

MENTAL HEALTH + ALCOHOL AND OTHER DRUGS: EVIDENCE-BASED STRATEGIES AND INSTITUTIONALIZING YOUR EFFORTS

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THANK YOU!

- **MeLissa Butler, Project Manager**
Nebraska Collegiate Prevention Alliance
- **Megan Hopkins, Project Director**
Nebraska Collegiate Prevention Alliance
- **Mary Wilfert**
former associate director in the NCAA Sports Science Institute
- **Jason Kilmer**
Associate Professor Department of Psychiatry and Behavioral Sciences, University of Washington
- **Students** at Macalester College, Grinnell College, and other colleges/institutions
- **YOU!**

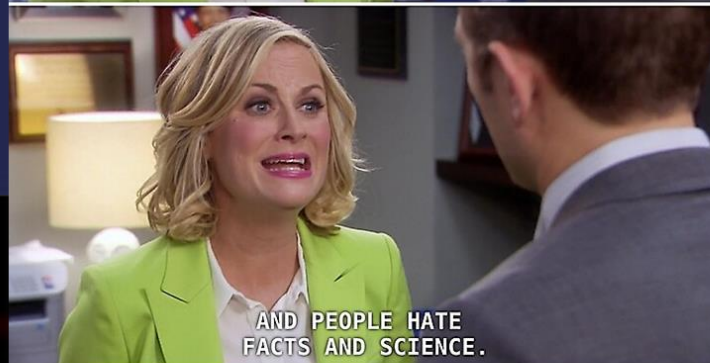
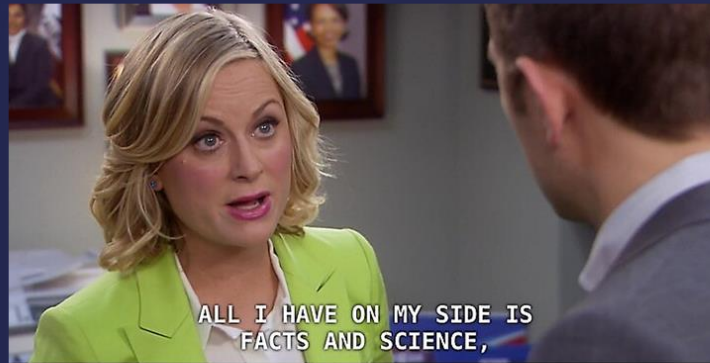


- Who is in the room?
- What brought you to this session?

About me



About me



From Jason:

Pieces of a Prevention Puzzle: Substance Use, Mental Health, and Meeting the Needs of Students with Evidence-Based Strategies Arbor Suite In this presentation, we will consider ways in which alcohol and cannabis use can impact mental health, student well-being, and student success. We will discuss prevention and intervention strategies that campuses can consider implementing to reduce the harms associated with substance use and increase student access to health and mental health support as campuses consider a comprehensive strategic plan for prevention. Lessons learned from brief interventions that can inform other prevention efforts will also be reviewed.

From me:

After attending this session participants should be able to:

- Describe the relationship between mental health and AOD in the college population
- Apply at least one evidence-based, public health/health promotion theory relevant to AOD work
- Identify a next step for their prevention efforts on their campus
- Sharing links, citations, and resources (mostly free)



EXAMINING THE RELATIONSHIP
BETWEEN MENTAL HEALTH AND
AOD IN THE COLLEGE
POPULATION

A note on language . . .

- When possible, we use “cannabis” instead of “marijuana”
- Person-first language (e.g. “students who use cannabis”, “students who drink heavily”)
- “Using cannabis” vs. “smoking cannabis”
- Adolescents and emerging adults

What is cannabis?

- Classified as a hypnotic-sedative drug
- THC active ingredient
- There is no defined “serving size” of THC
 - Some states guess at 5mg
- Can be inhaled or eaten
 - Inhaling cannabis smoke takes 2-3 minutes to have an effect
 - Edibles can take 20-30 minutes to have an effect



What does the research tell us?

Lower-Risk Cannabis Use Guidelines for Reducing Health Harms from Non-medical Cannabis Use: A Comprehensive Evidence and Recommendations Update (2022)

Results: A substantial body of modifiable risk factors for cannabis use-related health harms were identified with varying evidence quality. Twelve substantive recommendation clusters and three precautionary statements were developed. In general, current evidence suggests that individuals can substantially reduce their risk for adverse health outcomes if they delay the onset of cannabis use until after adolescence, avoid the use of high-potency (THC) cannabis products and high-frequency/-intensity of use, and refrain from smoking-routes for administration. While young people are particularly vulnerable to cannabis-related harms, other sub-groups (e.g., pregnant women, drivers, older adults, those with co-morbidities) are advised to exercise particular caution with use-related risks. Legal/regulated cannabis products should be used where possible.

Conclusions: Cannabis use can result in adverse health outcomes, mostly among sub-groups with higher-risk use. Reducing the risk factors identified can help to reduce health harms from use. The LRCUG offer one targeted intervention component within a comprehensive public health approach for cannabis use. They require effective audience-tailoring and dissemination, regular updating as new evidence become available, and should be evaluated for their impact.

Fischer, B., Robinson, T., Bullen, C., Curran, V., Jutras-Aswad, D., Medina-Mora, M. E., Pacula, R. L., Rehm, J., Room, R., van den Brink, W., & Hall, W. (2022). Lower-Risk Cannabis Use Guidelines (LRCUG) for reducing health harms from non-medical cannabis use: A comprehensive evidence and recommendations update. *The International journal on drug policy*, 99, 103381. <https://doi.org/10.1016/j.drugpo.2021.103381>

General Precaution A:

- *People who use cannabis (PWUC) need to know that there is no universally safe level of cannabis use; thus, the only reliable way to avoid any risk for harm from using cannabis is to abstain from its use.*
- Those who use cannabis should be aware that certain ways of using cannabis increase risks of a variety of acute and long-term adverse health and psychosocial outcomes. Consequently, reducing relevant risk-factors can help reduce the likelihood of such harms for the person engaging in cannabis use. [*Evidence Grade: Conclusive*]

General Precaution B:

- *Frequent cannabis use, and especially intensive use over longer periods, can lead to a 'cannabis use disorder' (CUD) or cannabis dependence, that may require treatment.*
- CUD is characterized by symptoms such as cannabis craving, withdrawal, neglect of essential obligations, and limited capacity to control or reduce cannabis use. [*Evidence Grade: Substantial*]

Recommendation #1:

- ***The initiation of cannabis use should be delayed until after late adolescence, or the completion of puberty, to reduce development-related vulnerabilities for harm.***
- While data are mixed, young PWUC may be more vulnerable to adverse effects from cannabis use because of ongoing neuro-logical, mental, and psycho-social development. Early initiation of cannabis use is associated with adverse health and psycho-social effects, especially in those who engage in intensive use (e.g., high-frequency use of potent cannabis products) and have other vulnerabilities. In general, the later in young adult life cannabis use is initiated, the lower the risks of adverse effects on general health and wellbeing. [*Evidence Grade: Moderate*]

Recommendation #2:

- *PWUC should use 'low-potency' cannabis products, i.e., cannabis products with ideally lower total THC content.*
- The higher the total or relative THC-content of cannabis that is used, the greater the risks of acute and chronic adverse mental or physical health outcomes. If possible, PWUC should select cannabis products that provide reliable information on their composition and potency, so that they can better regulate their cannabis exposure and related risks. [*Evidence Grade: Substantial to Moderate*]

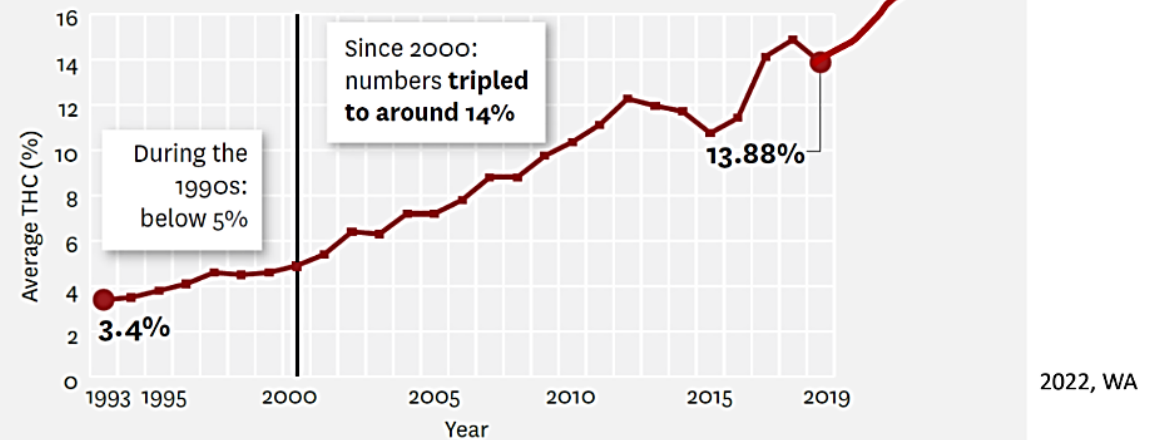
If I sing "Hello..." and you think of Lionel Richie and not Adele, then your back is probably sore

THC changes over time

The average THC content in cannabis has increased from about 4% in 1995 to about 14% in 2019, with variation up to 25%.

Conclusions: There is a shift in the production of illicit cannabis plant material from regular marijuana to sinsemilla. This increase in potency poses higher risk of cannabis use, particularly among adolescents.

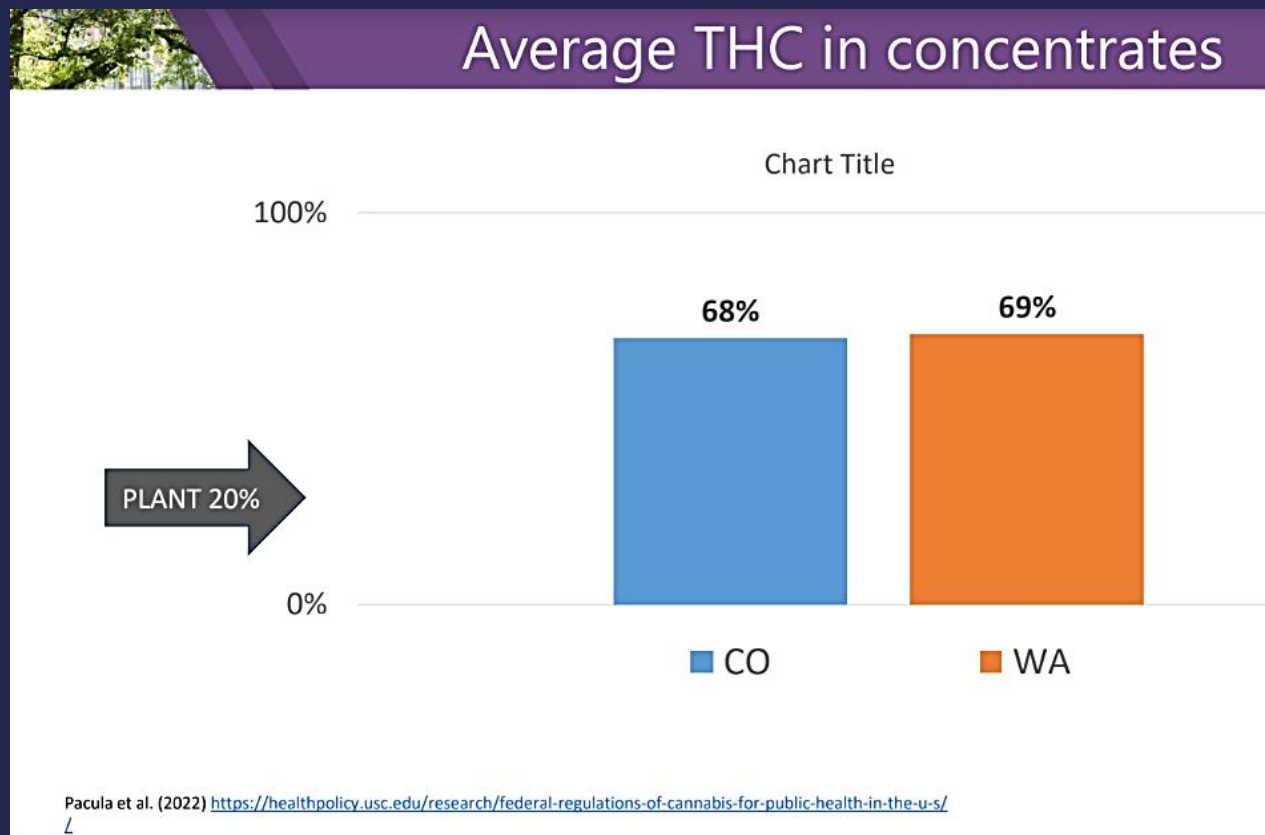
Figure 1. Average Δ^9 -THC Concentration of Raw Plant Material Seized by the DEA, 1993 to 2019



Sources: ElSohly, M. A., S. Chandra, M. Radwan, C. G. Majumdar and J. C. Church. (2021). A Comprehensive Review of Cannabis Potency in the United States in the Last Decade. *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*, 6 (6): 603-6; Mehmedic, Z., S. Chandra, D. Slade et al. (2010). Potency Trends of Δ^9 -THC and Other Cannabinoids in Confiscated Cannabis Preparations from 1993 to 2008. *Journal of Forensic Science*, 55 (5): 1209-17.

Pacula et al. (2022) <https://healthpolicy.usc.edu/research/federal-regulations-of-cannabis-for-public-health-in-the-u-s/>
The Marijuana Policy Project. 2023 Ohio Cannabis Legalization Law Summary. <https://www.mpp.org/states/ohio/2023-ohio-cannabis-legalization-law-summary>

THC changes over time



Beatriz Carlini, Cannabis Education and Research Program Director, University of Washington

Why THC concentration matters

<https://adai.uw.edu/wordpress/wp-content/uploads/2020/11/Cannabis-Concentration-and-Health-Risks-2020.pdf>

- Young people are particularly vulnerable to negative effects of high potency cannabis.
- Calls to Poison Centers about manufactured cannabis products (edibles, concentrates, and vaping liquids) are increasing nationally.
- There is strong evidence on the detrimental impact of THC use during adolescence and negative impacts may be higher for adolescents who use cannabis with high THC concentration or use more frequently.
- Use of cannabis with high THC concentration increases the chances of developing cannabis use disorder or addiction to cannabis, particularly among adolescents.
- **High potency cannabis use can have lifelong mental health consequences, which often manifest in adolescence or early adulthood.**
- **Daily cannabis use, particularly of high potency products, increases the risk of developing a psychotic disorder, like schizophrenia, and is related to an earlier onset of symptoms compared to people who do not use cannabis.**
- **Among those with a psychotic disorder diagnosis, the use of high potency cannabis exacerbates disease symptoms.**



Recommendation #5:

- ***PWUC should refrain from frequent (e.g., daily or near-daily) or intensive (e.g., binging) cannabis use, and instead limit themselves to less frequent or occasional use.***
- Frequent or intensive use patterns are strongly associated with a multiplicity of severe adverse outcomes in mental and physical health (e.g., including neuro-cognitive deficits and dependence) and psychosocial domains. This is especially the case for intensive use beginning at a young age and sustained ('chronic') use over long periods of time. Ideally, PWUC should limit their cannabis consumption to occasional or infrequent use (e.g., use only on 1 or 2 days per week, on weekends only) and avoid repeated, intensive 'binge' use throughout the day or night over extended time-periods. [*Evidence Grade: Substantial*]

Recommendation #6:

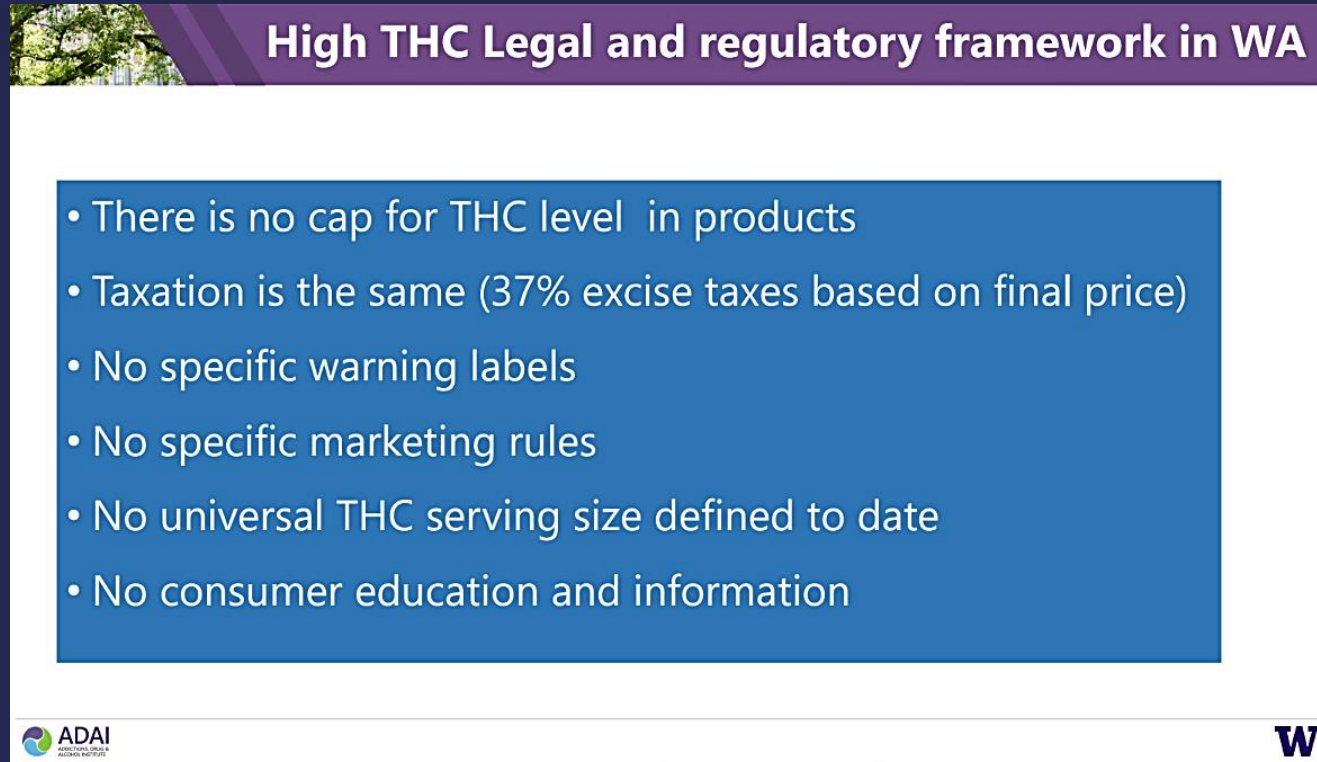
- ***Where circumstances allow, PWUC should use legal and quality-controlled cannabis products and use devices.***
- Illegal cannabis products are not regulated for quality and safety, and are typically not labelled for their THC and other content, and so may increase risks of adverse experiences and health problems. Legally regulated cannabis products are more predictable in their composition and potency, especially when there is product content labelling, and presumably safer because of their regulated production and other quality standards that minimize the contaminants that they may contain. [*Evidence grade: Limited*]

BASIC CONTENT ON A BEER CAN



• The labelling of THC products is NOT like alcohol labelling

What's happening in the U.S.



High THC Legal and regulatory framework in WA

- There is no cap for THC level in products
- Taxation is the same (37% excise taxes based on final price)
- No specific warning labels
- No specific marketing rules
- No universal THC serving size defined to date
- No consumer education and information

ADAI
AMERICAN DIETETIC ASSOCIATION
INSTITUTE OF DIETETICS

W

Beatriz Carlini, Cannabis Education and Research Program Director, University of Washington

What's happening in Minnesota?

In Minnesota, as of early October 2023, an estimated 90% of 60 businesses visited so far were non-compliant on at least one aspect of the law, according to Office of Medical Cannabis director Chris Tholke.

FOR IMMEDIATE RELEASE

CONTACT: Jill Phillips, Executive Director
Jill.Phillips@state.mn.us

Minnesota Board of Pharmacy files suit against Moorhead-based manufacturers and retailers of edible cannabinoids

Board of Pharmacy embargoes and seeks destruction of over \$7 million of edible cannabinoids exceeding the THC limits set by state law

December 5, 2022 (SAINT PAUL) — The Minnesota Board of Pharmacy announced today that it has filed a [civil lawsuit](#) in Clay County District Court against Northland Vapor Company Moorhead LLC, Northland Vapor Company Bemidji LLC, and Wonky Confections LLC, (collectively “Northland Vapor”) alleging they have violated Minnesota’s edible cannabinoid laws (Minnesota Statute 151.72).

Under the law, an edible cannabinoid product sold in Minnesota must not contain more than five milligrams of any hemp-derived tetrahydrocannabinol (THC) in a single serving or more than a total of 50 milligrams per package. The lawsuit alleges Northland Vapor sold edible cannabinoid products that contain THC far in excess of five milligrams per serving and far in excess of 50 milligrams per package. Investigators found packages containing 2,500 milligrams of THC, 50 times the amount permitted under Minnesota law.

What's happening in Minnesota?

News Release

Dec. 13, 2023

[Contact information](#)

MDH cautions consumers about illegal high-dose THC products

State officials significantly increasing education, inspection and enforcement actions to remove high-risk products from Minnesota marketplace

Consumption of high-dose THC products can lead to severe adverse health effects, including:

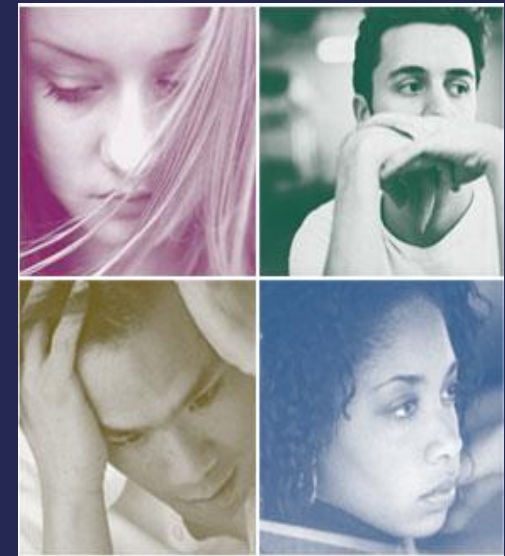
- Unresponsiveness.
- Extreme anxiety or panic attacks.
- Psychotic episodes (hallucinations, delusions or a loss of personal identity).
- An increase in heart rate, chest pain or heart attack.
- Sudden high blood pressure with headache.
- Uncontrollable shaking or seizures.
- Decreased judgment, perception and coordination that can lead to injuries.
- Consumers are advised to contact their health care provider if they become ill or begin suffering symptoms of THC overdose after consuming a high-dose cannabinoid product.

Recommendation #11:

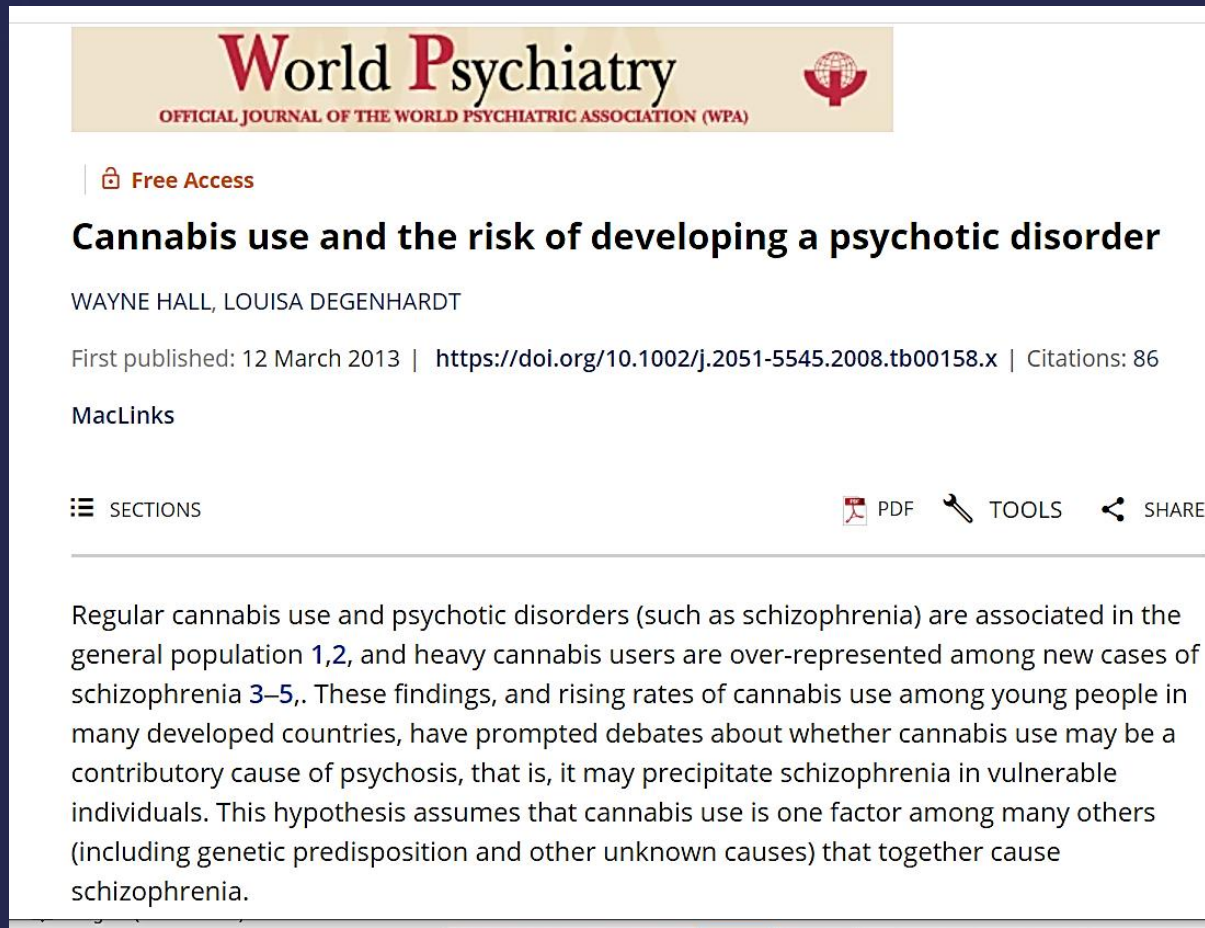
- *Some specific groups of people are at elevated risk for cannabis use-related health problems because of biological pre-dispositions or comorbidities. They should accordingly (and possibly on medical advice as required) avoid or adjust their cannabis use.*
- Higher risks for harm extend to individuals with a genetic predisposition (e.g., a first-degree family or personal history) for, or an active psychosis, mood (e.g., depressive) disorder, or substance use disorder. Individuals with pre-existing cardio-vascular risks may be at increased risk of acute harm especially if they inhale high-potency products. Older-age PWUC may be at increased risk for some adverse outcomes (e.g., cognitive, metabolic, cardio-vascular problems; falls/injuries) because of general ageing-related deficits, other comorbid chronic diseases, and/or the (e.g., medical) use of other psychotropic drugs. [*Evidence Grade: Moderate to Limited*]

Cannabis Use Associated with Risk of Psychiatric Disorders (Hall & Degenhardt, 2009; Hall, 2009; Hall 2013)

- Schizophrenia
 - Those who had used cannabis 10+ times by age 18 were 2-3 times more likely to be diagnosed with schizophrenia
 - “13% of schizophrenia cases could be averted if cannabis use was prevented (Hall & Degenhardt, 2009, p. 1388)”
- Depression and suicide
 - “Requires attention in cannabis dependent” (Hall, 2013)



Cannabis Use Associated with Risk of Psychiatric Disorders (Hall & Degenhardt, 2009; Hall, 2009; Hall 2013)



The screenshot shows the top portion of a journal article page. At the top is the journal logo for 'World Psychiatry', the official journal of the World Psychiatric Association (WPA), with a globe icon. Below the logo is a 'Free Access' badge. The article title is 'Cannabis use and the risk of developing a psychotic disorder' by Wayne Hall and Louisa Degenhardt. It includes the publication date (12 March 2013), a DOI link, and a citation count of 86. There are icons for PDF, tools, and share. The main text begins with a paragraph discussing the association between cannabis use and psychotic disorders.

World Psychiatry
OFFICIAL JOURNAL OF THE WORLD PSYCHIATRIC ASSOCIATION (WPA)

Free Access

Cannabis use and the risk of developing a psychotic disorder

WAYNE HALL, LOUISA DEGENHARDT

First published: 12 March 2013 | <https://doi.org/10.1002/j.2051-5545.2008.tb00158.x> | Citations: 86

MacLinks

SECTIONS PDF TOOLS SHARE

Regular cannabis use and psychotic disorders (such as schizophrenia) are associated in the general population 1,2, and heavy cannabis users are over-represented among new cases of schizophrenia 3–5,. These findings, and rising rates of cannabis use among young people in many developed countries, have prompted debates about whether cannabis use may be a contributory cause of psychosis, that is, it may precipitate schizophrenia in vulnerable individuals. This hypothesis assumes that cannabis use is one factor among many others (including genetic predisposition and other unknown causes) that together cause schizophrenia.

• Conclusions





- Those who had used cannabis 10+ times by age 18 were 2-3 times more likely to be diagnosed with schizophrenia
- “13% of schizophrenia cases could be averted if cannabis use was prevented.”

American Academy of Child & Adolescent Psychiatry (2023)

- Results:

“Adolescents with lifetime cannabis use have 2.07 times higher odds of mild/moderate and 3.32 times higher odds of severe depressive disorder . . . Furthermore, depression and cannabis use are independently associated with higher risk of suicide attempts.”

Cannabis Use Is Associated With Depression Severity and Suicidality in the National Comorbidity Survey—Adolescent Supplement

Jesse D. Hinckley, MD, PhD , Susan K. Mikulich-Gilbertson, PhD, Jian-Ping He, MS, Devika Bhatia, MD , Jarrod M. Ellingson, PhD , Brian Nguyenkhoa Vu, MD, Kathleen Ries Merikangas, PhD , Joseph T. Sakai, MD

Objective: To investigate the association of cannabis use with major depression and suicidal behavior in adolescence.

Method: Data are from the National Comorbidity Survey—Adolescent Supplement (N = 10,123), a nationally representative survey of adolescents aged 13 to 18 years. Weighted logistic regression and ordinal regression analyses of major depression and suicidal behavior outcomes were conducted on cannabis variables, incorporating sociodemographic characteristics.

Results: Adolescents with lifetime cannabis use have 2.07 times higher odds of mild/moderate (adjusted odds ratio [aOR]; 95% CI = 1.69, 2.53) and 3.32 times higher odds of severe major depressive disorder (MDD; aOR; 95% CI = 2.31, 4.75). Cannabis use (aOR 6.90, 95% CI = 4.67, 10.19), mild/moderate MDD (aOR 4.10, 95% CI = 2.82, 5.98), and severe MDD (aOR 13.97, 95% CI = 7.59, 25.70) were associated with higher odds of suicide attempt. Past 12-month cannabis use (aOR 3.70, 95% CI = 2.16, 6.32), mild/moderate major depressive episodes (MDE) (aOR 7.85, 95% CI = 3.59, 17.17), and severe MDE (aOR 36.36, 95% CI = 13.68, 96.64) were associated with higher odds of suicide attempt. The frequency of past 12-month cannabis use was associated with higher odds of suicide attempt and with MDE severity, with higher odds among individuals who use cannabis 3 or more days than among individuals who use cannabis less frequently, suggesting a dose effect. Among cannabis users, older age of onset of cannabis use was associated with lower odds of suicidal behaviors.

Conclusion: Cannabis use is associated with higher odds of depression and depression severity in adolescence. Furthermore, depression and cannabis use are independently associated with higher odds of suicide attempt.

› Addict Behav. 2018 Mar;78:107-113. doi: 10.1016/j.addbeh.2017.11.005. Epub 2017 Nov 4.

The association between adolescent cannabis use and anxiety: A parallel process analysis

Jacqueline Duperrouzel ¹, Samuel W Hawes ², Catalina Lopez-Quintero ², Ileana Pacheco-Colón ², Jonathan Comer ², Raul Gonzalez ²

Affiliations [+](#) expand

PMID: 29149635 PMCID: PMC5819339 DOI: 10.1016/j.addbeh.2017.11.005

[Free PMC article](#)

Abstract

Introduction: Associations between anxiety symptoms and cannabis use have been previously explored, yet the directionality of these associations remains highly debatable. The present study aims to prospectively examine patterns of cannabis use and anxiety during adolescence focusing on their co-development and bidirectional influences.

Results:

“Our results suggest that, during adolescence, early cannabis use has a greater influence on prospective reports of anxiety, than vice versa. Specifically, adolescents exhibiting higher initial levels of cannabis use displayed more persisting self-reported anxiety across time, as compared to those with less frequent use.”

Academic-related concerns:

THE ACADEMIC OPPORTUNITY COSTS OF SUBSTANCE USE DURING COLLEGE

RESEARCH BRIEF

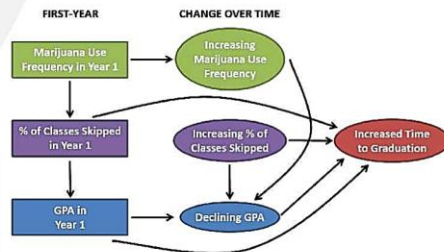
The academic consequences of marijuana use during college

MAJOR FINDINGS:

This study advances research on the adverse effects of marijuana use on academic achievement by focusing on its impact on postsecondary educational outcomes. Researchers followed 1,117 college students for eight years to test the direct and indirect effects of marijuana use on college grade point average (GPA) and time to graduation, with skipping class as a mediator of these outcomes. A structural equation model was evaluated taking into account a variety of baseline risk and protective factors (i.e., demographics, college engagement, psychological functioning, alcohol and other drug use) thought to contribute to college academic outcomes.

Results showed that marijuana use contributes indirectly to academic outcomes. For example, during their first year of college, students who used marijuana more frequently tended to skip more of their classes, which in turn contributed to a lower GPA and ultimately delaying their graduation. Over time, changes in marijuana use frequency were directly related to changes in GPA, such that grades tended to drop as marijuana use became more frequent, and conversely, grades tended to rebound as marijuana use declined. Thus, students with lower first-year GPAs tended to graduate later, and the more their GPA dropped over time, the later their graduation tended to be.

Overall, this pattern of findings highlights the importance of the first year of college as a critical period in which students' long-term academic trajectories begin to take shape, based in part on how they balance engagement in academic life—especially class attendance—with marijuana use.



Note. Baseline risk and protective factors do not appear in the above path diagram, though they were included in the analysis.

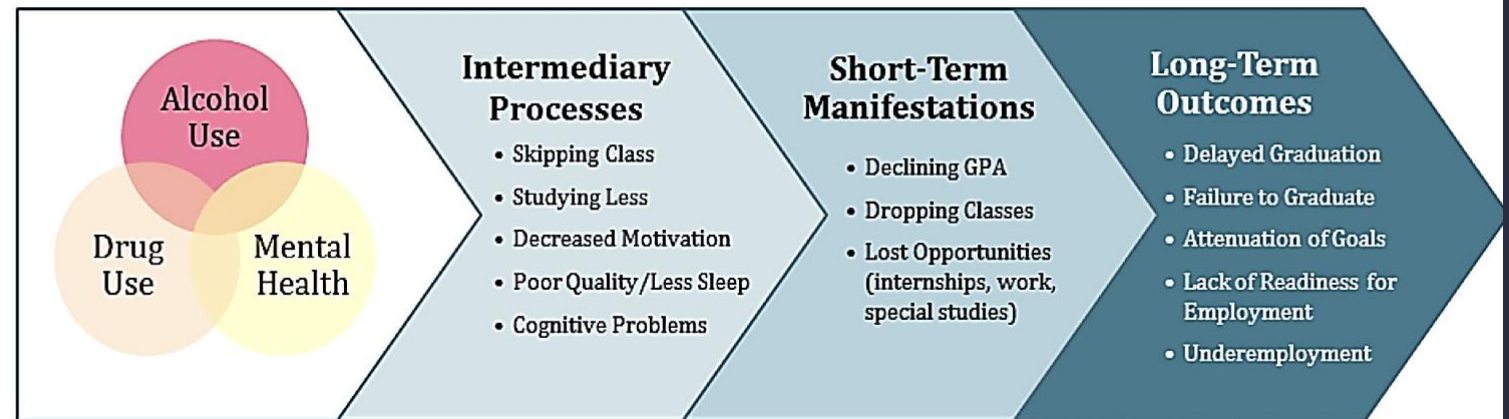
Of major interest to:

- College Administrators
- Parents
- Educators
- Health Professionals
- Students
- Law and Policy Makers



The Center on Young Adult Health and Development
University of Maryland School of Public Health
www.cyahd.umd.edu

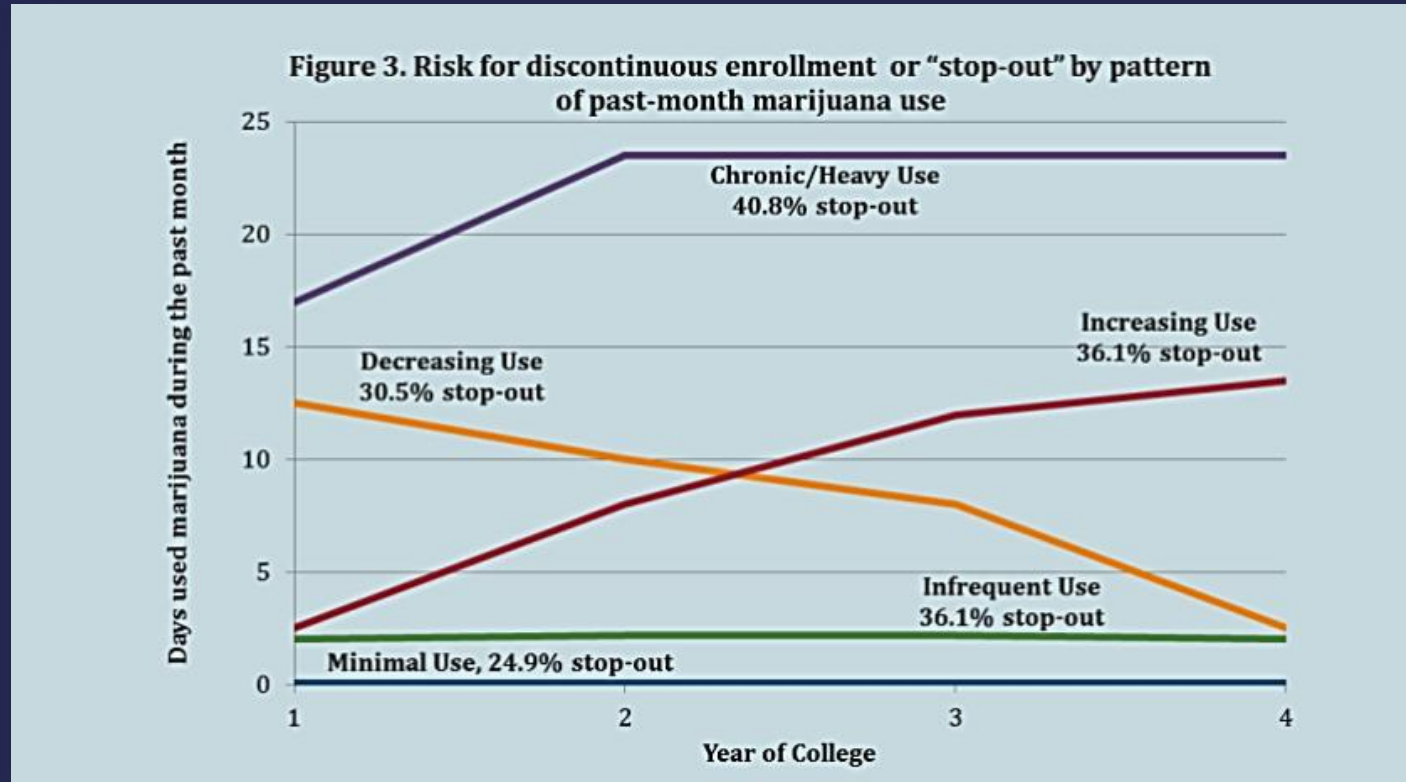
Figure 2. Alcohol use, drug use, and mental health outcomes have a cascade of effects on college students' academic outcomes



Center on Young Adult Health and Development
University of Maryland School of Public Health

Academic-related concerns:

THE ACADEMIC OPPORTUNITY COSTS OF SUBSTANCE USE DURING COLLEGE



Center on Young Adult Health and Development
University of Maryland School of Public Health



Is Alcohol Consumption Associated with Poor Academic Achievement in University Students?

Walid El Ansari, Christiane Stock¹, Claire Mills

School of Sport and Exercise, Faculty of Applied Sciences, University of Gloucestershire, Gloucester, United Kingdom, ¹Unit for Health Promotion Research, Institute of Public Health, University of Southern Denmark, 6700 Esbjerg, Denmark

ABSTRACT

Background: We assessed associations between educational achievement and alcohol consumption.

Methods: We employed five alcohol consumption measures (length

- Conclusions: “Alcohol consumption showed negative associations with motivation for and subjectively achieved academic performance. University alcohol prevention activities might have positive impact on students’ academic success.”

ACHA-NCHA-II

Spring 2018 73,912 students at 140 institutions

- **Within the last 12 months, have any of the following affected your academic performance** (received a lower grade on an exam, in a course, received an incomplete/dropped a course, significant disruption in thesis):
 - Alcohol use?
 - **3.5%**
 - Drug use?
 - **1.9%**

ACHA-NCHA-II data

Spring 2018 national undergraduate reference group, n =73,912
Significant at p<.001

Variable of Interest	Overall population	If “no marijuana in past 30 days”	If “yes, marijuana in past 30 days”	Odds Ratio (95% CI)
Academic performance negatively affected by:				
Anxiety	26.5%	23.9%	35.8%	1.77 (1.7078-1.8317)
Depression*	18.7%	16%	28.5%	2.10 (2.0177-2.1774)
Sleep Difficulties*	21.8%	19.6%	29.7%	1.73 (1.6628-1.7902)
Stress	33.2%	30.7%	42.6%	1.67 (1.6176-1.7298)

ACHA-NCHA-II data

Spring 2018 national undergraduate reference group, n =73,912

Significant at $p < .001$

Variable of Interest	Overall population	If “no marijuana in past 30 days”	If “yes, marijuana in past 30 days”	Odds Ratio (95% CI)
Too depressed to function (last 30 days)	22.8%	20.6%	30.9%	1.72 (1.6590-1.7830)
Diagnosed with depression	19.3%	17.0%	27.9%	1.90 (1.8247-1.9671)
Considered suicide (last 30 days)	4.2%	3.5%	6.8%	1.99 (1.8553-2.1330)
Considered suicide (last 12 months)	13.1%	11.1%	20.4%	2.07 (1.9796-2.1561)
Overwhelming anxiety (last 30 days)	40.7%	38.4%	49%	1.54 (1.4924-1.5926)
Diagnosed with anxiety	23.1%	20.8%	31.9%	1.78 (1.7202-1.8478)

Other substance use

Variable of Interest	Overall population	If “no marijuana in past 30 days”	If “yes, marijuana in past 30 days”	Odds Ratio (95% CI)
5+ servings of alcohol in one sitting one or more times in past 2 weeks	27.5%	20.4%	53.7%	4.54 (4.3908-4.7011)
Used prescription stimulants not prescribed to them in past 12 months	5.8%	2.8%	17.1%	7.03 (6.6311-7.4627)

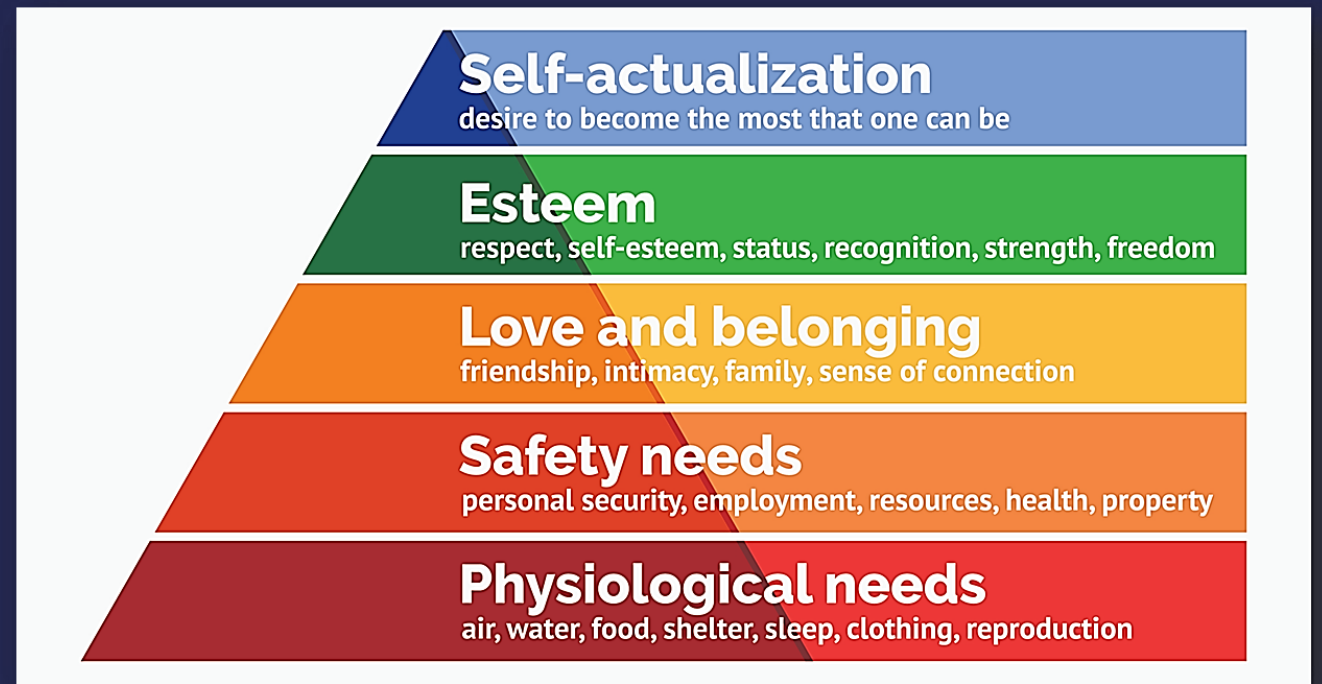
ACHA-NCHA Spring 2018 national undergraduate reference group, n =73,912
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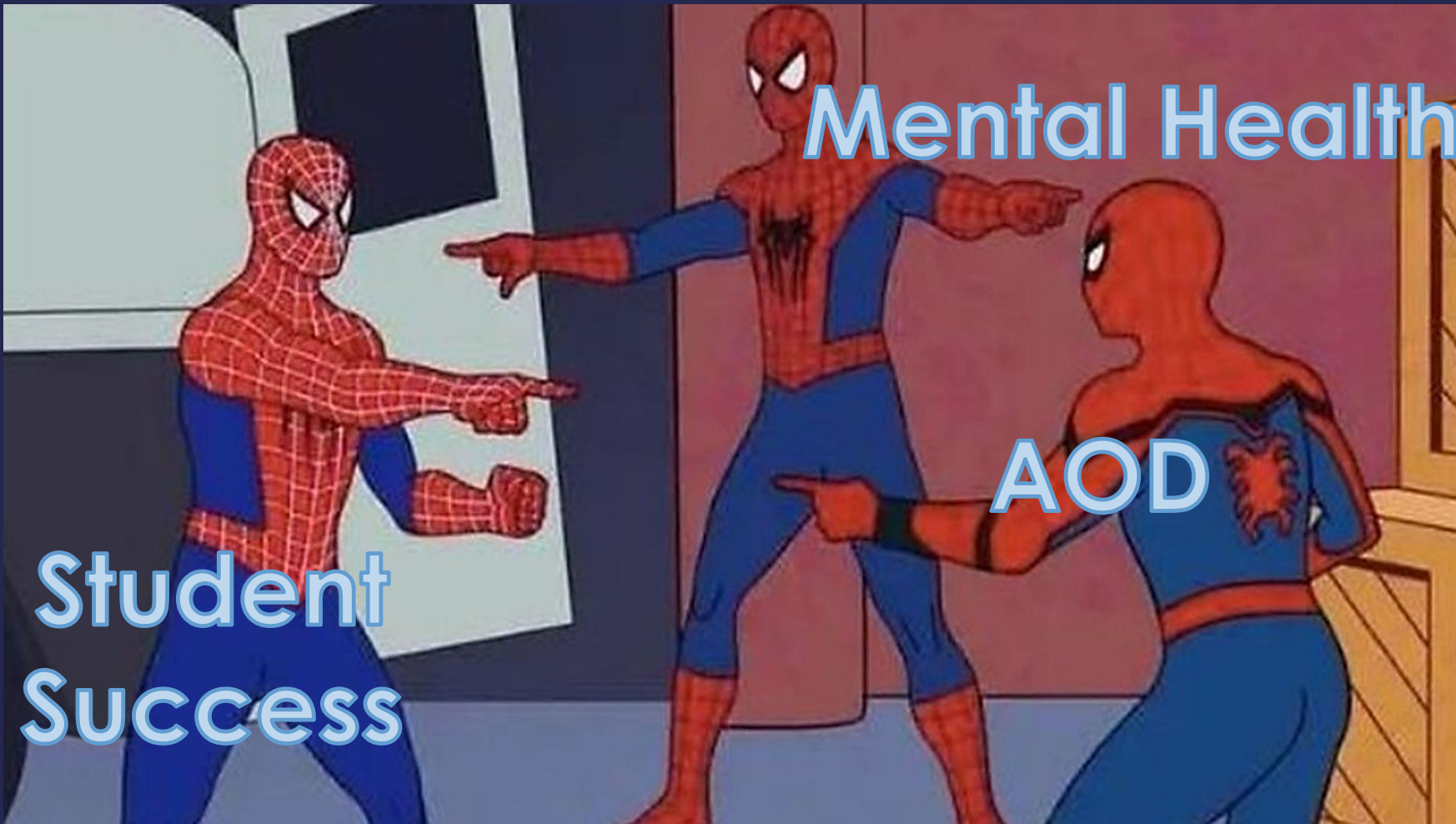


EVIDENCE-BASED STRATEGIES
AND
INSTITUTIONALIZING EFFORTS

What does your institution care about right now?

- Substance use?
- Mental health?
- Disability resources?
- Athletics?
- Student success?






Student
Success

Mental Health

AOD

Quantitative Research

Health-Related Behaviors and Academic Achievement Among College Students

Alyssa M. Lederer, PhD, MPH, MCHES ¹, Sara B. Oswalt, MPH, PhD, CSE², Mary T. Hoban, PhD, MCHES³, and Melissa N. Rosenthal, MPH⁴

Purpose College students' academic achievement has crucial implications for their future success. Students' health may be a key determinant of academic performance, but more research is needed to understand this relationship.

Design/Setting/Subjects Secondary analysis of the American College Health Association-National College Health Assessment III pre-COVID-19 Spring 2020 dataset. N = 39 146 undergraduates at 75 higher education institutions (14% mean response rate, comparable with other large-scale national college health surveys).

Measures Self-reported grade point average (GPA) and 33 health behaviors in the categories of dietary behavior, physical activity, sedentary behavior, substance use, sexual risk behavior, violence-related behavior, mental health, and sleep behavior.

May 2024



- There is a link between numerous health behaviors and academic performance. Stakeholders invested in college students' health and academics should engage in mutually beneficial strategies to safeguard students' current and future well-being and success.
- In general, protective behaviors corresponded with higher GPAs and most risk behaviors were associated with lower GPAs.

Working at every level of the socio-ecological model

“A mix of strategies is best”



Policy level: <https://www.eiu.edu/ihec/drugfreeschools.php>

Drug Free Schools and Communities Act (DFSCA) requirements

- The Drug Free School and Campuses Act (DFSCA) stipulates that campuses “must develop and implement a program to prevent the unlawful possession, use, or distribution of illicit drugs and alcohol by students and employees.”
- Regardless of state laws, if an institution accepts federal money (grants, work-study, etc.), it must follow federal laws, which prohibit the possession of cannabis and related products.
- The Drug Enforcement Agency also specifically names “THC, Delta-8 THC, Delta-9 THC, dronabinol and others” – these are called out by name, not just “marijuana” or “cannabis,” and are federally illegal.
- State laws specify 21 and over (like alcohol); nationally, most residential students are under 21.
- Stakes are higher for international students because of their visa status and undocumented students.

Policy level: NCAA and Cannabis

- The NCAA allows student-athletes are allowed limited amounts of THC in their systems; may soon be removed from banned drug list.
- The timing of discussion and adoption of possible legislation is a decision that will be made by each of three NCAA divisional governance structures.
- The rationale for considering the change was largely informed by the December 2022 [Summit on Cannabinoids in College Athletics](#) and the consensus opinion formed that cannabis is not a performance-enhancing drug and that a harm-reduction approach to cannabis is best implemented at the school level.
- "Marijuana is not considered a performance- enhancing substance, but it remains important for member schools to engage student-athletes regarding substance use prevention and provide management and support when appropriate." Dr. Brian Hainline, the NCAA's chief medical officer <https://www.ncaa.org/news/2022/2/25/media-center-committee-adjusts-thc-test-threshold.aspx>

Environmental level: On- and off-campus parties

- Men as Peacemakers: BEST Party Model
- <https://www.menaspeacemakers.org/best#:~:text=A%20program%20of%20Men%20As%20environments%20they%20occupy%20and%20influence.>
- (I offer “off campus party host training” as well)

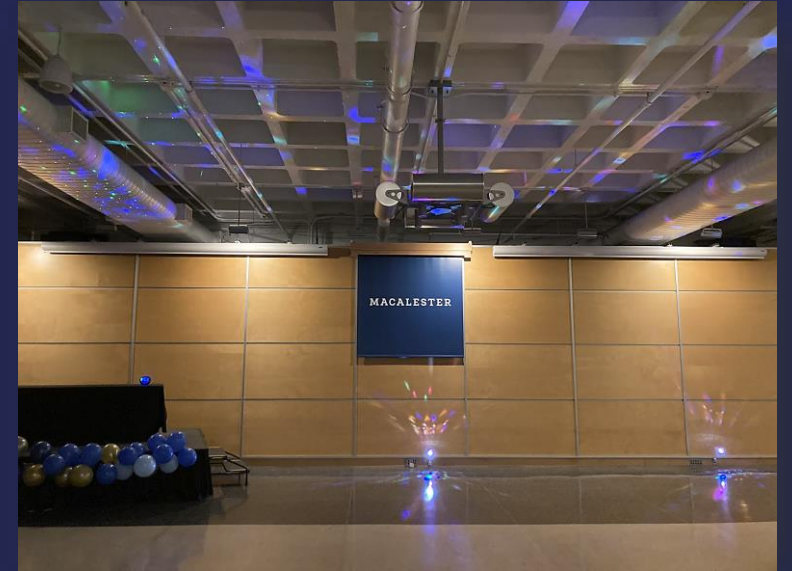


WHAT IS BEST?

A program of Men As Peacemakers, the BEST Party Model is an innovative environment-shaping program designed to empower students with the awareness, relationships, and skills necessary to shape the campus environments they occupy and influence. This 8-week program targets high risk environments for sexual violence, engaging student leaders and other influential student groups (athletic teams, Greek houses, clubs and associations) in community-building and making grassroots, student-driven changes to campus life and culture. BEST also supports school administrators, coaches, and staff in implementing proven prevention models in order to create the safe, equitable, and fulfilling campus experience all students want and deserve.

Environmental level: Campus events

- Time of event
- Messaging for the event
- Physical environment of the event
- Meeting the needs of various attendees



Institutional level: Collaborating with institutional partners

- Understand the goals of your potential collaborators
- Invite potential collaborators to the table (e.g. Harm Reduction Committee, AOD Advisory Group)
 - Don't wait for someone to charge you with this
 - Use the opportunity to explore evidence-based strategies
 - Engage with DFSCA biennial review recommendations
- Offer training on Motivational Interviewing
- Online training videos



Institutional level: Collaborating with institutional partners



Step 2:

Build a Team

As you build your 360 Proof team, think about who will make the best allies because they have a stake in improving campus health and safety. This step provides guidance on how to build the strongest team for your institution.

Step 2 Worksheet

360 Proof Team



We know that college campus staffs wear many hats! This worksheet includes a list of possible areas to include in your team, many of which may be supported by the same person or people. Some of these may not even exist on your campus. The list is to help you think broadly about how to structure your own team.

Possible Roles Include:

- Overall Planning
- Data Collection for the Campus Self Study Part 1: Information Checklist
- Information Collection for the Campus Self Study Part 2: Inventory of Policies and Programs
- Selection of evidence-based strategies
- Program Evaluation
- PFI promotion or other implementation

Campus Area or Department	Possible Role
Student affairs	
Athletics <i>e.g., director of athletics, senior woman administrator, athletic trainer, assistant or associate director of athletics, coach, life skills coordinator.</i>	
Campus safety	
Health services	
Evaluation specialist/evaluator	
Institutional research & assessment	
Academic affairs	
Health/wellness promotion/education	
Judicial affairs	
Student leadership <i>e.g., student government leader, student-athlete advisory committee representative, fraternity and sorority leader, multicultural leaders, substance-free programming leaders, residence life student staff.</i>	
Residence life	
Student activities	
Counseling/psychological services	
Fraternity/sorority advisors	
Faculty member or Faculty Athletics Representative	

Institutional level: Collaborating with faculty

- Health Promotion Specialists presented ACHA-NCHA-III highlights to health psychology class in the context of learning social norms
- Offering data to stats and other data science classes

**BINGE DRINKING:
WHAT IS IT?**



Individuals assigned male at birth:
5+ drinks within 2 hours

Individuals assigned female at birth:
4+ drinks within 2 hours

1 drink =
12 oz (1 can) of beer, 5 oz of wine, 1.5 oz (1 shot) of liquor

Information Source: CDC | <https://www.cdc.gov/alcohol/fact-sheets/binge-drinking.htm>

WHY DRINK WITH INTENTION?

57.5% of Mac students who drank within 3 months of a survey reported that they **did not intend to get drunk**

By **drinking with intention**, we hope to **increase self-awareness** to **decrease harmful drinking behaviors**

Institutional level: Collaborating with Disability Resources

- ACHA-NCHA-III data show a statistically significant relationship between past 30 day cannabis use and:
 - Being diagnosed with anxiety
 - Being diagnosed with depression
 - Being diagnosed with ADD/ADHD
 - Taking medication for anxiety*
 - Taking medication for ADD/ADHD*
- Concurrent vs. sequential work (with counseling as well)
- Inclusion opportunity

Institutional level: Health and counseling centers

- Screening
 - AUDIT
 - CUDIT
- Clinician training
 - Current information on substance use
 - Motivational interviewing



Institutional level: Collaborating with athletics

- Athletic Director
- Senior Woman Administrator*
- Life Skills
- Athletic Trainers
- Faculty Athletic Representative*
- Coaches
- SAAC*
- Other student-athlete groups
- Student-athletes



Mental health an emerging priority in college athletics



Marina Harris Ph.D.
Letters From Your
Therapist

SPORT AND COMPETITION

College Student-Athletes Are Dying in Mental Health Crisis

A call for change.

Updated July 5, 2023 | Reviewed by Vanessa Lancaster



THE BASICS

Suicide Risk Factors and Signs

[Take our Depression Test](#)

KEY POINTS

- College student-athlete suicide is at a record high.
- College athletes are mirrors for the environments created by coaches/staff.
- An athletics culture change is needed to keep athletes safe.



Media Center | 5/1/2024 10:00:00 AM | Corbin McGuire

How the NCAA is prioritizing mental health

New resources, initiatives and research driving actions focused on student-athletes



The NCAA continued its commitment to advancing mental health for its more than 520,000 student-athletes in the 2023-24 academic year. Check out a few ways the NCAA has made progress in this area, including new resources, initiatives and research.

Mental Health Best Practices

In early 2024, the NCAA released an updated [Mental Health Best Practices](#) document. The best practices, developed by the NCAA Committee on Competitive Safeguards and Medical Aspects of Sports, reflect a consensus of the Mental Health Advisory Group, which includes representatives from science, medicine, sports medicine organizations and the NCAA membership. **Under the NCAA constitution adopted in January 2022, each member school – regardless of division – must facilitate an environment that reinforces physical and mental health within athletics by ensuring access to appropriate resources and open engagement with respect to physical and mental health.** Schools across all divisions are legislatively required to provide student-athletes mental health resources and education consistent with the Mental Health Best Practices. Additionally, as part of its holistic student-athlete model, Division I is requiring schools to attest to providing services and support consistent with the best practices beginning

Risk factors and protective factors

Risk Factors

- “Risk factors are characteristics at the biological, psychological, family, community, or cultural level that precede and are associated with a higher likelihood of negative outcomes” (SAMHSA, 2019).

Protective Factors

- “Protective factors are characteristics associated with a lower likelihood of negative outcomes or that reduce a risk factor’s impact. Protective factors may be seen as positive countering events” (SAMHSA, 2019).
- Protective factors enhance the likelihood of positive outcomes.

Student-athletes + AOD

Risk Factors

- Expectancies and scripts
- Stressors (e.g. time management)
- Injury and pain management
- Team traditions
- Social events with students of all ages
- Sensation seeking traits
- Explicit/implicit pressure to fit in
- Team culture

Protective Factors

- Prioritizing athletic performance
- Team policies
- Coach expectations
- Teammate expectations
- Accountability
- Looking out for each other
- Close relationship with staff members
- Team culture

REVIEW

Open Access

The effects of caffeine, nicotine, ethanol, and tetrahydrocannabinol on exercise performance

Dominik H Pesta^{1,3}, Siddhartha S Angadi⁴, Martin Burtscher³ and Christian K Roberts^{2*}

- Alcohol can also **impair recovery** following exercise. Alcohol seems to interfere with protein synthesis . . . which is critical to facilitate repair and hypertrophy following strength training.
- Alcohol consumption was associated with significantly greater **decreases in torque production (40-44%) 36 hours into recovery** . . . the consumption of a moderate amount of alcohol after damaging exercise magnified the loss of muscle force production potential.
- **Alcohol is a uniformly ergolytic agent that has significant detrimental effects on exercise performance** and that use of the same during competitive activity should be minimized for athlete safety and so as to maximize athletic performance.

Athletic performance: Cannabis

- Cannabis is an **ergolytic** (performance de-enhancing) drug
 - It negatively impacts cardio-vascular system, anerobic systems, recovery, memory and attention, sleep
 - *Lisano, J.K., Smith, J.D., Mathias, A.B., Christensen, M., Smoak, P., Phillips, K.T., Quinn, C.J., & Stewart, L.K. (2019). Performance and health-related characteristics of physically active males using marijuana. Journal of Strength and Conditioning Research, 33, 1658-1668.*
 - *Pesta, D.H. Angadi, S.S., Burtscher, M., & Roberts, C.K. (2013). The effects of caffeine, nicotine, ethanol, and tetrahydrocannabinol on exercise performance. Nutrition & Metabolism, 10, 71.*
 - *Pope, H.G., Jr., & Yurgelun-Todd, D. (1996). The residual cognitive effects of heavy marijuana use in college students. JAMA, 275, 521-527.*
 - *Ware, M.A., Jensen, D., Barrette, A., Vernec, A., Derman, W. (2018). Cannabis and the health and performance of the elite athlete. Clinical Journal of Sports Medicine, 28, 480-484.*

Athletic trainers



DETERRA
Drug Disposal Pouch System

DRUG DISPOSAL POUCH
Destroys over-the-counter, prescription and illicit drugs including opioids and fentanyl!

Safe for the Household Trash and the Environment

PLANT-BASED POUCH
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BIODEGRADABLE
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Single use pouch

HERE'S HOW OUR PREVENTION & EDUCATION PROGRAM WILL IMPACT YOUR COMMUNITY

- Prevent Unnecessary Human Suffering by addressing high-risk behaviors
- Educate and Drive Awareness to the consequences of substance misuse and empower individuals and families with knowledge and resources
- Connect to Community Resources for harm reduction, prevention and treatment in your community
- Provide a Prevention Tool for immediate, convenient safe drug disposal
- Reach Rural and Underserved Areas who lack access to other disposal methods or resources
- Reduce Social and Financial Costs associated with OUD
- Mitigate Risk by reducing access to medications and illicit drugs
- Involve your entire community as part of the SOLUTION

Estimates suggest a potential return on investments in evidence-based substance use prevention programs & activities
- SAMSHA 2022-2026 Strategic Plan Priority 1

**WHEREVER DRUGS ARE PRESENT
DETERRA SHOULD BE PRESENT**

DID YOU KNOW? As an evidence-based prevention solution, Deterra fits the strategy in several of the *2022 National Drug Use Prevention and the Distributor Settlement Agreement List of Critical Remediation Items!*

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PREVENTION IS KEY

PREVENT • EDUCATE • CONNECT

Coaches

Addiction Research and Theory, February 2012; 20(1): 64–71
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ISSN: 1606-6359 print/1476-7392 online
DOI: 10.3109/16066359.2011.562621

informa
healthcare

Do coaches make a difference off the field? The examination of athletic coach influence on early college student drinking

Nadine R. Mastroleo¹, Miesha Marzell², Rob Turrisi², & Brian Borsari^{1,3}

¹*Center for Alcohol and Addiction Studies, Brown University, 121S-G-4, Providence, RI 02912, USA,*
²*Department of Biobehavioral Health, The Pennsylvania State University, 204 Calder Way, State College, PA 16801, USA, and* ³*Mental Health and Behavioral Sciences Service, Department of Veterans Affairs Medical Center, 830 Chalkstone Avenue, Providence, RI 02908, USA*

(Received 14 May 2010; revised 28 January 2011; accepted 6 February 2011)

Coaches can exert a considerable influence on the lives of their athletes. However, little is known about the influence of athletic coaches on athlete drinking behaviors. This study extends research on drinking influences in student-athletes. The relationship between athletic coaches and athlete drinking behaviors were examined. First-year college students ($N = 362$) who had played high school sports were assessed on their relationships with their coaches as well as their alcohol use and problems. Findings revealed significant associations among the approval of and relationship with their athletic coaches and student drinking behaviors. These findings are discussed in the context of involving coaches in comprehensive strategies to reduce athlete drinking.

“The primary finding is that the more athletes believe their coaches approve of their drinking patterns, the more they drink.”

Mastroleo, N.R., Marzell, M. Turrisi R. & Borsari, B.(2012).

Do coaches make a difference off the field? The examination of athletic coach influence on early college student drinking.

Addiction Research & Theory, 20:1, 64-71, DOI: 10.3109/16066359.2011.562621

- Increasing communication about alcohol use between athletes and coaches may have important implications for preventing or reducing alcohol use among student-athletes. One potential approach may be to identify methods in which coaches can discuss alcohol use and team policies about drinking.
- Clear and consistent messages about alcohol policies and expectations would be delivered directly to athletes from their coaches, rather than through team captains or teammate word of mouth.
- It would open lines of communication between athletes and their coaches, which Lewis (2008) identified may reduce drinking in team leaders and could in turn, also reduce overall team member drinking.
- Enhancing communication between coaches and athletes surrounding the use of alcohol may supplement established prevention and intervention approaches using peers, parents, and environmental influences to create a multifaceted approach.

Faculty Athletic Representative

The Division III FAR...

- Helps to ensure a quality student-athlete experience and promote student-athlete well-being.
- Serves as an independent advocate for student-athletes.
- Assists in the oversight of intercollegiate athletics at the campus and conference levels to assure that they are conducted in a manner designed to protect and enhance the physical, psychological, and educational well-being of student-athletes.
- Oversees the nominations of student-athletes for NCAA grant, scholarship, and recognition programs.
- Helps promote student-athlete success in the classroom, in athletics, and in the community by striking a balance among academic excellence, athletics competition, and social growth as they prepare for lifelong success.

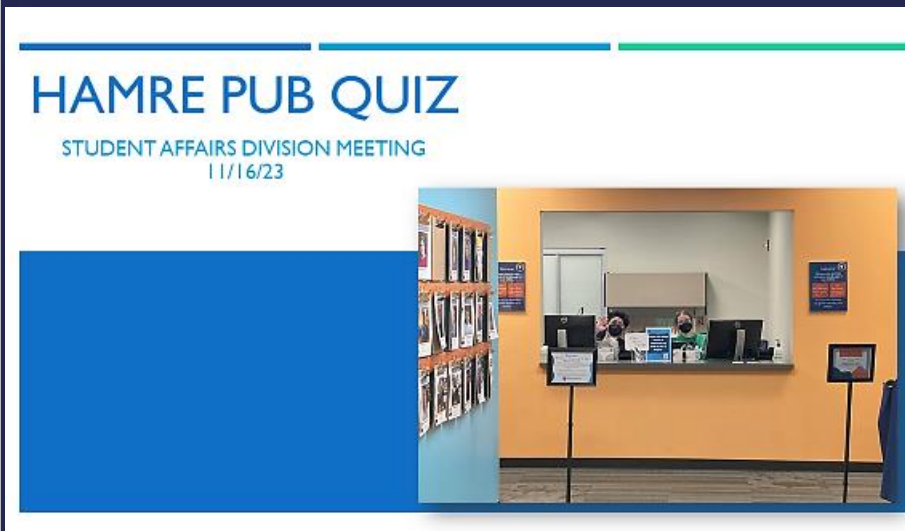
Student Athlete Advisory Council

- A student-athlete advisory committee (SAAC) is a committee made up of student-athletes assembled to provide insight on the student-athlete experience. The SAAC also offers input on the rules, regulations and policies that affect student-athletes' lives on NCAA member institution campuses.

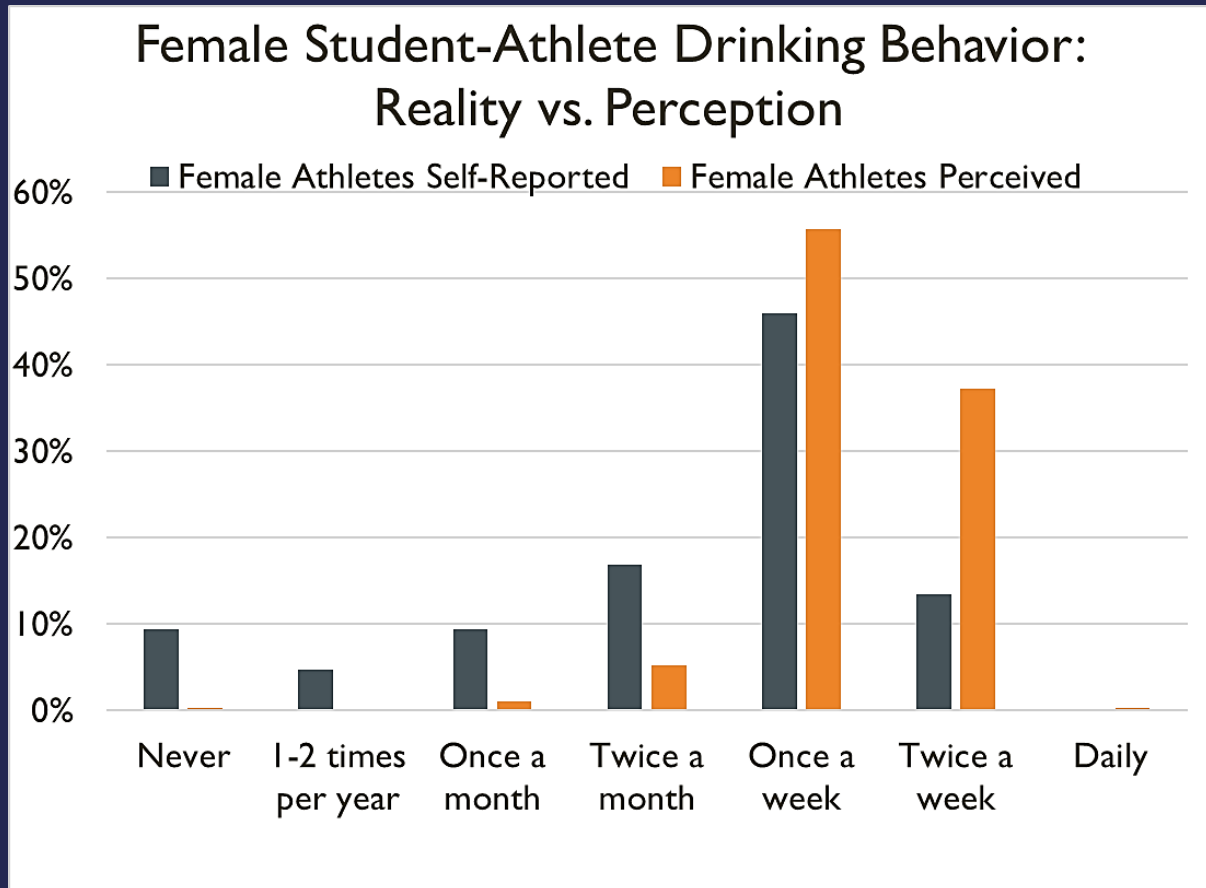
Functions of campus SAACs:

- Promote communication between athletics administration and student-athletes.
- Disseminate information
- Provide feedback and insight into athletics department issues. • Generate a student-athlete voice within the campus athletics department formulation of policies.
- Build a sense of community within the athletics program involving all athletics teams. Solicit student-athlete responses to proposed conference and NCAA legislation.
- Organize community service efforts.
- Create a vehicle for student-athlete representation on campus-wide committees (e.g., student government).
- Promote a positive student-athlete image on campus.

Make your data impossible to ignore

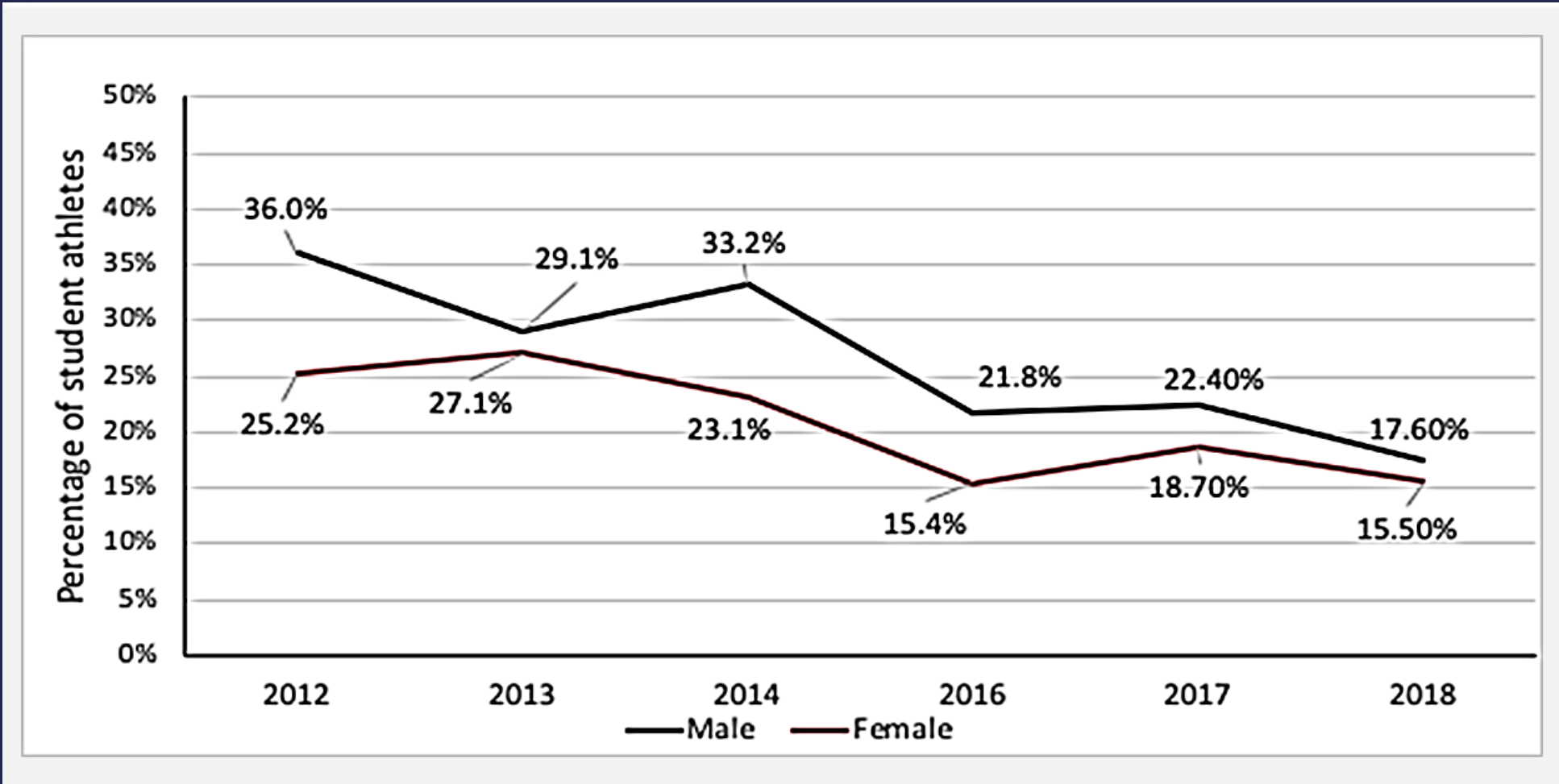


Group level: Social Norms and Norms clarification



Survey of Student Athlete Norms, 2014

Percentage of student-athletes self-reporting experiencing a blackout in the first seven weeks of fall semester (SSAN, 2012-2018)



Social Norms

- <http://www.socialnormsurveys.org/>

Hobart and William Smith Colleges

Social Norm Surveys Online

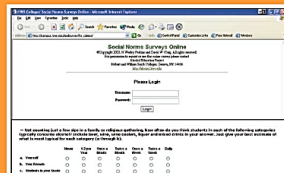
Youth Populations Targeted:	Attitudes and Behaviors Targeted:
Middle School Students	Alcohol, Tobacco, and Other Drugs
High School Students	Academic Climate
College Student-Athletes	Bullying and Violence
Fraternity and Sorority Students	Weight and Body Image
	Sexual Behaviors
	School Safety and Weapons in School
	Traffic Safety and Seat Belt Use

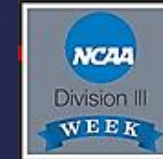
Web based surveys have been designed to support social norms programing in college and secondary school environments. Specifically, college student-athlete and greek surveys focusing on alcohol and tobacco use and other health related behaviors are available to support sub-population programming. A survey focusing on alcohol, tobacco, other drug use, and other health related behaviors is available for programming in secondary schools as is a survey on bullying and school violence.

Web surveys provide a secure, low cost, rapid data collection solution for social norms programming that provides for greater accuracy through real-time validation. Students can complete surveys in 15-20 minutes.

Features of our web-based surveys with sample user interface screens are shown on this link ([Click here](#)).

You can see some examples below of results from surveys that have been administered, run some sample surveys, and learn how you can use these surveys in your program.

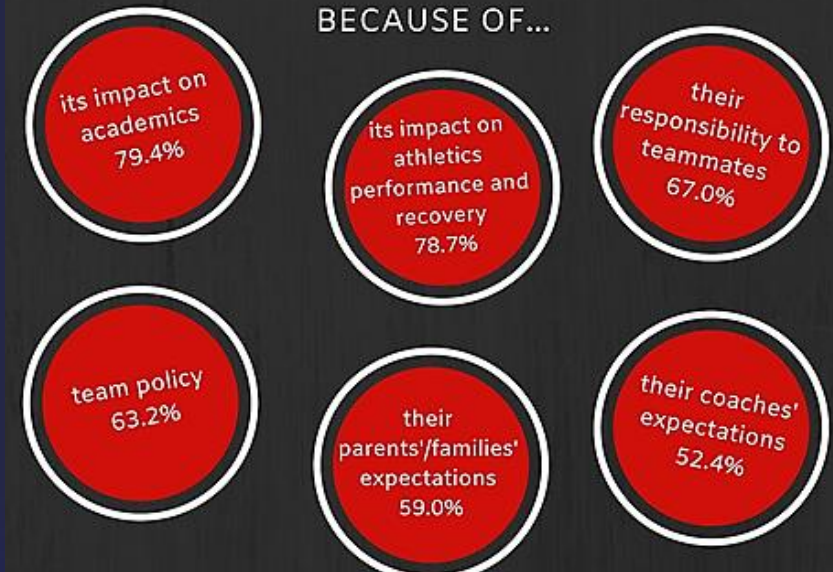




75.9%

OF GRINNELL
STUDENT-ATHLETES
REPORT THEY HAVE
NOT USED MARIJUANA
IN THE LAST 30 DAYS

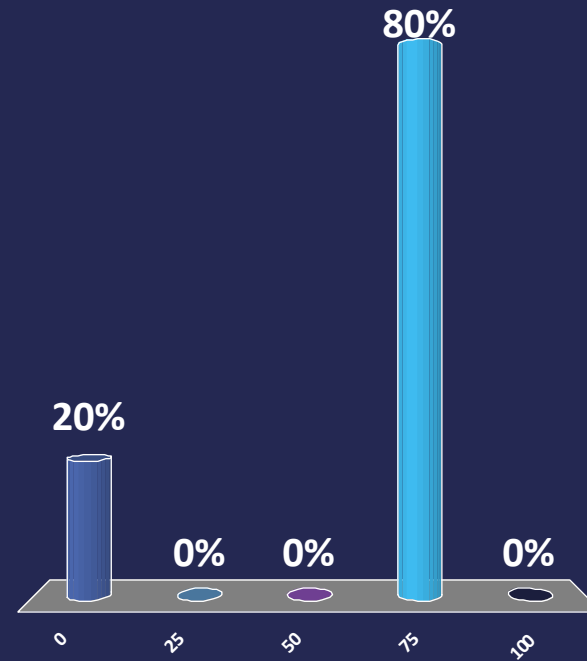
BECAUSE OF...



SAAC, SAMS, Survey of Student Athlete Norms Research Team, and 2019 APPLE Institute Team Survey of Student-Athlete Norms, October 2018, n=347. Questions? Contact Jen Jacobsen jacobsen@grinnell.edu

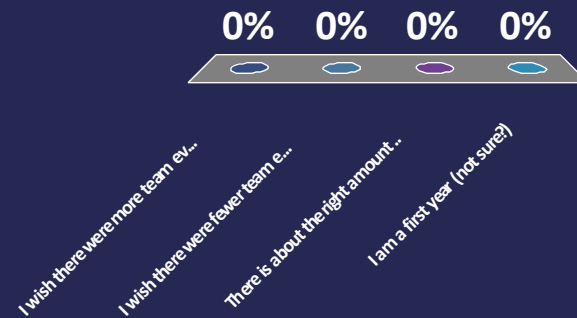
What percentage of student-athletes at our college report drinking less in season than out of season? (SSAN, fall 2014)

- A. 0
- B. 25
- C. 50
- D. 75
- E. 100



Team events with alcohol

- A. I wish there were more team events involving alcohol
- B. I wish there were fewer team events involving alcohol
- C. There is about the right amount of team events with alcohol
- D. I am a first year (not sure?)



Interpersonal strategies: Parents and Families

COLLEGE PARENTS MATTER
have the conversation

HOME WHO WE ARE TOPICS COMMUNICATION TIPS FAQs NEWSLETTER CONTACT US

Printer-friendly version

Cannabis

Why is this important?

Did you know that approximately 44% of people will have tried marijuana by the time they are 18 years old, and now more youth are using marijuana than cigarettes (1)?

A lot of conflicting and confusing information exists today about cannabis or marijuana (2) which is also known by many other names (3). The public health and legal environments are rapidly changing and it is hard to keep up with the most current research, laws, and recommendations.

For an in-depth discussion about many aspects of cannabis use, visit the Cannabis Use and Health page.

Starting the conversation

- Start from a place of care and concern.
- Ask for permission to talk about it.
- Ask about possible opportunities to use cannabis (friends, situations, etc...).
- Set clear expectations around cannabis use and tell your student that your expectations and disapproval are the same for cannabis as they are for all other drugs.

Say something like this...

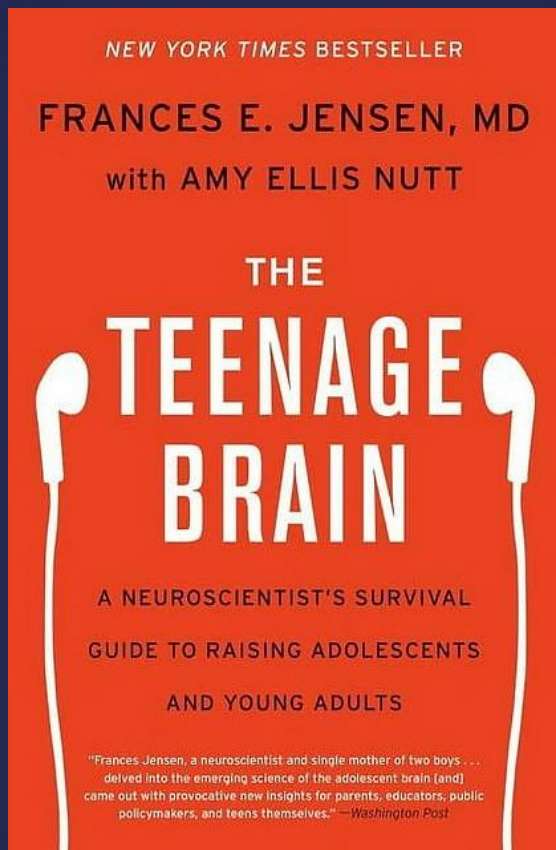
"I'm worried about what goes on out there and I care about you. It would mean a lot to me if we could talk about this. Is that okay with you?"

"I want to be clear that I disapprove of cannabis use. I don't want you to become distracted by something that will take you away from what you want to achieve - in school, in your life and in your personal relationships with other people."

Focus on the positives

- Emphasize how important your student's health is to you, your family, and their friends.
- Discuss your student's natural gifts, accomplishments and how cannabis use might halt their progress, and be a barrier to success during college.

Interpersonal Strategies: Parents and Families



FRESH AIR

LISTEN & FOLLOW

The Science Of The Teenage Brain

APRIL 15, 2016 · 4:00 PM ET

48-Minute Listen

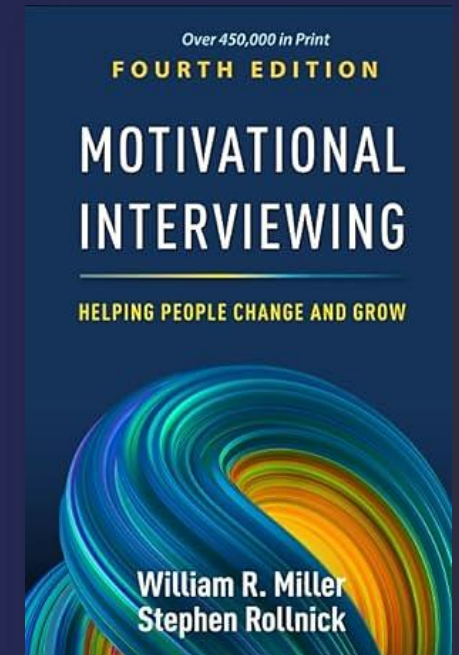
+ PLAYLIST

Why do teenagers behave like — teenagers? We get an explanation from neuroscientist Dr. Frances Jensen, who says our brains are still maturing through our 20s and that the front part of the brain is the last to develop. "And what's in the front? Your frontal cortex and prefrontal cortex; these are the areas where we have insight, empathy, impulse control," she says. "Risk-taking behavior is suppressed by activity in your frontal lobes." Her book is 'The Teenage Brain.' Film critic David Edelstein reviews 'The Jungle Book.'

<https://www.npr.org/2016/04/15/474414826/the-science-of-the-teenage-brain>

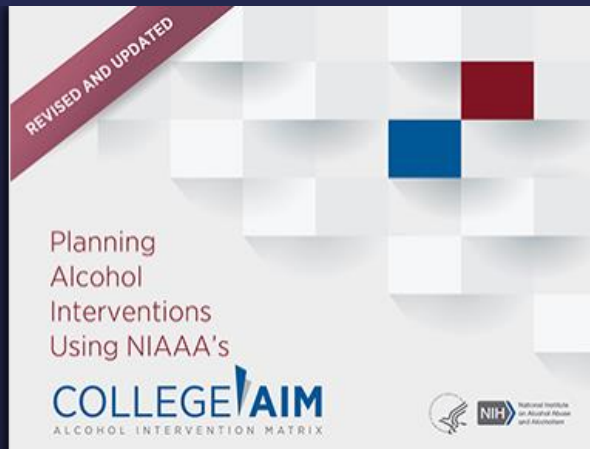
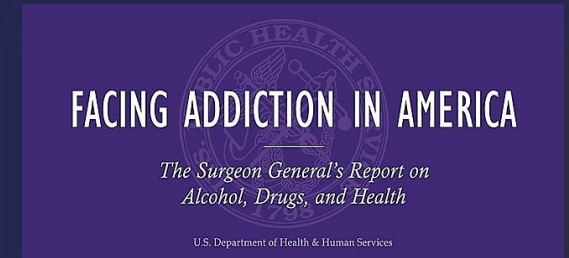
Individual strategies: BASICS and Motivational Interviewing for Cannabis

- A collaborative way of "talking with people about change and growth to strengthen their own motivation and commitment."
- Guiding (vs. directing or following)
- "A central concept of motivational interviewing is identification, examination, and resolution of ambivalence about changing behavior"
- Key elements include partnership, acceptance, compassion, empowerment.



Brief Alcohol Screening and Intervention for College Students

- NIAAA College Alcohol Intervention Matrix (College AIM) strategy & 2016 Surgeon General's Report: highest level of evidence for prevention of alcohol use
- Includes: Normative re-education, Personalized Feedback Index, Brief Motivational Interviewing



Lower costs \$	Mid-range costs \$\$	Higher costs \$\$\$
Higher effectiveness		
<ul style="list-style-type: none"> <input type="checkbox"/> Normative re-education: Electronic/mailed personalized normative feedback (PNF)—Generic/other <input type="checkbox"/> Skills training, alcohol focus: Self-monitoring/self-assessment <i>alone</i> <input type="checkbox"/> Personalized feedback intervention (PFI): eCHECKUP TO GO (formerly, e-CHUG) 	<ul style="list-style-type: none"> <input type="checkbox"/> Skills training, alcohol focus: Goal/intention-setting <i>alone</i> <input type="checkbox"/> Skills training, alcohol plus general life skills: Alcohol Skills Training Program (ASTP) <input type="checkbox"/> Brief motivational intervention (BMI): In-person—Individual (e.g., BASICS) <input type="checkbox"/> Personalized feedback intervention (PFI): Generic/other 	<ul style="list-style-type: none"> <input type="checkbox"/> Multi-component education-focused program (MCEFP): AlcoholEdu® for College



Vice Admiral Vivek Murthy
19th/21st Surgeon General
of the U.S.

<https://www.collegedrinkingprevention.gov/collegeaim/>

Motivational Interviewing

Counselors and non-clinicians have used MI for behavior change, including AOD, for decades

“The present research provides support for short-term efficacy on in-person therapist-delivered feedback in reducing the overall amount of marijuana used . . . We would tentatively endorse this approach for campuses considering options for responding to students who violate substance use policies related to marijuana.”

Lee, C.M., Kilmer, J.R., Neighbors, C., Atkins, D.C., Zheng, C., Walker, D.D., & Larimer, M.E. (2013). Indicated Prevention for College Student Marijuana Use: A Randomized Controlled Trial. *Journal of Counseling and Clinical Psychology, 81* (4), 702-709.

A Marijuana Consequences Checklist for Young Adults with Implications for Brief Motivational Intervention Research

Christine M. Lee¹ • Jason R. Kilmer¹ • Clayton Neighbors² • Jennifer M. Cadigan¹ • Anne M. Fairlie¹ • Megan E. Patrick³ • Diane E. Logan⁴ • Theresa Walter¹ • Helene R. White⁵

Accepted: 25 September 2020 / Published online: 24 October 2020
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Abstract

Measures assessing marijuana-related consequences or problems experienced by young adults have typically been adapted from measures assessing alcohol consequences. These measures may not fully reflect the specific unwanted or perceived “not so good” effects of marijuana that are experienced by young adults. Thus, using these measures may present a gap, which needs to be addressed, given that reports of consequences are often utilized in brief motivational personalized feedback interventions. Data from three different studies of young adults were used to (1) examine self-reported “not so good” effects or consequences of marijuana use among frequent marijuana-using college students (Study 1), (2) create a new version of a marijuana consequences list and compare it to an existing marijuana consequences measure (Study 2), and (3) assess convergent and divergent validity between a finalized Marijuana Consequences Checklist (MCC, 26-items) and marijuana use and risk for cannabis use disorder (Study 3). The most frequently endorsed self-reported effects of marijuana included the impact on eating (the “munchies”), dry mouth, trouble concentrating, and acting foolish or goofy. Higher scores on the MCC were associated with more frequent use and a higher probability of meeting criteria for cannabis use disorder. The MCC represents a range of negative consequences of marijuana use derived from frequent users’ own accounts and includes consequences not assessed by other measures. The MCC captures marijuana-specific negative consequences relevant for young adults, which can be incorporated in brief motivational personalized feedback interventions.

Implementation challenge . . . and collaboration success

- Residential Life assigned a reflection paper as a conduct outcome for violating alcohol policy on campus
- This reflection paper aligned with learning outcomes (social emotional learning, community impact) for Residential Life
- Residential Life was at first unwilling to assign BASICS instead of a reflection paper; eventually agreed to add it as an additional outcome
- Health Promotion was seeing students for BASICS ~3 weeks after incident
- **COMPROMISE:** BASICS or MI for cannabis first, then reflection paper

BASICS for student-athletes

Using the following scale, indicate how much you believe your coach approves of the following:

Drinking alcohol every weekend

**Strongly
Disapprove**

**Moderately
Disapprove**

**Mildly
Disapprove**

Neither

**Mildly
Approve**

**Moderately
Approve**

**Strongly
Approve**

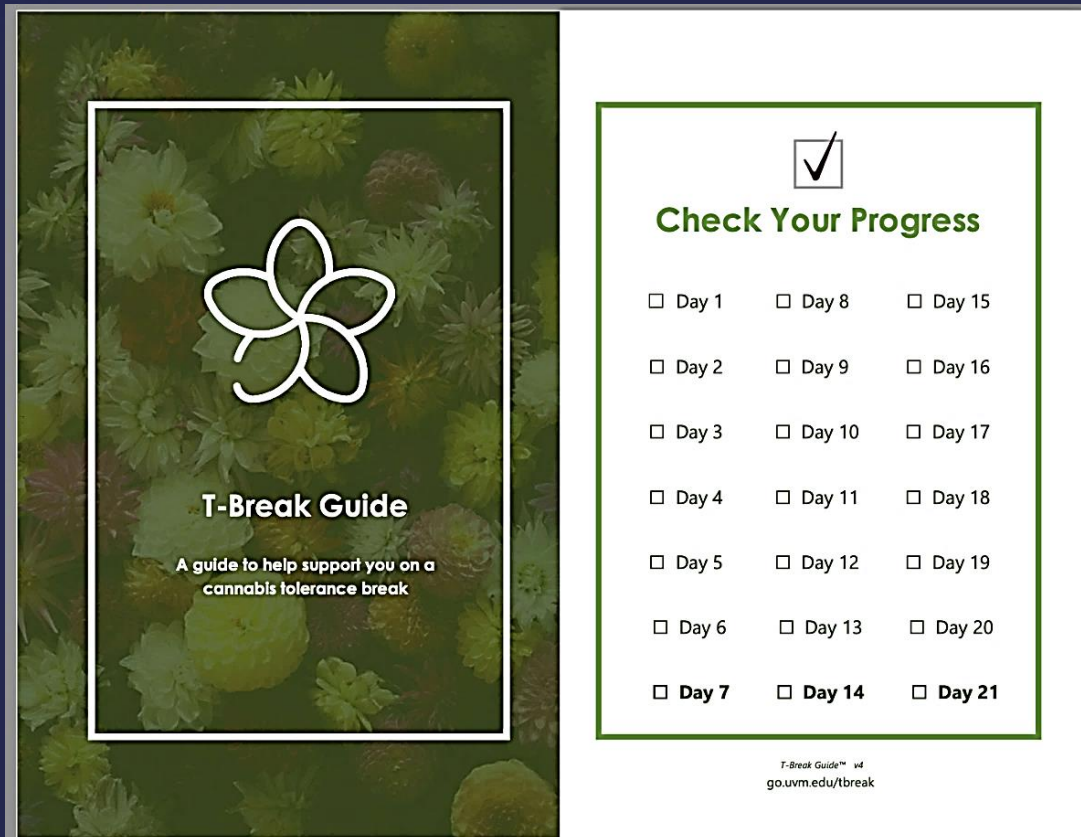
Impact on Athletic Performance

Drinking alcohol can have a number of negative effects on athletic performance, including:

- Canceling workout gains by preventing muscle recovery
- Depleting energy
- Impairing learning, retention, memory
- Inhibiting nutrient absorption
- Increasing fatigue via disrupted sleep patterns
- Impacting balance, coordination, and reaction time

Your typical weekend drinking negatively impacts your athletic performance until the following **Thursday**. This means that your training and practice sessions will not be as effective, your performance will be inhibited, and your risk for injury will increase.

Individual level strategies: T-Break



- T-Break Guide: University of Vermont
- <https://legacy.drupal2.uvm.edu/health>

REVIEW

Open Access

The effects of caffeine, nicotine, ethanol, and tetrahydrocannabinol on exercise performance

Dominik H Pesta^{1,3}, Siddhartha S Angadi⁴, Martin Burtcher³ and Christian K Roberts^{2*}

- Alcohol can also **impair recovery** following exercise. Alcohol seems to interfere with protein synthesis . . . which is critical to facilitate repair and hypertrophy following strength training.
- Alcohol consumption was associated with significantly greater **decreases in torque production (40-44%) 36 hours into recovery** . . . the consumption of a moderate amount of alcohol after damaging exercise magnified the loss of muscle force production potential.
- **Alcohol is a uniformly ergolytic agent that has significant detrimental effects on exercise performance** and that use of the same during competitive activity should be minimized for athlete safety and so as to maximize athletic performance.

Athletic performance: Cannabis

- Cannabis is an **ergolytic** (performance de-enhancing) drug
 - It negatively impacts cardio-vascular system, anerobic systems, recovery, memory and attention, sleep
 - *Lisano, J.K., Smith, J.D., Mathias, A.B., Christensen, M., Smoak, P., Phillips, K.T., Quinn, C.J., & Stewart, L.K. (2019). Performance and health-related characteristics of physically active males using marijuana. Journal of Strength and Conditioning Research, 33, 1658-1668.*
 - *Pesta, D.H. Angadi, S.S., Burtscher, M., & Roberts, C.K. (2013). The effects of caffeine, nicotine, ethanol, and tetrahydrocannabinol on exercise performance. Nutrition & Metabolism, 10, 71.*
 - *Pope, H.G., Jr., & Yurgelun-Todd, D. (1996). The residual cognitive effects of heavy marijuana use in college students. JAMA, 275, 521-527.*
 - *Ware, M.A., Jensen, D., Barrette, A., Vernec, A., Derman, W. (2018). Cannabis and the health and performance of the elite athlete. Clinical Journal of Sports Medicine, 28, 480-484.*



RESOURCES

(MOSTLY FREE)

NIAAA College AIM

<https://www.collegedrinkingprevention.gov/collegeaim>

collegedrinking
CHANGING THE CULTURE

INFO PRINT

Statistics NIAAA College Materials Supporting Research Special Features **CollegeAIM** College Administrators Parents & Students

COLLEGEAIM
ALCOHOL INTERVENTION MATRIX

Overview Individual Strategies Environmental Strategies Worksheet FAQs Additional Information

CollegeAIM—the College Alcohol Intervention Matrix—an easy-to-use and comprehensive booklet and website to help schools identify effective alcohol interventions.

[Learn More](#)

360 Proof (NASPA, no cost)

- Strategic Planning resources
- Learning Community/Webinars
- Personalized Feedback Index (PFI)
<https://www.360proof.org/students>
- Coaches' Modules
<https://www.360proof.org/coaches>

For Coaches

The Coaches' Modules are designed to equip coaches with insights into alcohol-related behavior and consequences, as well as strategies for communicating with student-athletes in a manner that engenders trust, confidence and accountability.

Coaches' Module 1:

Overview of 360 Proof (2:58)

WATCH MODULE

Coaches' Module 2:

Understand Student-Athlete Alcohol Use (3:46)

WATCH MODULE

Coaches' Module 3:

The Consequences of High-Risk Alcohol Use (2:58)

WATCH MODULE

WHAT'S YOUR RISK?

Take the PFI
Select your school to start a personalized survey and see how you compare to your peers.

Enter School Name

LAUNCH

Health behavior theories & models

Downloadable guide:

Rimer & Glanz, 2006

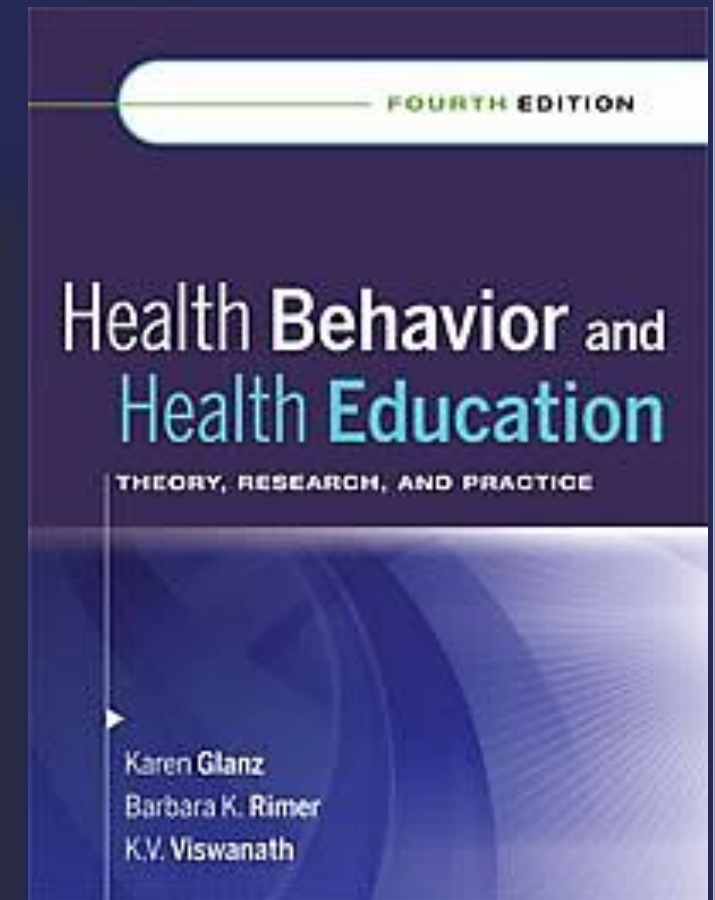
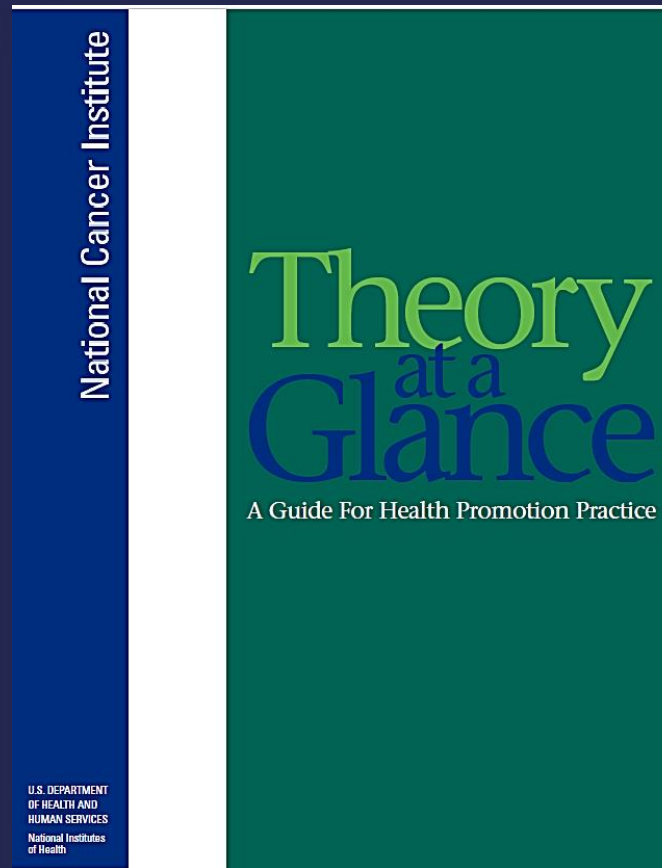
<https://cancercontrol.cancer.gov/sites/default/files/2020-06/theory.pdf>

Book:

Glanz, Rimer, & Viswanath, 2008

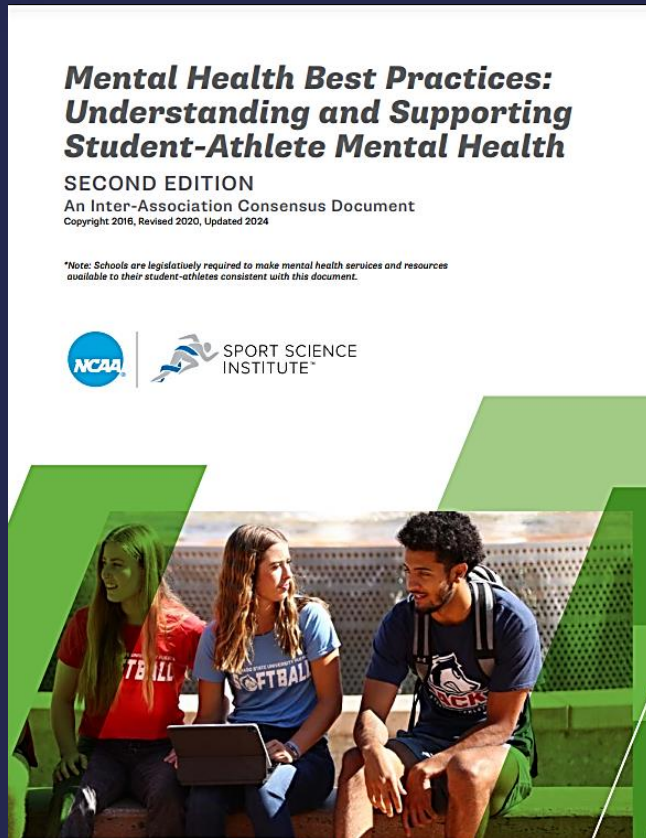
Companion materials:

<https://www.med.upenn.edu/hbhe4/#>



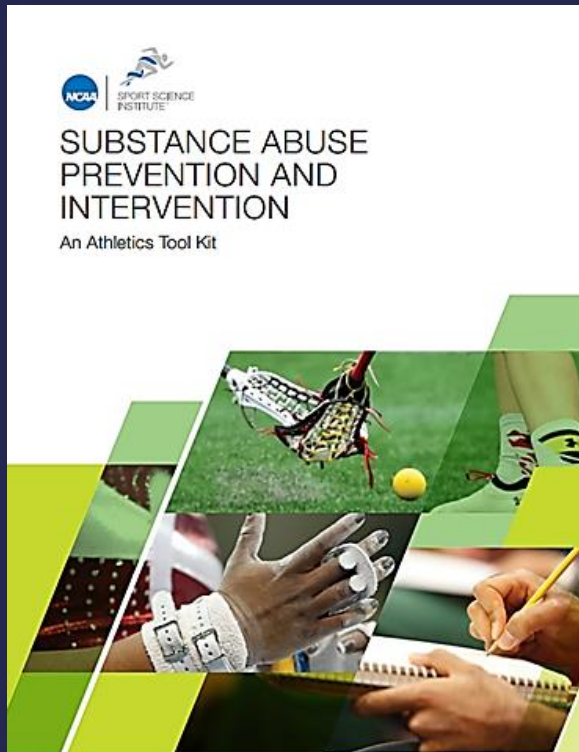
NCAA Mental Health Best Practices (2024)

https://ncaaorg.s3.amazonaws.com/ssi/mental/SSI_MentalHealthBestPractices.pdf



- Mental health is an important dimension of overall student-athlete health and optimal functioning
- Emerging adulthood is a particularly important time for supporting mental health.
- Mental health risk and protective factors occur across settings and over time.
- Coaches play an important role in student-athlete mental health and well-being.
- Mental and physical health are inextricably linked.
- Discrimination, maltreatment and psychosocial trauma negatively impact mental health.
- Social media is an evolving and concerning risk factor for poor mental health.
- Collaboration and continuous improvement are essential.

NCAA



Checklists for comprehensive alcohol and other drug prevention

The Coalition of Higher Education Associations for Substance Abuse Prevention (*see Appendix C*) has endorsed a comprehensive approach to alcohol and other drug prevention. For athletics, this approach comprises the following strategies:

1. Student-athlete needs assessment and data analysis.
2. Campus resource inventory.
3. Departmental policy review and dissemination.
4. Collaboration and compliance.
5. Evidence-based educational programming.
6. Student-athlete engagement.

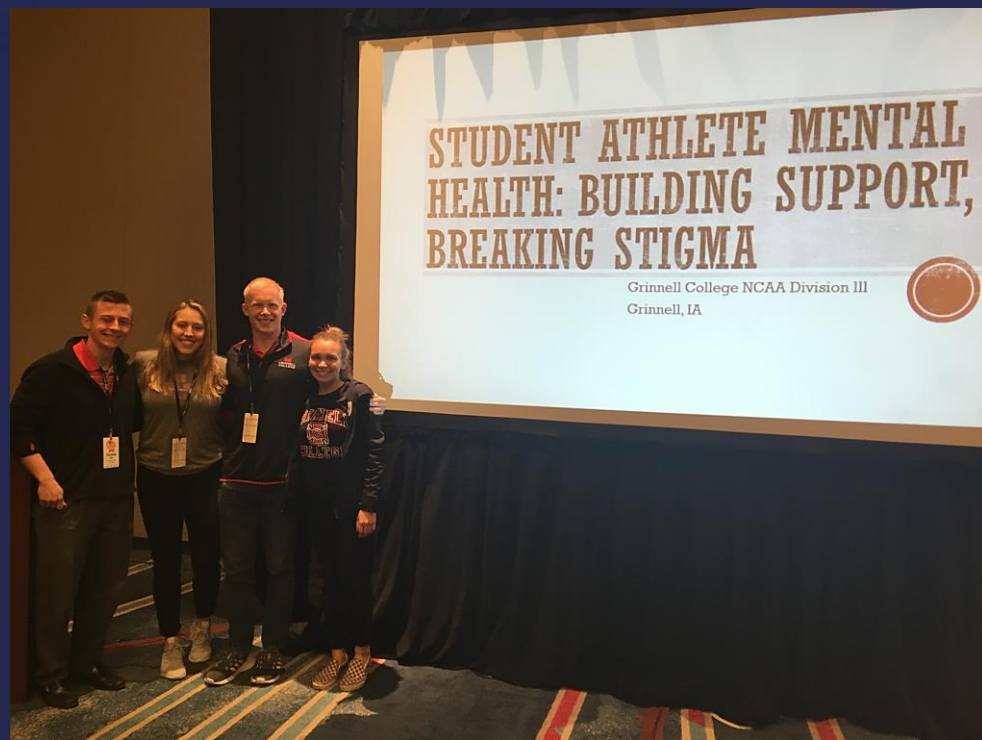
7. Coach engagement.
8. Faculty engagement.
9. Screening, early intervention and referral protocols.
10. Treatment services and recovery support.

The following checklists provide athletics administrators with tools to guide their efforts in addressing substance abuse prevention, intervention and treatment. It is recommended that these checklists be shared with senior student-affairs officers, and those who work closely with prevention staff, to support athletics department efforts and those of the campus.

<https://www.ncaa.org/sports/2017/7/20/substance-abuse-prevention-tool-kit.aspx>

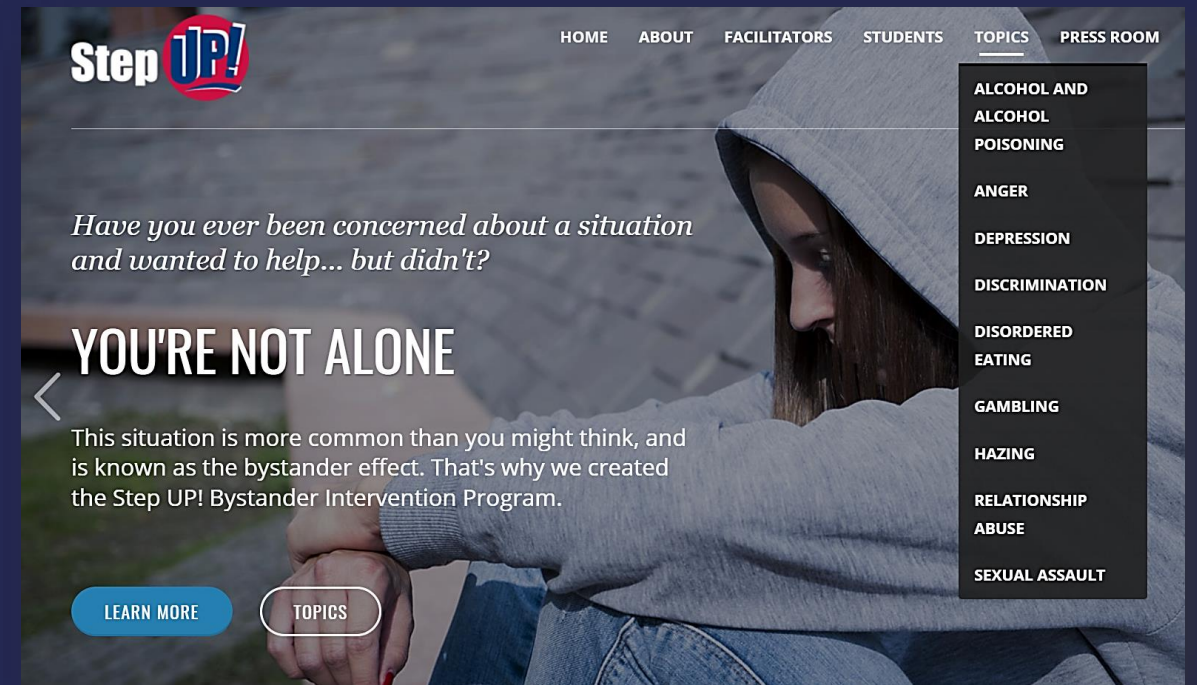
Apple Training Institute

<https://apple.studenthealth.virginia.edu/>



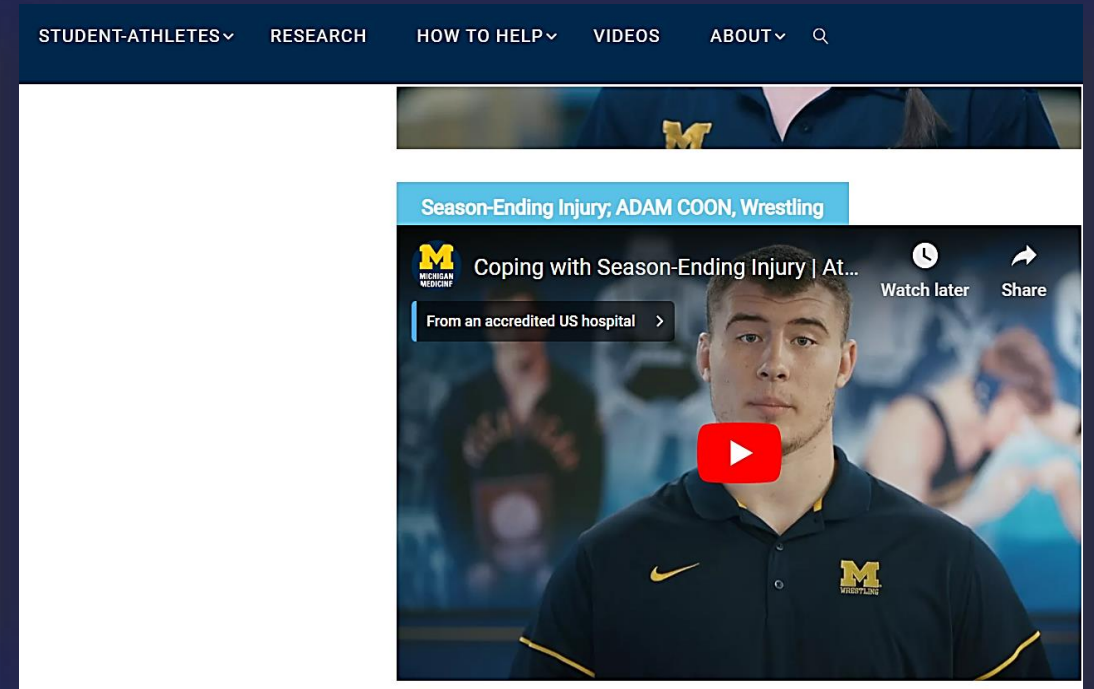
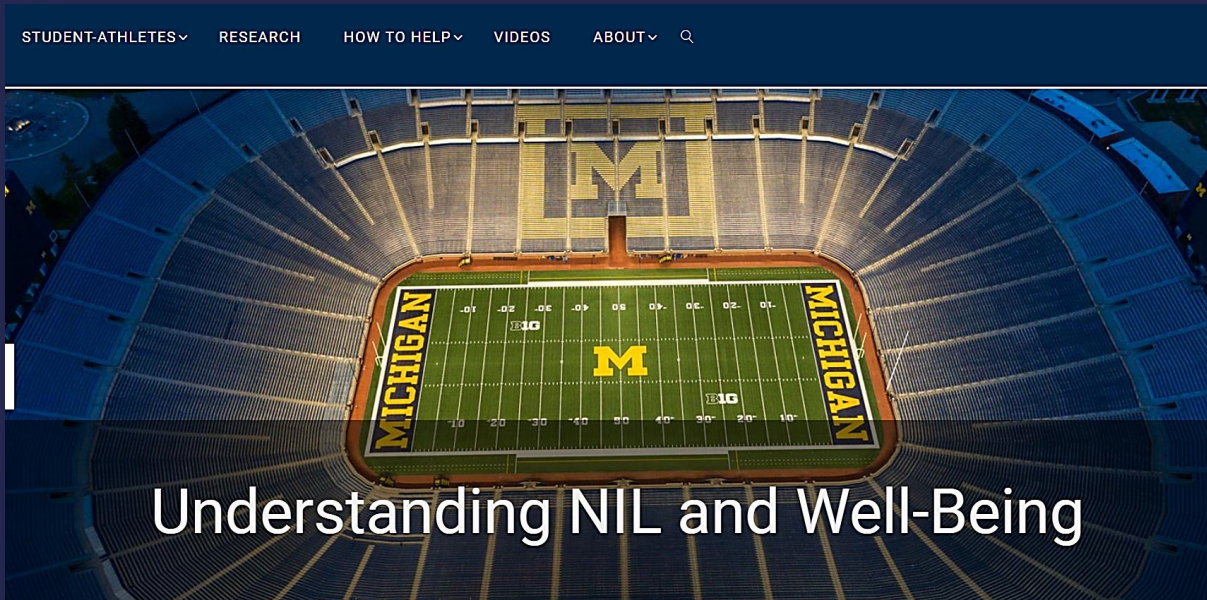
Step UP! active bystander program

<https://stepupprogram.org/>



Athletes Connected

<https://athletesconnected.umich.edu/>



Taking this home

- Who is one person you will connect with? Can you e-mail them asking to meet right now?
- What's one new strategy you might use?
- What's one resource you might use?

Selected References

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ElSohly, M. A., Mehmedic, Z., Foster, S., Gon, C., Chandra, S., & Church, J. C. (2016). Changes in cannabis potency over the last 2 decades (1995-2014): Analysis of current data in the United States. *Biological Psychiatry*, 79(7), 613-619. <https://doi.org/10.1016/j.biopsych.2016.01.004>.

U.S. Food and Drug Administration. (2020). What you need to know (and what we're working to find out) about products containing cannabis or cannabis-derived compounds, including CBD. <https://www.fda.gov/consumers/consumer-updates/what-you-need-know-and-what-were-working-find-out-about-products-containing-cannabis-or-cannabis>.

U.S. Department of Health and Human Services (HHS), Office of the Surgeon General, *Facing Addiction in America: The Surgeon General's Report on Alcohol, Drugs, and Health*. Washington, DC: HHS, November 2016.

https://www.deadiversion.usdoj.gov/schedules/orangebook/c_cs_alpha.pdf (p. 18 & 19)



FINAL QUESTIONS AND THANK YOU

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