalence (current)	Youth sample size of survey
Afghanistan	2.9%	1,143
Bahrain	9.7%	2,465
Djibouti	6.6%	1,361
Egypt	4.8%	2,141
Gaza Strip	6.5%	1,579
Iran	3.0%	1,153
Iraq	5.7%	1,266
Jordan	11.4%	1,899
Kuwait	11.6%	2,050
Lebanon	11.3%	1,651
Libya	4.3%	1,361
Morocco	1.9%	2,948
Oman	1.7%	1,498
Pakistan	3.3%	5,832
Qatar	6.6%	1,608
Saudi Arabia	8.9%	1,797
Somalia	5.8%	897
Sudan	2.7%	950
Syria	6.8%	1,210
Tunisia	7.7%	1,863
United Arab Emirates	6.2%	3,376
Unrwa Gaza Strip	11.1%	1,272
West Bank	17.5%	1,332
Yemen	6.8%	1,634

The Americas

Country	Prevalence (current)	Youth sample size of survey
Antigua and Barbuda	1.4%	1,500
Argentina	17.4%	2,069
Barbados	7.0%	1,306
Bolivia	6.9%	3,782
Brazil- Sao Paulo	11.6%	1,413
Chile	17.2%	1,481
Colombia	26.2%	1,235
Costa Rica	5.0%	2,158
Cuba	10.6%	2,533
Dominica	11.6%	934
Dominican Republic	2.4%	917
Ecuador	8.0%	4,367
El Salvador	9.9%	2,567
Guatemala	12.9%	3,351
Haiti	14.0%	1,726
Honduras	5.2%	2,515
Jamaica	11.2%	1,031
Mexico	14.6%	1,825
Nicaragua	12.2%	3,006
Panama	3.9%	2,096
Peru	7.7%	2,299
Puerto Rico	8.6%	783
St. Kitts	4.0%	770
Saint Lucia	6.3%	1,234
St. Vincent and the Grenadines	4.1%	995
Trinidad & Tobago	6.7%	2,292
Uruguay	8.2%	3,256
Virgin Islands -USA	3.4%	1,433

European Region

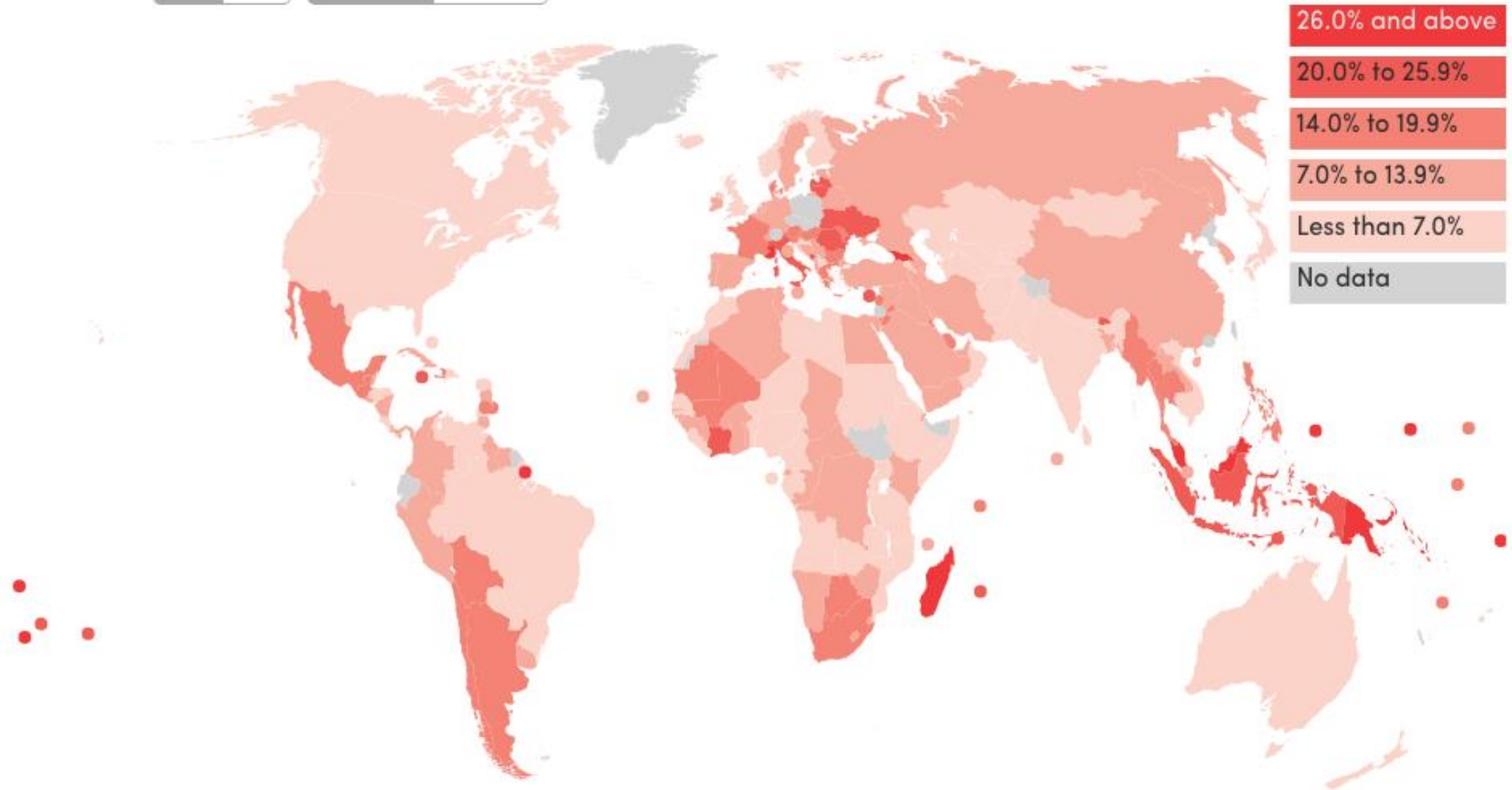
Country	Prevalence (current)	Youth sample size of survey
Albania	6.0%	3,482
Bosnia and Herzegovina	11.2%	10,018
Bulgaria	20.4%	3,532
Croatia	14.6%	2,991
Czech Republic	15.2%	3,521
Estonia	27.2%	2,330
Finland	17.9%	4,773
Hungary	23.2%	3,861
Italy	19.8%	1,518
Kazakhstan	1.7%	1,715
Kosovo	4.4%	3,895
Latvia	14.8%	3,900
Lithuania	16.7%	2,549
Macedonia	7.6%	4,919
Montenegro	6.0%	3,896
Republic of Moldova	7.2%	3,548
Poland	15.3%	3,857
Portugal	11.4%	7,600
Romania	8.6%	4,395
Russia	25.4%	10,956
Serbia	11.0%	3,362
Slovakia	17.1%	3,565
Slovenia	6.1%	2,015
Tajikistan	0.8%	2,411
Turkey	7.7%	84,007
Turkmenistan	0.0%	6,803
Ukraine	9.2%	3,040

SOUTHEAST ASIAN REGION

Country	Prevalence (current)	Youth sample size of survey
Bangladesh	2.1%	3,186
Bhutan	14.0%	1,378
India	4.4%	10,112
Indonesia	18.3%	4,317
Maldives	4.3%	1,494
Myanmar	8.3%	2,621
Nepal	3.1%	1,602
Sri Lanka	1.5%	1,416
Timor Leste	28.9%	1,908
Thailand	11.3%	1,721

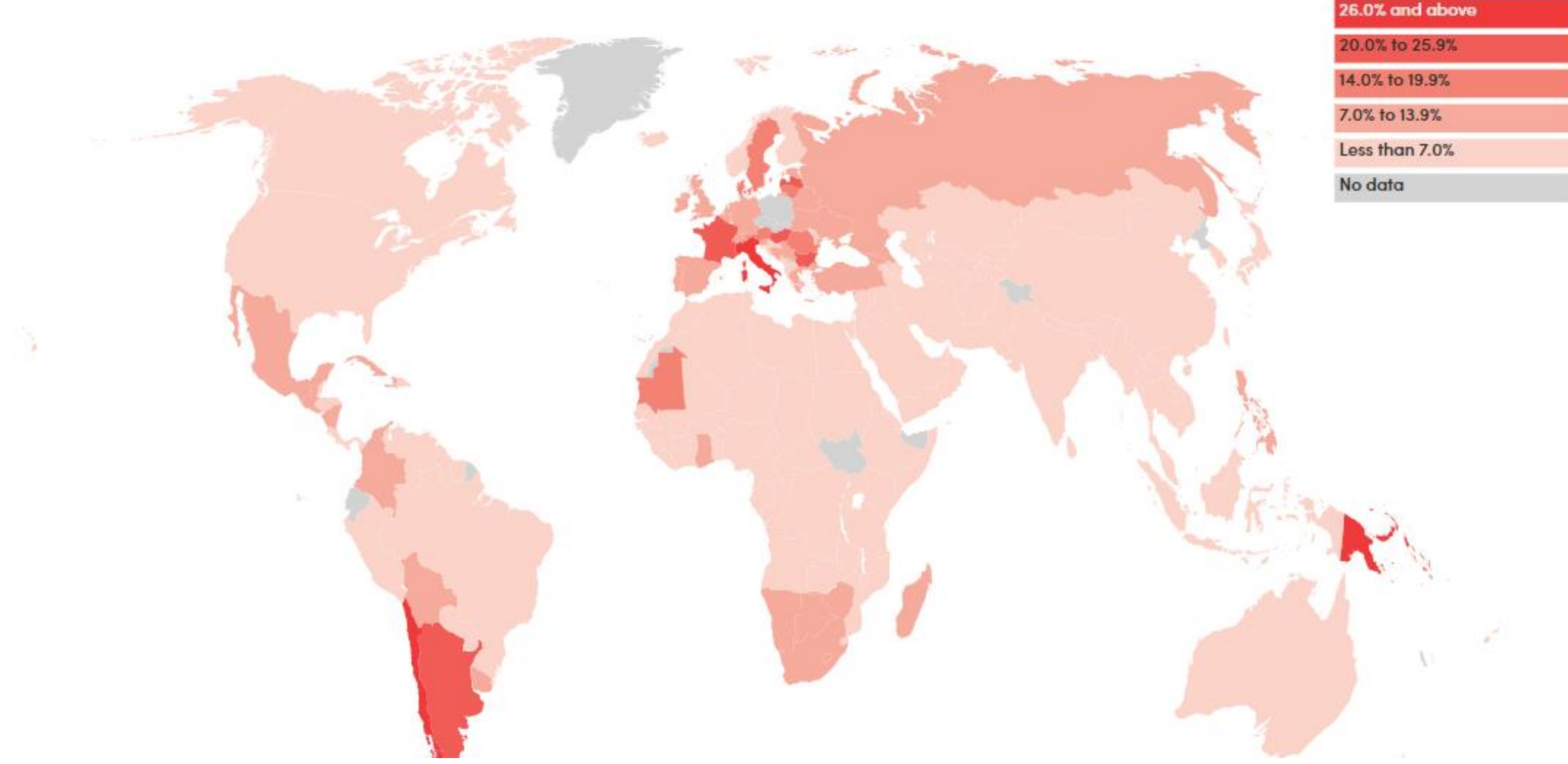
Prevalence, Tobacco and Cigarette Use (Boys and Girls)

Filters: Boys Girls Cigarette Tobacco



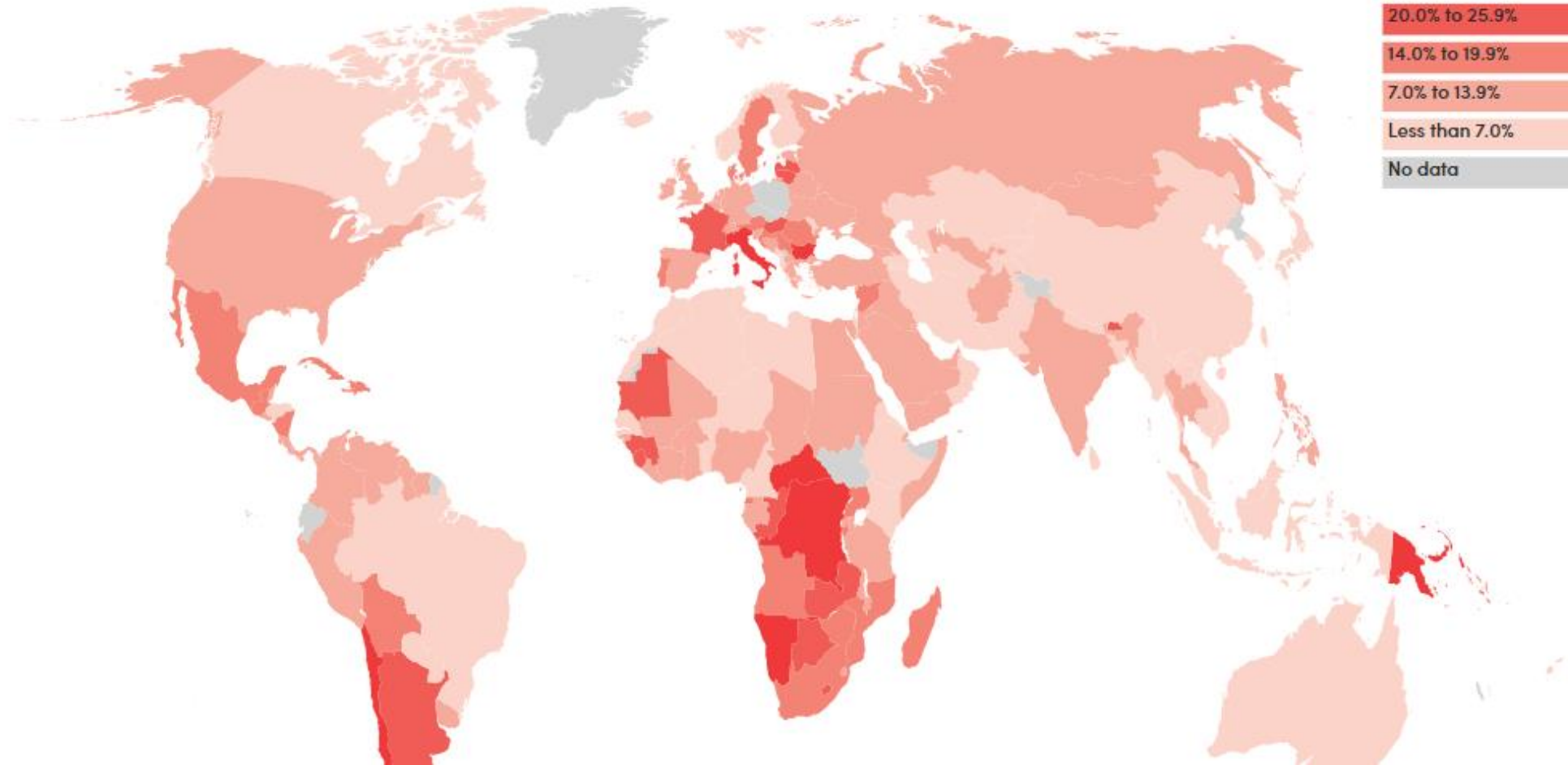
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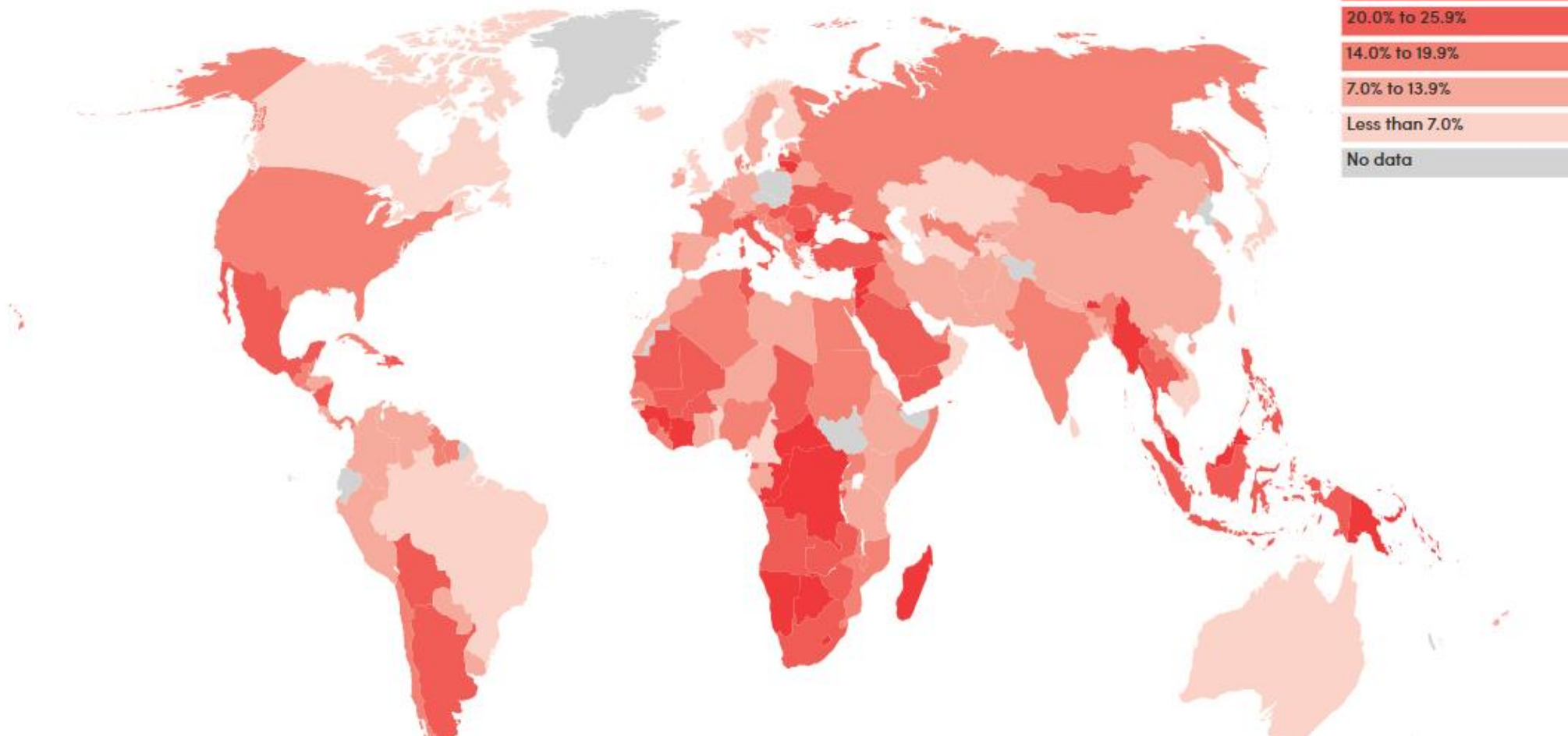
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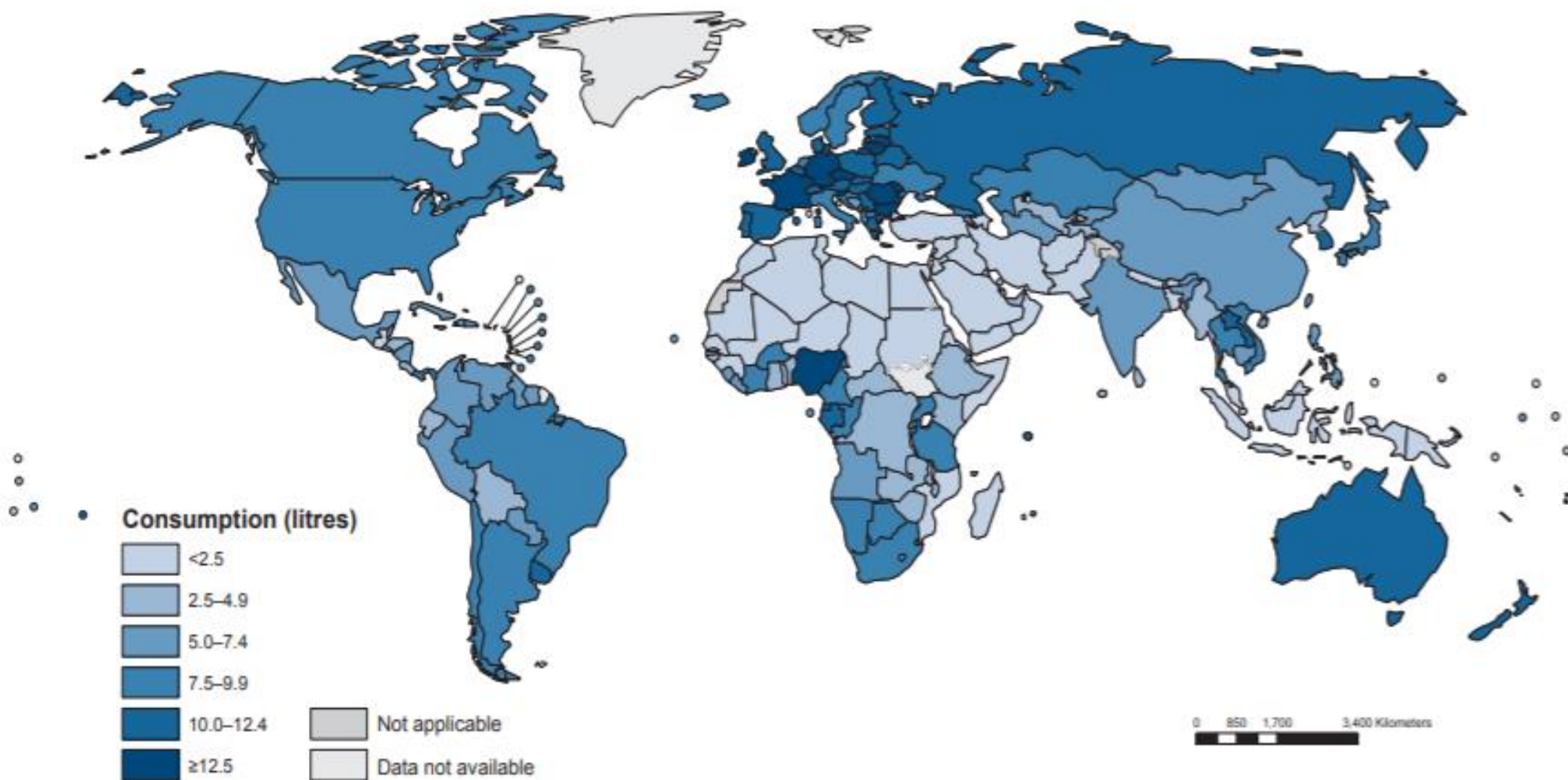
Prevalence, Tobacco and Cigarette Use (Boys and Girls)

Filters: Boys Girls Cigarette Tobacco



PREVALENCE BY REGION: ALCOHOL

Figure 3.3 Total alcohol per capita consumption (APC) (15+ years; in litres of pure alcohol), 2016



ALCOHOL IN ADOLESCENTS

- Alcohol is the most used drug among adolescents, even more than Marijuana and Tobacco.
- Adolescent males drink at a slightly higher rate than adolescent females.
- Adolescents who drink alcohol are more likely to skip school, fail grades and become more aggressive in the future.
- Adolescents who use alcohol are more likely to try other drugs.
- Historically since 2002 to 2015 rates of underage drinking have remained stable.

ALCOHOL IN ADOLESCENTS GLOBALLY

- Worldwide, more than a quarter (26.5%) of all 15–19-year-olds are current drinkers, amounting to 155 million adolescents:

Region	Adolescents (15-19) in millions
African Region	22.5
The Americas	29.9
Mediterranean Region	.7
South-East Asia Region	37.9
Western Pacific Region	41.9

Figure 3.9 Percentage (in %) of current drinkers, former drinkers and lifetime abstainers among the total population (15–19 years) by WHO region and the world, 2016

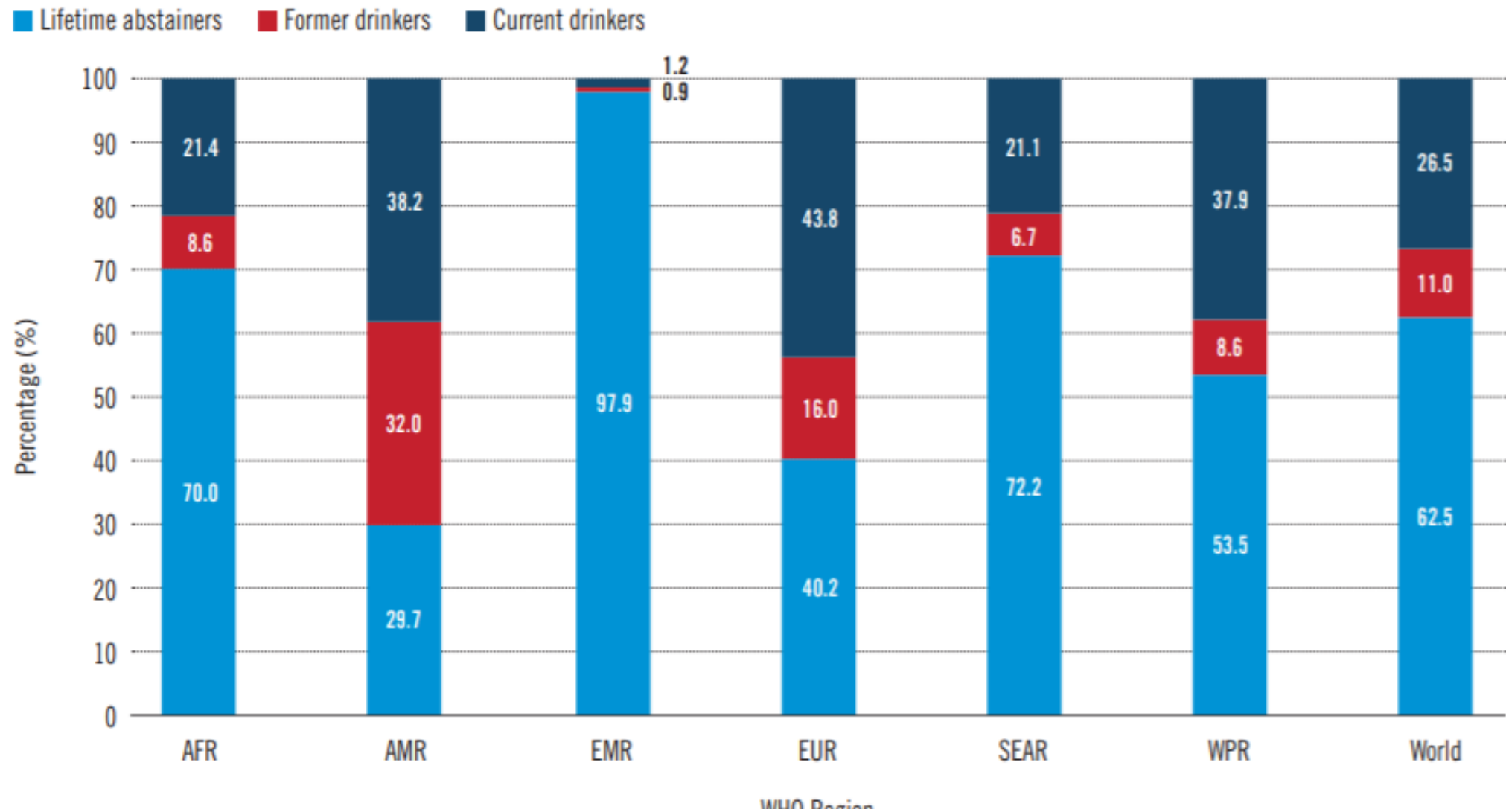
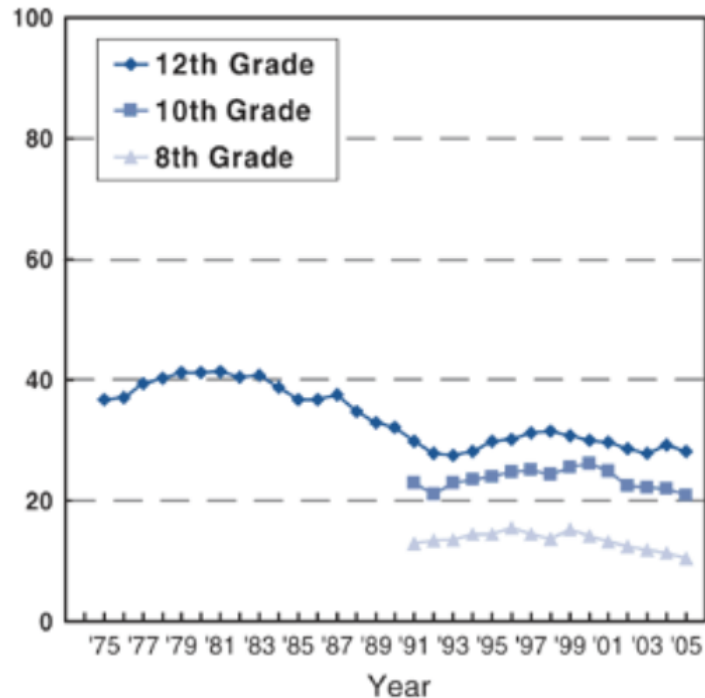


Table 3.9 Prevalence (in %) of heavy episodic drinking (HED) among the total population aged 15 years and older and adolescents (15–19 years) and the corresponding adolescents-to-adults ratios by sex, by WHO region and the world, 2016

WHO Region	All (15+ years) (%)		Adolescents (%)		Adolescents/all ratio	
	Males	Females	Males	Females	Males	Females
AFR	28.3	6.8	20.8	4.3	0.7	0.6
AMR	35.0	8.2	30.1	6.4	0.9	0.8
EMR	0.9	0.1	0.3	0.0	0.4	0.5
EUR	40.7	13.5	36.2	11.5	0.9	0.8
SEAR	23.3	4.2	17.1	2.8	0.7	0.7
WPR	35.3	8.3	30.0	6.4	0.8	0.8
World	29.2	7.2	21.9	4.7	0.7	0.7

Binge Drinking



Percent of young people drinking 5+ drinks at one time in the last 2 weeks. Source: www.monitoringthefuture.org/data/o5data.html#2005data-drugs.

ADOLESCENT BINGE DRINKING

- Binge drinking is the most harmful way adolescents use alcohol.
- From those who drink, 18% binge drank alcohol.
- Young males are more likely to engage in binge drinking.
- Violence behavior such as; motor vehicle accidents, homicide and suicide can result from binge drinking.

PREVALENCE BY REGION: MARIHUANA

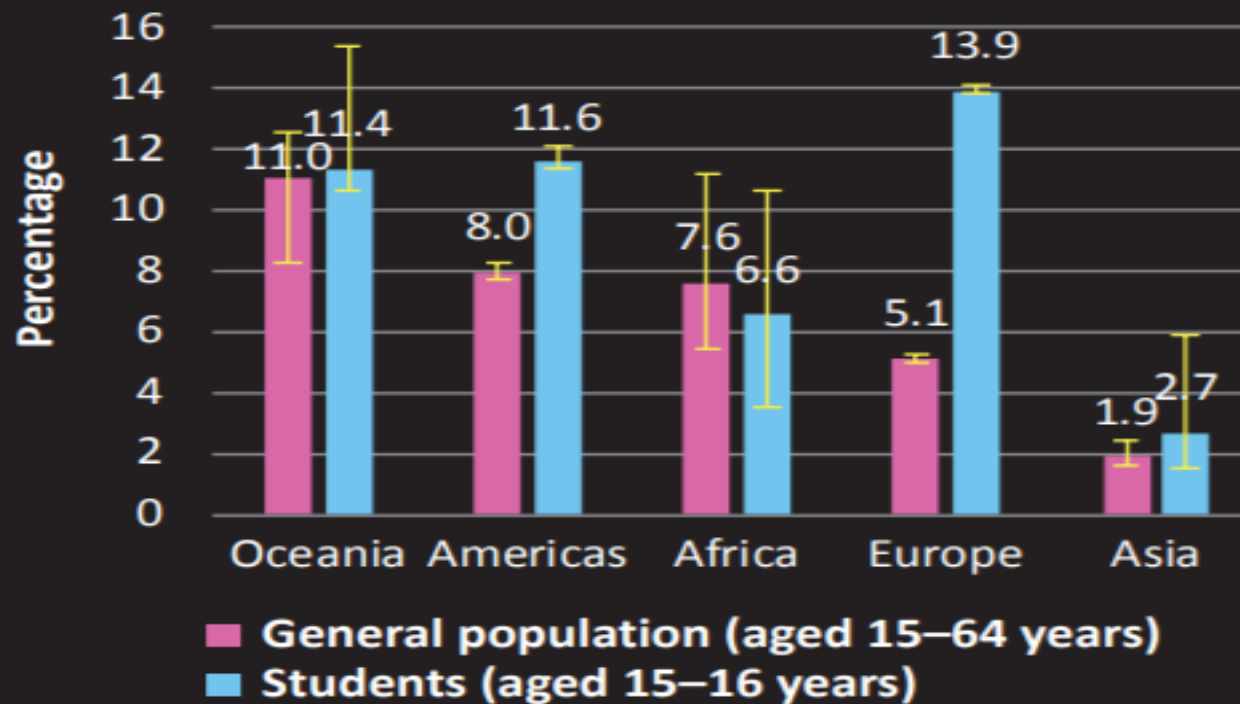
MARIHUANA (CANNABIS)

- Cannabis use among adolescents has increased overtime as it can be viewed as a socially accepted behavior in many countries globally.
- Cannabis is the preferred drug of choice among young people. It is often consumed along with other substances.
- Social norms in some countries have created a cultural acceptance of Marihuana use.
- Early onset is a predictor of chronic substance use among adolescents.

MARIHUANA CONTINUED

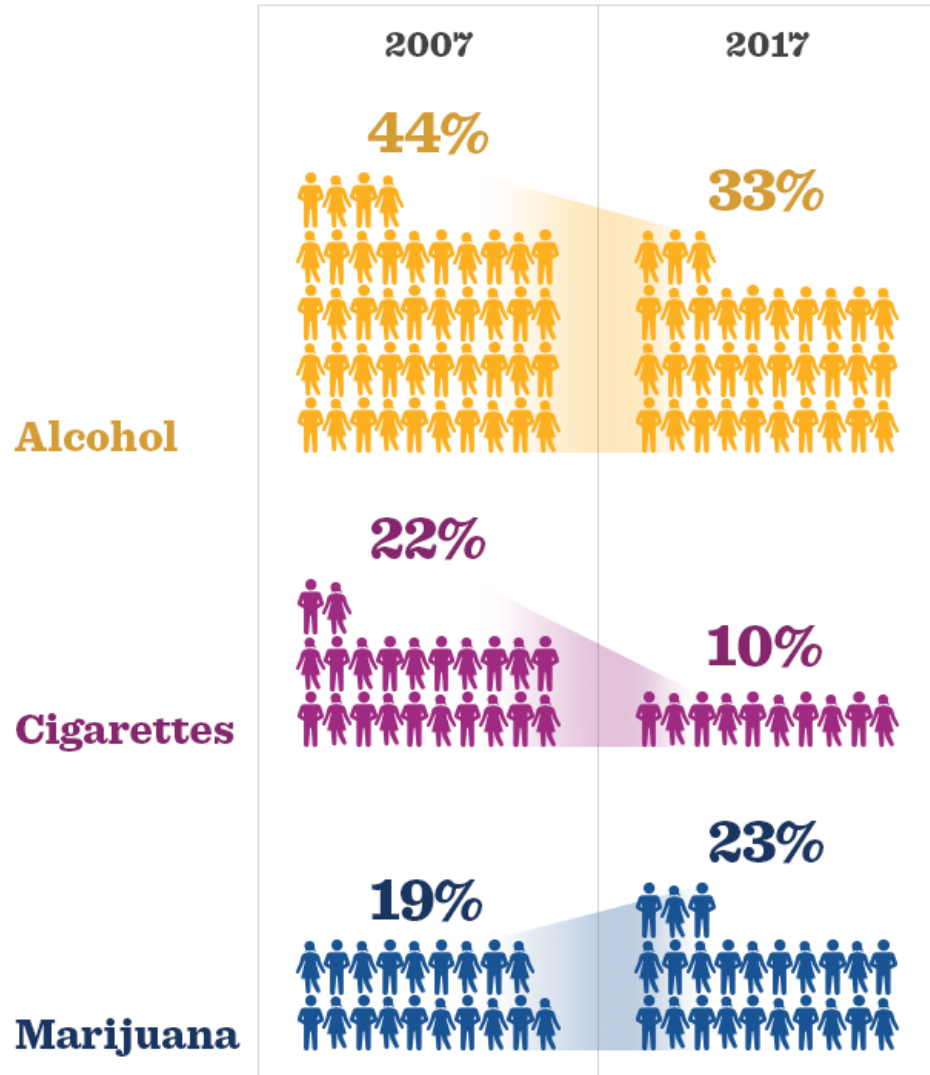
- Smoking Marihuana can lead to breathing problems in the future.
- Eating Marihuana can lead to poisoning.
- Using marihuana in adolescence can damage the developing brain.
- Research suggest that using marihuana before the age of 16 are at high risk of developing drug use disorders and mental health problems such as anxiety, depression, and personality disorders.
- Adolescents experience lack of motivation, poor school performance and general dissatisfaction with life.

Annual prevalence of cannabis use among the general population aged 15–64 years and among students aged 15–16 years, 2016



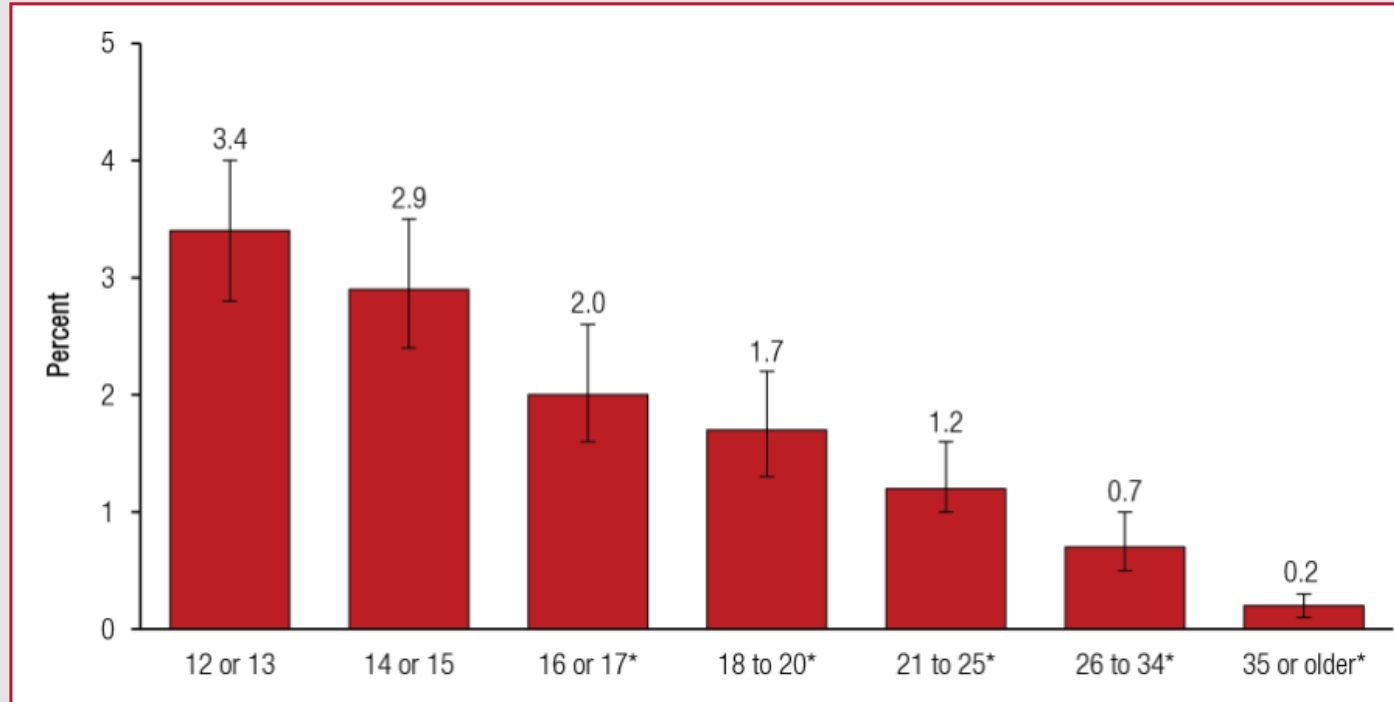
Sources: UNODC, annual report questionnaire data and government reports.

Note: the estimate of past-year cannabis use in young people aged 15–16 years is based on school surveys in most countries, hence the use of the term “students”.



Trends in Alcohol, Cigarette and Marijuana Use: 30-day prevalence in 12th graders

Figure 1. Past year inhalant use among people aged 12 or older, by age group: 2015



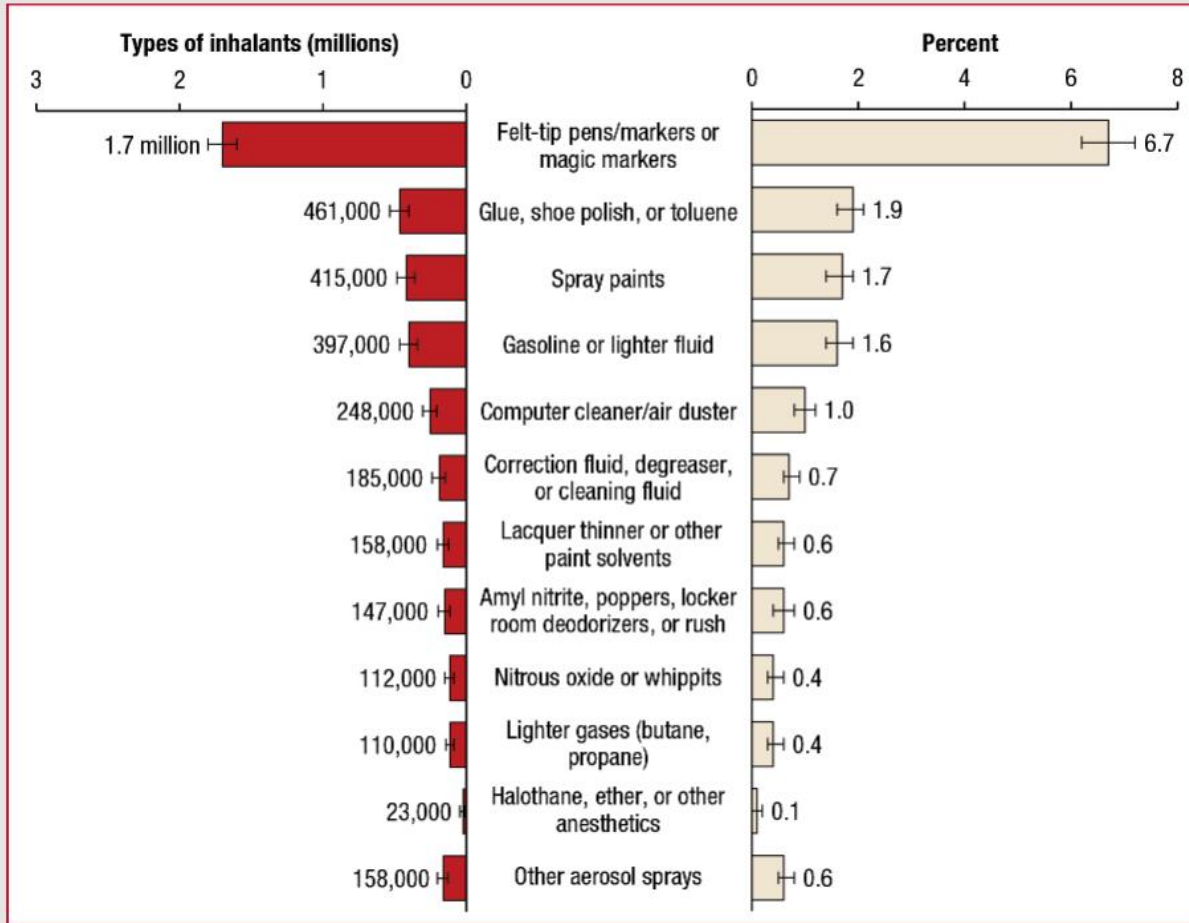
* Difference between this estimate and the estimate for those aged 12 or 13 is statistically significant at the .05 level.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health (NSDUH), 2015.

INHALANTS

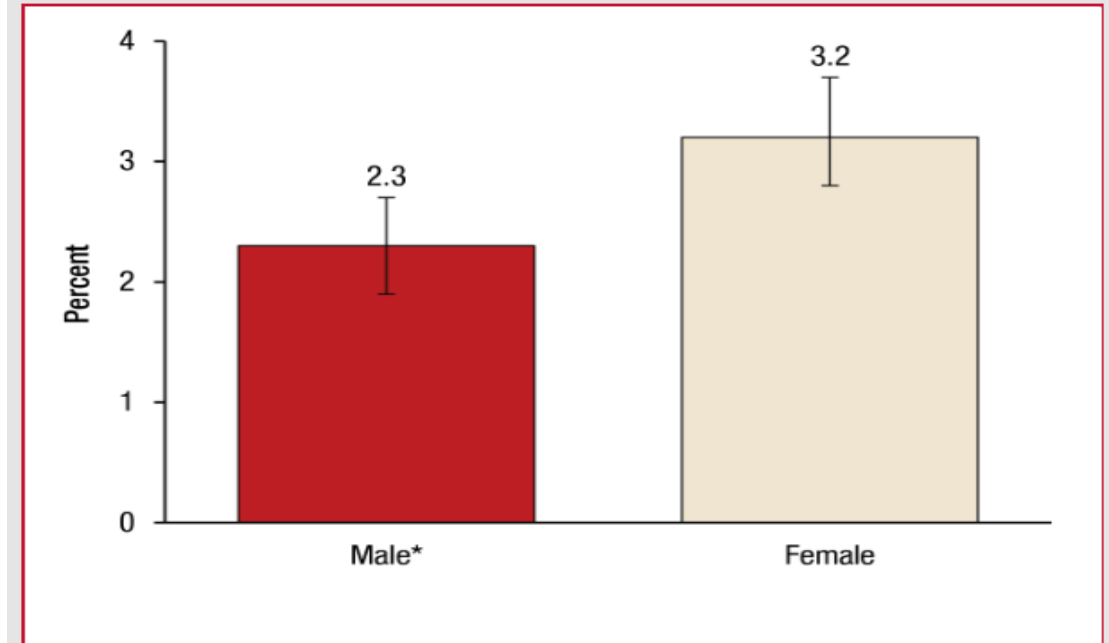
- Definition of Inhalants
 - Volatile Solvents
 - Aerosol
 - Gasses

Figure 4. Lifetime use of inhalants among adolescents aged 12 to 17, by type: 2015



Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health (NSDUH), 2015.

Figure 2. Past year inhalant use among adolescents aged 12 to 17, by gender: 2015



* Difference between males and females is statistically significant at the .05 level.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health (NSDUH),

ABOUT INHALANT USE

(CDC, 2019; SAMHSA, 2017)

COCAINE & ECSTASY

- Cocaine

- Indicators of cocaine use vary by population, past year prevalence ranges from 0.03% to almost 2%.
- There are clear differences in cocaine use among boys and girls in secondary school, with higher rates of use among boys.

- Ecstasy

- “Ecstasy” use in the general population ranges from 0.01% to a maximum of 0.9%.
- “Ecstasy” use tends to be higher among boys than girls—except for Guatemala, Panama, and Uruguay, where they are roughly equal.

- Club drugs such as “ecstasy”, methamphetamine, cocaine, ketamine, LSD and GHB are used in high-income countries

OPIOIDS & PRESCRIPTION DRUGS

Characteristic	Any Use of Prescription Opioid (<i>n</i> = 15,143) ^b Percent (95% CI)
Age	
12–17	21.0 (20.4–21.6)
18–25	32.2 (31.4–33.0)
Sex	
Male	24.8 (24.2–25.4)
Female	30.3 (29.7–30.9)

- Opioid use has increased over time.
- Heroin is an opioid and the only illegal drug across the world.
- Prescribed opioids include; oxycodone (OxyContin®), hydrocodone (Vicodin®), codeine, and morphine, among others.
- In 2016, 3.6 percent of adolescents ages 12-17 reported misusing opioids over the past year.
- Females are more likely to misuse prescription opioids.
- Youth Opioid use is directly linked to sexual risk behavior.

OTHER DRUGS

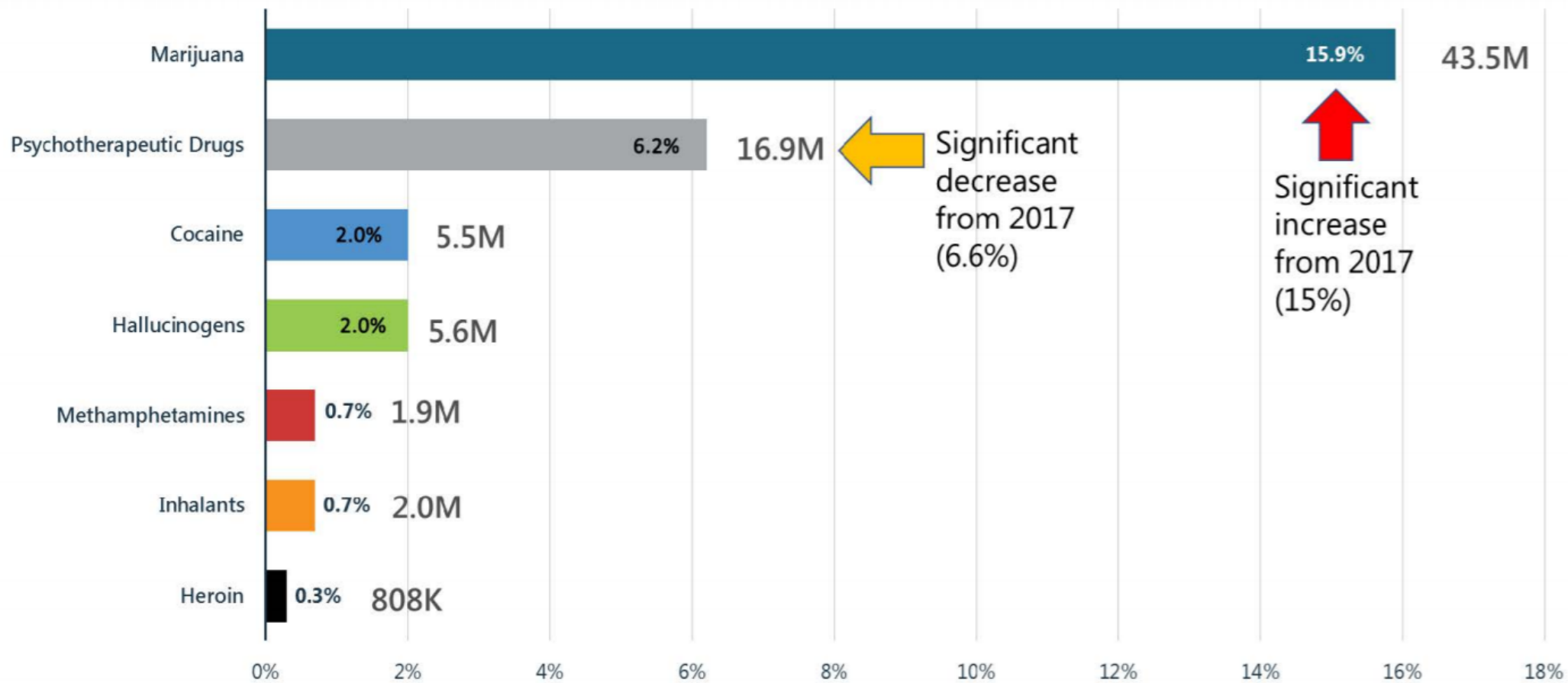
- Bath Salts

- “Bath salts” are usually swallowed, snorted through the nose, inhaled, or injected with a needle. Snorting or injecting is the most harmful.
- Bath salts can produce feelings of joy and increased social interaction, including an increased sex drive. But they can also cause paranoia, nervousness, and hallucinations (seeing or hearing things that are not real).
- Researchers do know that bath salts are chemically like amphetamines, cocaine, and MDMA.
- 1% of adolescents has used bath salts.

- Energy Drinks

- High caffeine content per serving.
- adolescent energy drink consumption has significantly increased in the past 10 years.
- The CDC reports that drinkers aged 15 to 23 who mix alcohol with energy drinks are four times more likely to binge drink at high intensity (i.e., consume six or more drinks per binge episode) than drinkers who do not mix alcohol with energy drinks.

Illicit Drug Use: Marijuana Most Used Drug



PAST YEAR, 2018 NSDUH, 12+

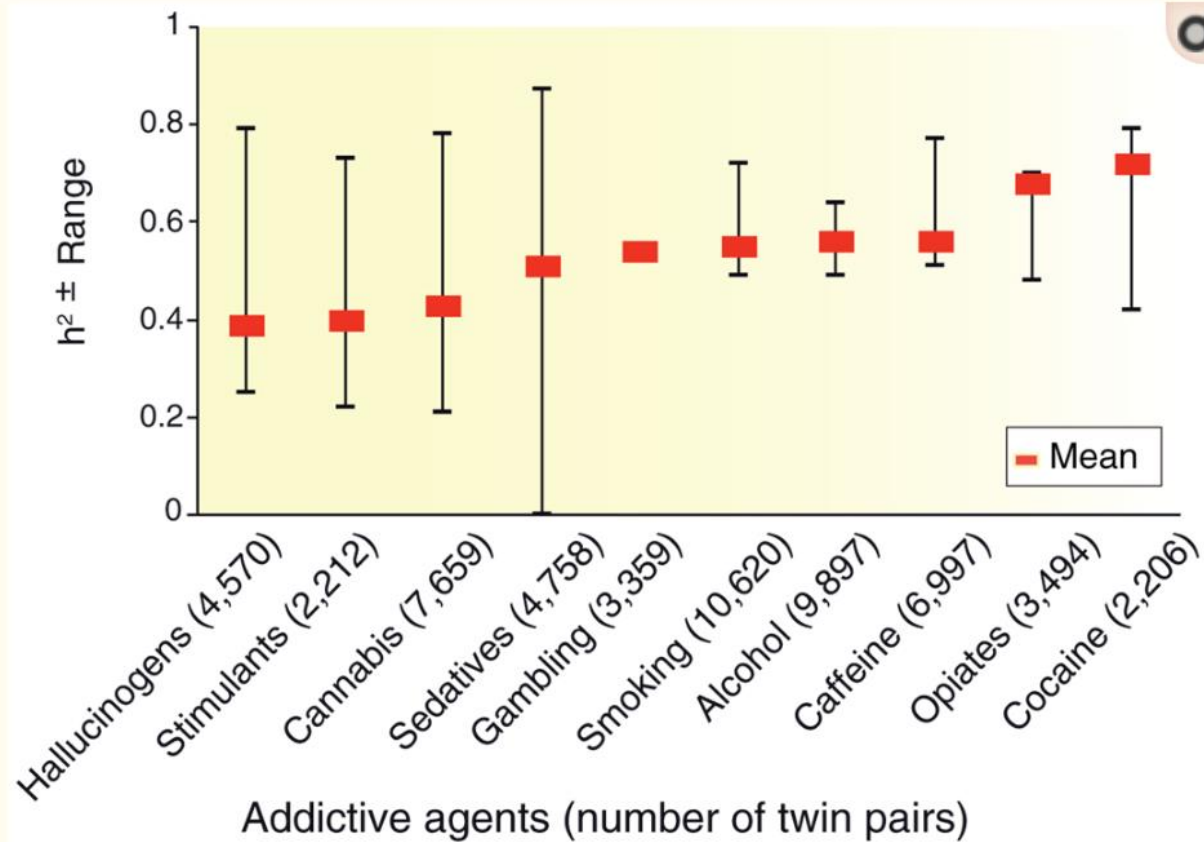


ROUTES OF DRUG ADMINISTRATION

- Oral – swallowed
- Sublingually – Placed under tongue
- Buccally – Placed between cheek/gums
- IV – Given by injection into vein
- Rectal – Placed into rectum
- Ocular route- Placed in the eye
- Nasally -Sprayed into the nose
- Inhalation –Inhaling vapors by mouth and/or nose into lungs
- Applied to the skin

PREDISPOSITION TO SUBSTANCE USE/ABUSE

GENETICS



[Figure 1](#)

Heritability (weighted mean and range) of 10 addictive disorders: dependence on or abuse of hallucinogens, stimulants, cannabis, sedatives, opiates, and cocaine; alcohol dependence; smoking persistence; caffeine consumption or heavy use; and pathological gambling. Weighted heritability means were computed using data from large national surveys of adult twins. Reprinted from ref. 3.

(Bevilacqua & Goldman, 2009)

Predisposition due to Mental Health vulnerabilities

- Learning Disorders (ADD/ADHD)
- Mental Illness
- Childhood Trauma

GENERAL RISK/PROTECTIVE FACTORS

- Child's attachment style
- Household Environment
- Early onset
- Self-esteem
- Academic performance
- Peers & social norms
- Community
- Poverty

FIG. 8 | Factors that determine different pathways to substance use and substances use disorders

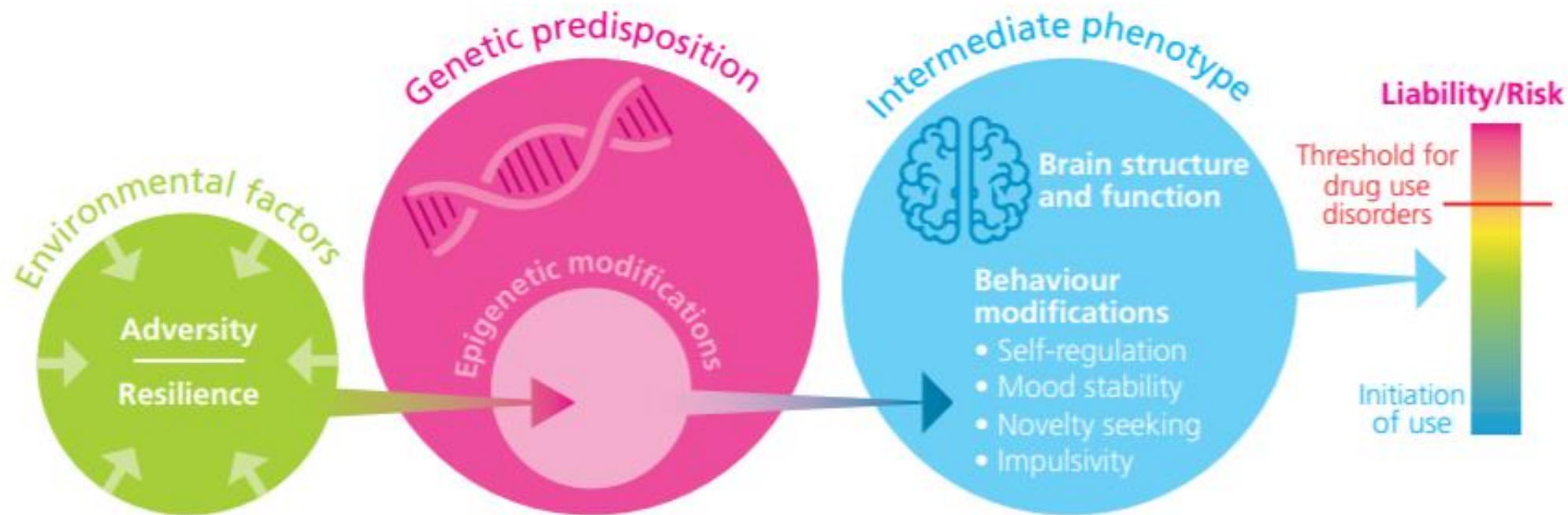


Figure 8 shows the two main categories of factors conferring risk for substance use: genes and the environment. Genetic variants are like switches: they are either turned on or off, but their expression is influenced by experience (i.e., epigenetic modifications). Environmental factors are more like dials that are turned up or down, also depending on experience. Risk or adversity factors include child maltreatment, poverty, poorly equipped schools, dysfunctional families, discrimination and witnessing violence. Resiliency or protective factors include high-quality education, housing, health care, social attachments and parenting. The combination of switches and dials crosses a liability threshold that, when predominantly negative, primes the brain for substance use. The functional relationship between factors is not linear, nor is it static; it fluctuates throughout a lifespan. Some environmental influences confer resiliency and may attenuate the effects of genetic predispositions. Thus, psychosocial interventions and practices are of the utmost importance in determining final outcomes.

Summary

- Adolescent substance abuse is a global public health problem where societies are tremendously affected.
- International standards state that adolescents should not use substances as it can permanently damage the developing brain.
- Alcohol and Marijuana are the most common drugs used among adolescents
- A combination of genetics, environmental and social factors can impact adolescent substance use.