



Marijuana Use and American Indian/Alaska Native Youth in Washington State

FAITH PRICE

WASHINGTON STATE UNIVERSITY

PRESENTATION OUTLINE

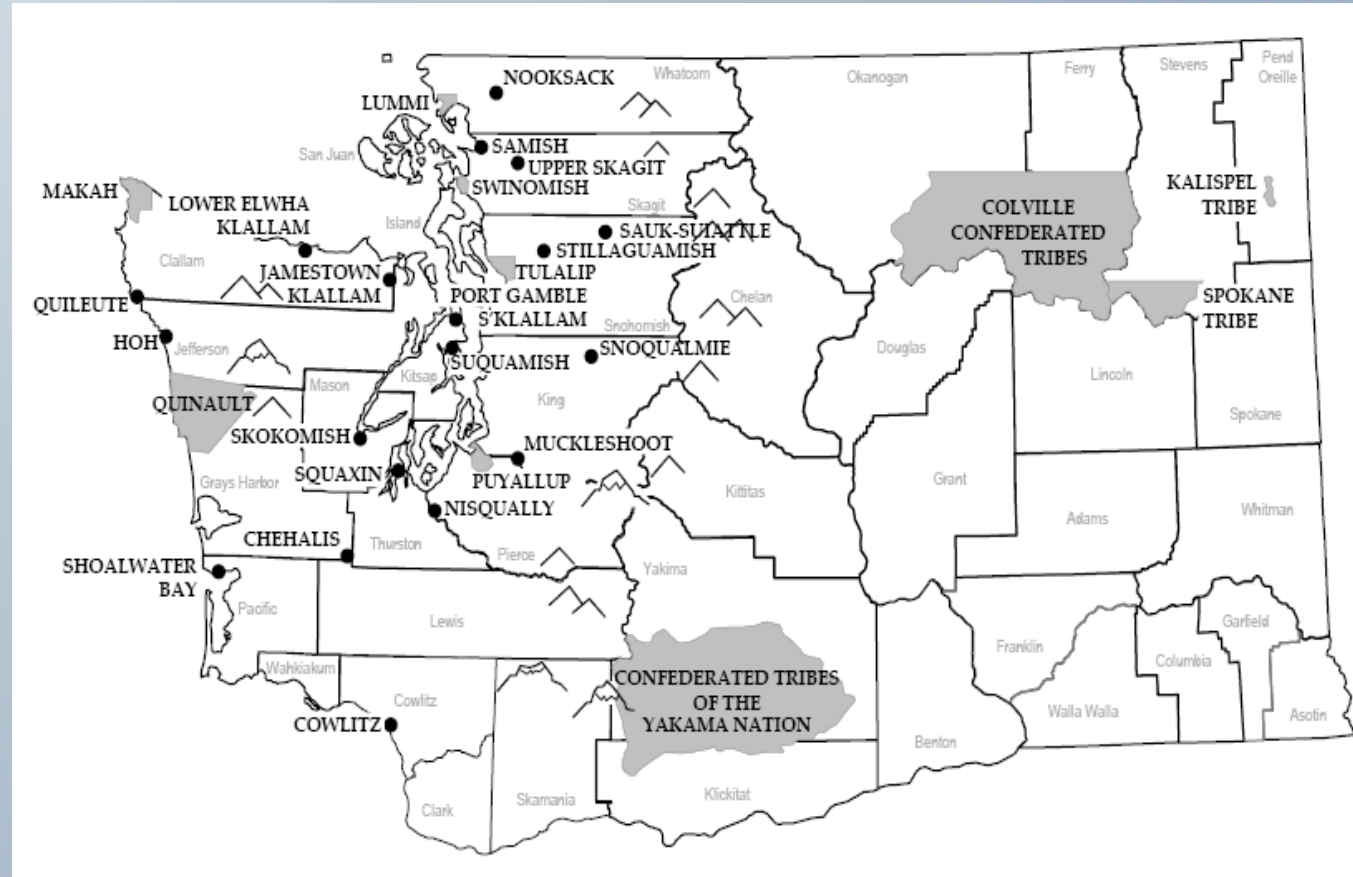
- BACKGROUND ON AI/AN POPULATION IN WASHINGTON
- OVERVIEW OF MARIJUANA USE PREVALENCE AND TRENDS
- THEORY
- CURRENT STUDY
- METHOD & ANALYSES
- RESULTS
- DISCUSSION



Washington State Tribes

29

Federally-recognized tribes



1859

Last treaty signed with tribes in Washington state.

2%

of Washington State Population

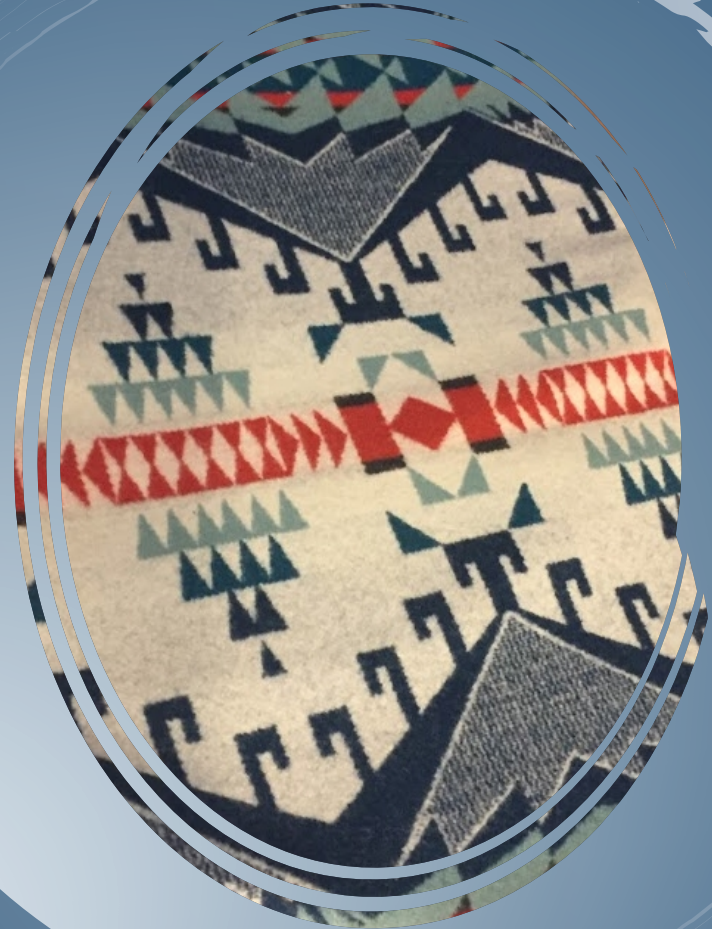
8th

Largest employer in the state are Washington's Tribes.

SOURCE: (Winchell & Rolland, 2009)

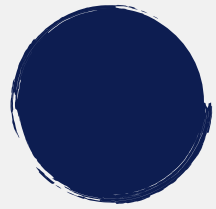
MARIJUANA

TRENDS & PREVALENCE RATES



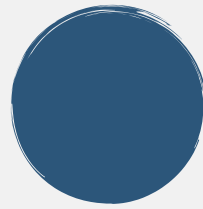
Marijuana Legalization in Washington State

Recreational marijuana use was legalized for adults 21+ in the state of Washington in 2012.



\$1.05B

- Marijuana sales in Washington were nearly \$1.05 billion in 2019 (*Washington State Liquor and Cannabis Board, 2020*)
 - The perception among Washington State youth that marijuana use is harmful went down by half between 2006-2014 (*Fleming, Guttmannova, Cambron, Rhew, & Oesterle, 2016*)



12 Tribes

- 12 Tribes have state-tribal marijuana compacts with Washington including: Colville, Jamestown S'Klallam, Muckleshoot, Puyallup, Port Gamble S'Klallam, Quinault, Samish, Squaxin Island, Stillaguamish, Swinomish, Suquamish, and Tulalip. (*Cain, 2020*).
- Yakama Nation has banned recreational marijuana on their reservation (*La Ganga, 2014*)

Marijuana Use: trends & prevalence rates

Legalization

Recreational marijuana is now legal in 11 states. (<https://www.businessinsider.com/legal-marijuana-states-2018-1>).

Racial Differences

Prevalence rates, frequency of use, and age of initiation of marijuana use vary between races. (Chen & Jacobson, 2012; Keyes et al., 2015)

36%

of American high school students have tried marijuana. (Johnson et al., 2015)

AI/AN Use

AI/AN youth consistently have the highest rates of drug use of any racial/ethnic group in the United States, especially marijuana (Beauvais, Jumper-Thurman, & Burnside, 2008)

Lifetime Use

Nearly twice as many AI/AN youth 12-17 years old have tried marijuana (28.1%) than their White (15.6%), Black (15.7%) or Latino peers (16.2%) (*SAMHSA, 2018*)

Past Month Use

Past month rates of marijuana use for 12-17 year old AI/AN youth are 2.24 times higher than those of their non-native peers (*SAMHSA, 2018*).

Reservation Youth

AI/AN 8th graders living on/near reservations were 4.2 times as likely to have used marijuana in the last 30-days than the general 8th grade population (*Swaim & Stanley, 2018*).

Age of Initiation

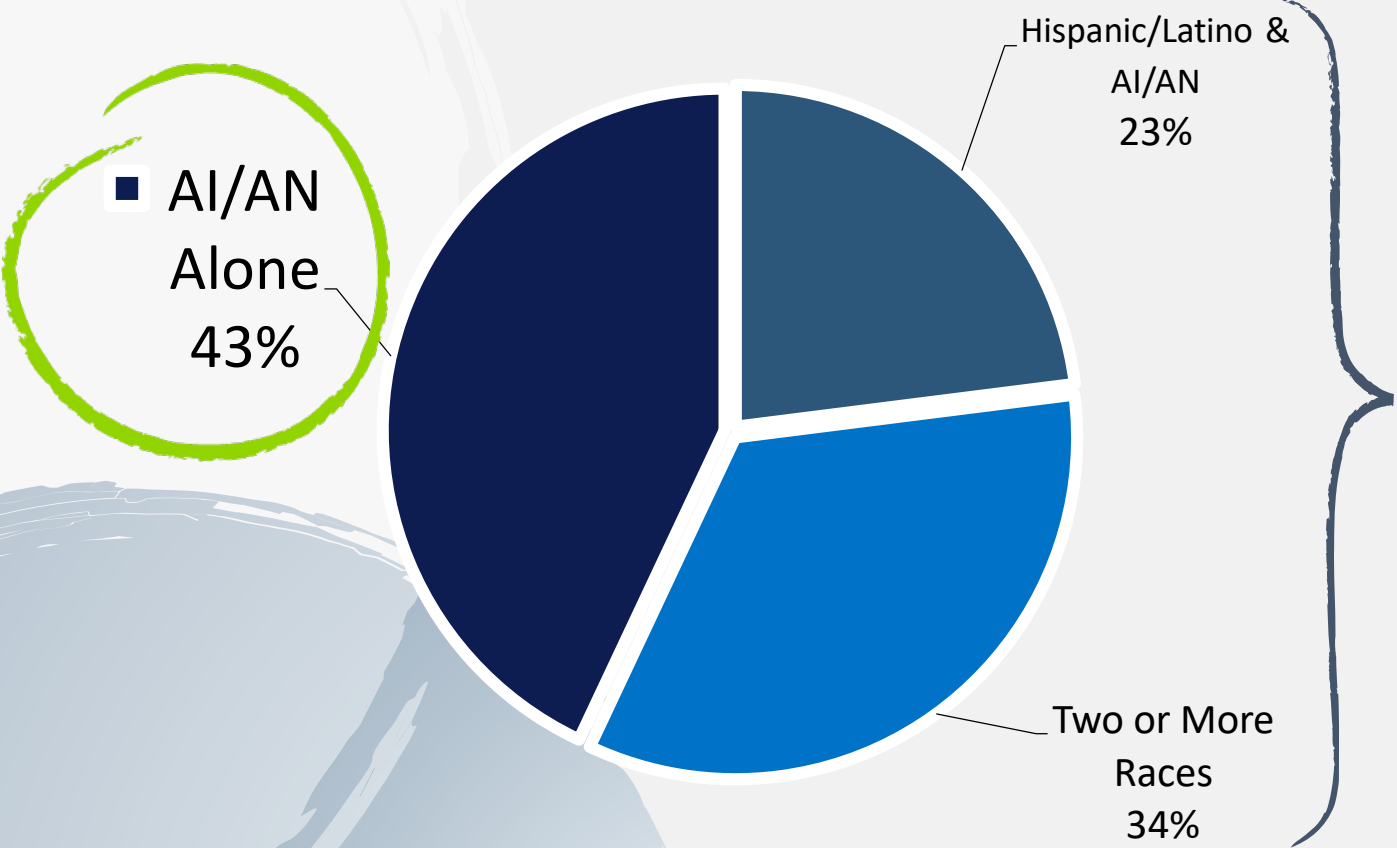
AI/AN youth initiate substance use earlier than white youth living on or near reservations (*Stanley & Swaim, 2015*).

AI/AN Youth & Marijuana Use

Example from 2010 U.S. Census

Multicultural AI/AN

Over half of the AI/AN population reports being AI/AN in combination with another race/ethnicity (U.S. Census Bureau, 2010)



Theoretical perspectives

Prevention Science

Reducing exposure to risks and promoting factors that protect from harm to prevent negative health outcomes.

(Catalano, Berglund, Ryan, Lonczak, & Hawkins, 2002)

Ecological Systems

Health is a product of relationships between the individual and the systems that influence them – family, community, culture, physical and social environment.

(Green, Richard, & Potvin, 1996)

Critical Race Theory

Race and racism are highly influential components of our organization as a society.

(Burton, Bonilla-Silva, Ray, Buckelew, & Hordge Freeman, 2010)



Current Study

Secondary data analysis of
Washington State Healthy
Youth Survey data

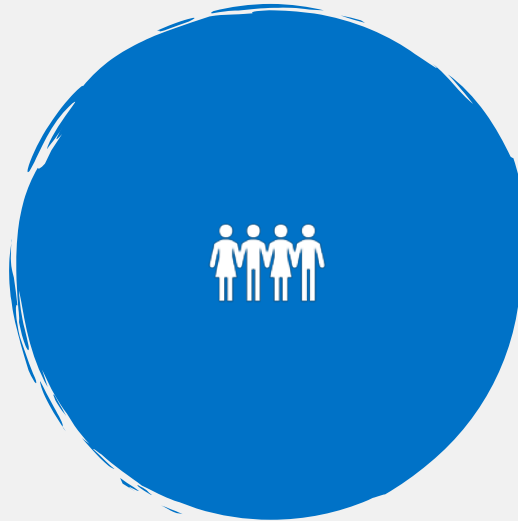
Method

Washington State Healthy Youth Survey,
(Washington State Department of Health)



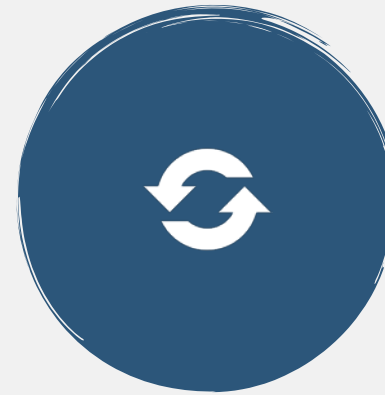
Statewide,
biennial survey

Consists of questions about youth health behaviors and attitudes, alcohol, tobacco, and other drug use, and related risk and protective factors.



Tenth grade
students

- AI/AN-only, $n = 8,737$
- Multiracial AI/AN, $n = 8,122$
- Non-Native, $n = 351,006$



2006-2018

Collapsed across
these 7 waves

Descriptives



AI/AN-only

2.4% of sample

53.8% Male

Mean age: 15.34

20.9% had a
mother with
college degree+



Multicultural AI/AN

2.2% of sample

43.4% Male

Mean age: 15.28

24.6% had a
mother with
college degree+



Non-Native

95.4% of sample

48% Male

Mean age: 15.26

32.1% had a
mother with a
college degree+



RESEARCH QUESTION #1

HOW DO MARIJUANA USE PATTERNS
DIFFER BETWEEN AI/AN-ONLY,
MULTICULTURAL AI/AN, AND NON-NATIVE
YOUTH?

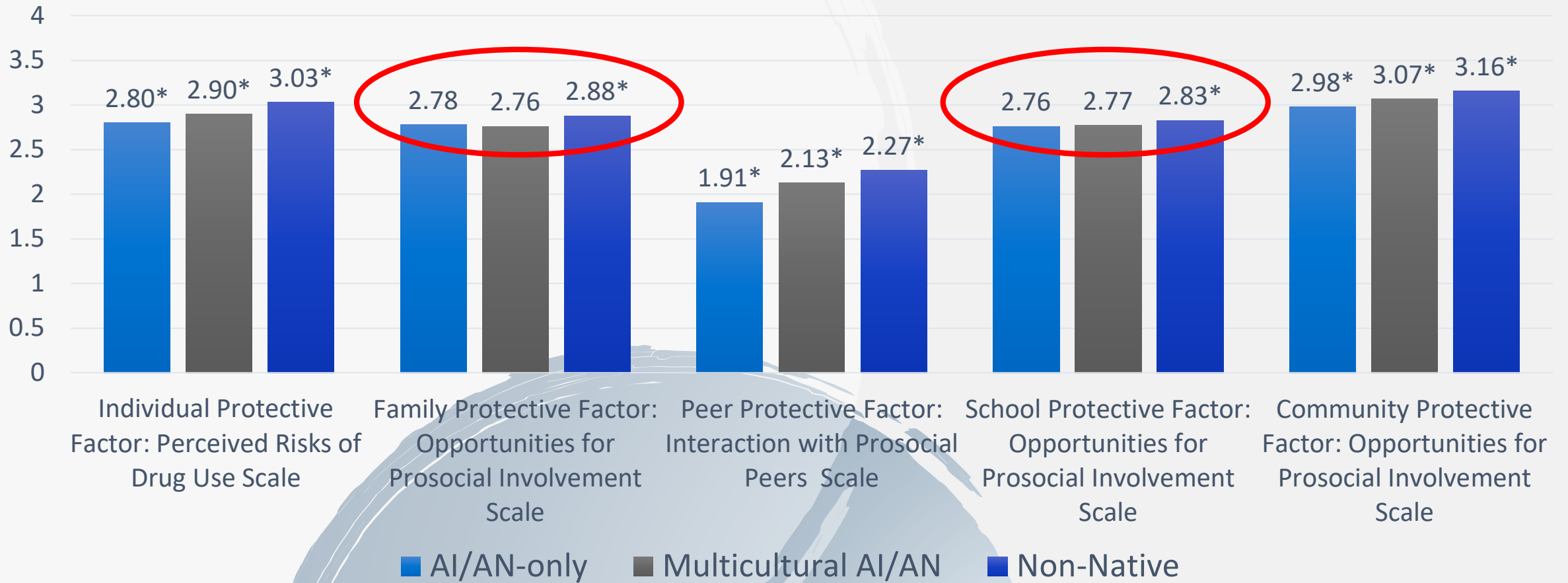
<u>Item</u>	<u>AI/AN-only</u>	<u>Multicultural AI/AN</u>	<u>Non-Native</u>
Age of Initiation			
Never have	55.6% (4,614)	60% (4,652)	71% (240,514)
13 or younger	25.7% (2,132)	21.7% (1,686)	13.1% (44,468)
14 or older	18.7% (1,551)	18.3% (1,416)	15.8% (53,605)
Lifetime Marijuana Use Prevalence	44.4% (3,683)	40% (3,102)	29% (98,073)
Current Marijuana Use Prevalence	27.3% (2,294)	23.9% (1,876)	17.5% (59,834)
0 days	72.7% (6,110)	76.1% (5,967)	82.5% (281,987)
1-2 days	8.7% (730)	7.5% (589)	6.6% (22,404)
3-5 days	4.7% (397)	4.7% (369)	3.4% (11,527)
6-9 days	3.3% (275)	2.8% (217)	2.0% (6,692)
10 or more days	10.6% (892)	8.9% (701)	5.6% (19,211)

RESEARCH QUESTION #2

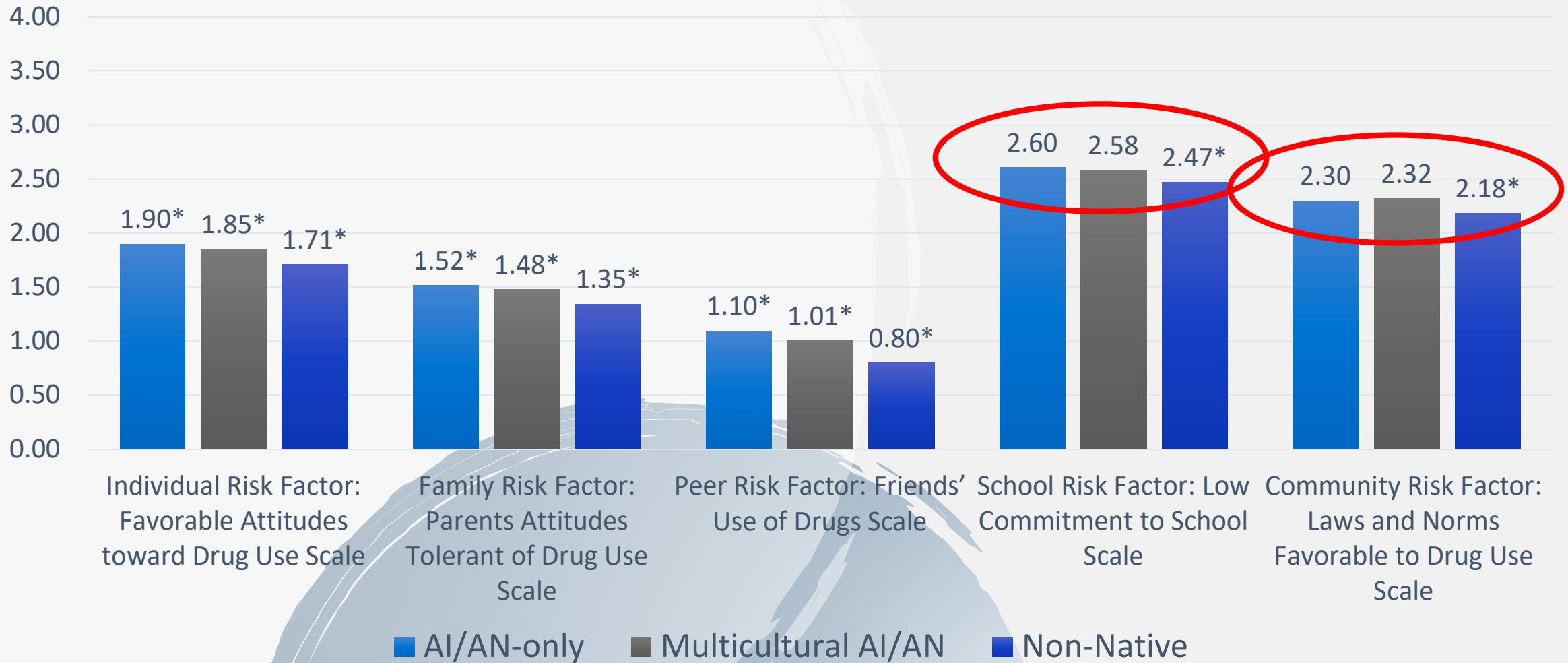
WHAT ARE THE MEAN LEVELS OF RISK AND PROTECTIVE FACTORS FOR AI/AN-ONLY, MULTICULTURAL AI/AN, AND NON-NATIVE YOUTH IN THE FOLLOWING DOMAINS:

- Community
- School
- Peers
- Family
- individual

Means of Protective Factor Scales



Means of Risk Factor Scales





RESEARCH QUESTION #3

TO WHAT DEGREE DO THE SPECIFIED RISK
AND PROTECTIVE FACTORS PREDICT
MARIJUANA USE FOR EACH OF THESE
GROUPS?

Marijuana Lifetime Use



AI/AN-Only

Negatively Related:

- Gender (male)
- Interaction with prosocial peers
- **Perceived risks of drug use**

Positively Related:

- **Friends' use of drugs**
- Parental attitudes tolerant of drug use
- Favorable attitudes toward drug use



Multicultural AI/AN

Negatively Related:

- Mother's education
- Interaction with prosocial peers
- **Perceived risks of drug use**

Positively Related:

- Low commitment to school
- School opportunities for prosocial involvement
- Friends' use of drugs
- Parental attitudes tolerant of drug use
- **Favorable attitudes toward drug use**



Non-Native

Negatively Related:

- Mother's education
- Community opportunities for prosocial involvement
- Interaction with prosocial peers
- **Perceived risks of drug use**

Positively Related:

- Age
- Low commitment to school
- School opportunities for prosocial involvement
- **Friends' use of drugs**
- Parental attitudes tolerant of drug use
- Favorable attitudes toward drug use

Marijuana Current Use



AI/AN-Only

Negatively Related:

- Perceived risks of drug use

Positively Related:

- Friends' use of drugs
- Parental attitudes tolerant of drug use
- **Favorable attitudes toward drug use**



Multicultural AI/AN

Negatively Related:

- Perceived risks of drug use

Positively Related:

- Low commitment to school
- School opportunities for prosocial involvement
- Friends' use of drugs
- Parental attitudes tolerant of drug use
- **Favorable attitudes toward drug use**



Non-Native

Negatively Related:

- Laws and norms favorable to drug use
- Interaction with prosocial peers
- Family opportunities for prosocial involvement
- **Perceived risks of drug use**

Positively Related:

- Gender
- Low commitment to school
- School opportunities for prosocial involvement
- **Friends' use of drugs**
- Parental attitudes tolerant of drug use
- Favorable attitudes toward drug use



DISCUSSION

**WASHINGTON
AI/AN YOUTH
HAVE HIGHER
PREVALENCE OF
MARIJUANA USE**



**AI/AN RESEARCH
MUST BE
INCLUSIVE OF
MULTICULTURAL
AI/AN POPULATION**



**AI/ANYOUTH AT
GREATER RISK AND
WITH LESS
PROTECTION**



INADEQUATE MEASURES OF AI/AN USE



THE CALL FOR CULTURALLY- GROUNDED PREVENTION AND RELATED MEASURES



KUTÂPUTUNUMUW & QUESTIONS





EXTRA SLIDES

References

- 500nations.com. (2018). Washington Tribes in the Cannabis Industry. Retrieved October 28, 2018, from <https://www.500nations.com/Washington-Cannabis.asp>
- Allen, J., Mohatt, G. V., Fok, C. C. T., Henry, D., Burkett, R., & People Awakening Team. (2014). A Protective Factors Model for Alcohol Abuse and Suicide Prevention Among Alaska Native Youth. *American Journal of Community Psychology*, 54(1–2), 125–139. <https://doi.org/10.1007/s10464-014-9661-3>
- Ault, P., & John, L. (2017). *OBSCURED IDENTITIES: Improving the Accuracy of Identification of American Indian and Alaska Native Students*. Retrieved from <http://educationnorthwest.org/sites/default/files/resources/obscured-identities.pdf>
- Beauvais, F., Jumper-Thurman, P., & Burnside, M. (2008). The changing patterns of drug use among American Indian students over the past thirty years. *American Indian and Alaska Native Mental Health Research*, 15(2), 15–24. <https://doi.org/10.5820/aian.1502.2008.15>
- Burton, L. M., Bonilla-Silva, E., Ray, V., Buckelew, R., & Hordge Freeman, E. (2010). Critical Race Theories, Colorism, and the Decade’s Research on Families of Color. *Journal of Marriage and Family*, 72(3), 440–459. <https://doi.org/10.1111/j.1741-3737.2010.00712.x>
- Caudell, J. (2018, August 10). CBC approves edits of marijuana compact by state liquor board. *Tribal Tribune*. Retrieved from http://www.tribaltribune.com/news/article_fe2f54a2-9cd6-11e8-8e78-f3735f78b6af.html
- Chen, P., & Jacobson, K. C. (2012). Developmental trajectories of substance use from early adolescence to young adulthood: Gender and racial/ethnic differences. *Journal of Adolescent Health*. <https://doi.org/10.1016/j.jadohealth.2011.05.013>
- Fleming, C. B., Guttmanova, K., Cambron, C., Rhew, I. C., & Oesterle, S. (2016). Examination of the Divergence in Trends for Adolescent Marijuana Use and Marijuana-Specific Risk Factors in Washington State. *Journal of Adolescent Health*, 59(3), 269–275. <https://doi.org/10.1016/j.jadohealth.2016.05.008>
- Henson, M., Sabo, S., Trujillo, A., & Teufel-Shone, N. (2017). Identifying Protective Factors to Promote Health in American Indian and Alaska Native Adolescents: A Literature Review. *Journal of Primary Prevention*. <https://doi.org/10.1007/s10935-016-0455-2>
- Indianz.com. (2017, April 7). Six more tribes are pursuing marijuana agreements in Washington. *Indians.Com*. Retrieved from <https://www.indianz.com/News/2017/04/07/six-more-tribes-are-pursuing-marijuana.asp>
- Keyes, K. M., Vo, T., Wall, M. M., Caetano, R., Suglia, S. F., Martins, S. S., ... Hasin, D. (2015). Racial/ethnic differences in use of alcohol, tobacco, and marijuana: Is there a cross-over from adolescence to adulthood? *Social Science and Medicine*. <https://doi.org/10.1016/j.socscimed.2014.11.035>
- Kosterman, R., Bailey, J. A., Guttmanova, K., Jones, T. M., Eisenberg, N., Hill, K. G., & Hawkins, J. D. (2016). Marijuana Legalization and Parents’ Attitudes, Use, and Parenting in Washington State. *Journal of Adolescent Health*, 59(4), 450–456. <https://doi.org/10.1016/j.jadohealth.2016.07.004>
- La Ganga, M. (2014, January 9). Yakama tribe just says no to Washington state’s legal pot market - The Washington Post. *Washington Post*. Retrieved from https://www.washingtonpost.com/national/yakama-tribe-just-says-no-to-washington-states-legal-pot-market/2014/01/09/14e2aab6-6bfc-11e3-aecc-85cb037b7236_story.html?noredirect=on&utm_term=.6ecee9468f9
- Miller, K. A., Stanley, L. R., & Beauvais, F. (2012). Regional differences in drug use rates among American Indian youth. *Drug and Alcohol Dependence*. <https://doi.org/10.1016/j.drugalcdep.2012.04.010>

References

- Moilanen, K. L., Markstrom, C. A., & Jones, E. (2014). Extracurricular Activity Availability and Participation and Substance Use Among American Indian Adolescents. *Journal of Youth and Adolescence*. <https://doi.org/10.1007/s10964-013-0088-1>
- Moon, S. S., Blakey, J. M., Boyas, J., Horton, K., & Kim, Y. J. (2014). The Influence of Parental, Peer, and School Factors on Marijuana Use Among Native American Adolescents. *Journal of Social Service Research*, 40(2), 147–159. <https://doi.org/10.1080/01488376.2013.865578>
- Radin, S. M., Banta-Green, C. J., Thomas, L. R., Kutz, S. H., & Donovan, D. M. (2012). Substance use, treatment admissions, and recovery trends in diverse Washington state tribal communities. *American Journal of Drug and Alcohol Abuse*. <https://doi.org/10.3109/00952990.2012.694533>
- SAMHSA. (2018). Results from the 2017 National Survey on Drug Use and Health: Detailed Tables. Retrieved October 29, 2018, from <https://www.samhsa.gov/data/sites/default/files/cbhsq-reports/NSDUHDetailedTabs2017/NSDUHDetailedTabs2017.htm#tab1-29B>
- Stanley, L. R., Swaim, R. C., & Dieterich, S. E. (2017). The Role of Norms in Marijuana Use Among American Indian Adolescents. *Prevention Science*. <https://doi.org/10.1007/s11121-017-0768-2>
- Swaim, R. C., & Stanley, L. R. (2018). Substance Use Among American Indian Youths on Reservations Compared With a National Sample of US Adolescents. *JAMA Network Open*, 1(1), e180382. <https://doi.org/10.1001/jamanetworkopen.2018.0382>
- U.S. Census Bureau. (2010). 2010 Demographic Profile Data. Retrieved from https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=DEC_10_DP_DPDP1&src=pt
- Vega, W. A., Zimmerman, R. S., Warheit, G. J., Apospori, E., & Gil, A. G. (1993). Risk factors for early adolescent drug use in four ethnic and racial groups. *American Journal of Public Health*. <https://doi.org/10.2105/AJPH.83.2.185>
- Wallace, J. M., & Bachman, J. G. (1991). Explaining Racial/Ethnic Differences in Adolescent Drug Use: The Impact of Background and Lifestyle. *Social Problems*. <https://doi.org/10.2307/800603>
- Warne, D., & Lajimodiere, D. (2015). American Indian health disparities: Psychosocial influences. *Social and Personality Psychology Compass*. <https://doi.org/10.1111/spc3.12198>
- Washington State Department of Social and Health Services, & Department of Health, Office of the Superintendent of Public Instruction, and L. and C. B. (2017). *Washington State Healthy Youth Survey Analytic Report 2008*. Retrieved from [https://www.askhys.net/Docs/HYS 2016 Analytic Report Final 10-24-17.pdf](https://www.askhys.net/Docs/HYS%2016%20Analytic%20Report%20Final%2010-24-17.pdf)
- Washington State Governmental Operations Committee. (2014). *INDIAN TRIBES IN WASHINGTON STATE: BRIEF SUMMARY*.
- Washington State Legislature. (2015). Senate Bill 5433. Retrieved October 28, 2018, from <http://apps2.leg.wa.gov/billssummary?BillNumber=5433&Year=2015>
- Washington State Liquor and Cannabis Board. (2018). *WSLCB Marijuana Dashboard | Washington State Liquor and Cannabis Board Data Portal (WSLCB)*. Retrieved from <https://data.lcb.wa.gov/stories/s/WSLCB-Marijuana-Dashboard/hbnp-ia6v/>
- Winchell, D., & Rolland, R. (2009). *Tribal Transportation Planning Guide for Washington State*. Retrieved from <https://www.wsdot.wa.gov/NR/rdonlyres/D9668173B571-57EB32122036/0/TribalTransportationPlanningGuideforWashingtonState.pdf>

Economic Development

Indian Country in Washington

casinos and other tribally owned enterprises*



*As reported by survey respondents. Not shown: on-reservation businesses owned by individual Indians or non-Indians.
[1,6,7]

- Tribes in Washington are the 8th largest employer in the state
- Tribal economy is \$5.3 billion/year

(Taylor, 2019)



Cultural Revitalization

- Examples of AI/AN cultural revitalization taking place in Washington state right now:
 - Canoe culture
 - Food sovereignty
 - Education
 - Language

Despite federal efforts to assimilate AI/AN people, Native people have retained much of their culture, and many aspects of traditional practices, art forms, and language are being revitalized among tribal communities today.

Conflict

With European contact came the decimation of an estimated 90% of the AI/AN population, through military conflicts, disease, and colonial policies.

Boarding Schools

Between 1819 and the 1930s, generations of AI/AN children were physically removed from their families and raised in federal or religious boarding schools.

Inter- generational Trauma

Common reactions to trauma include PTSD, depression, and substance use.

Historical Trauma

Poor health outcomes for Native people can be connected to the historical trauma of loss of land, loss of culture, forced assimilation, and genocidal policies.

RISK & PROTECTIVE FACTORS

Risk and protective factors show disparities across racial/ethnic lines (*Vega, Zimmerman, Warheit, Apospori, & Gil, 1993; Wallace, & Bachman, 1991*).

Risk Factors for AI/AN for Substance Use

Community

- Neighborhood Safety
- Neighborhood Poverty
- Reservation Residence
- Historical Loss

School

- Negative School Environment
- Low Sense of School Safety

Peers

- Peer Alcohol Use
- Peer Misbehavior
- Delinquent/Deviant Peers
- Peer Encouragement of Alcohol Use
- Peer Alcohol Associations

Family

- Low SES of Family
- Parental Drug/Alcohol Problem
- Family Members' Substance Problems
- Addicted Family Members

Individual

- Impulsivity
- Delinquent Behavior
- Pro-delinquency attitudes
- Angry Feelings
- Low Self-Worth
- Abuse/Trauma
- Witnessed Family Violence
- ACES
- Stressful Life Event in Past Year
- Perceived Discrimination

Protective Factors for AI/AN for Substance Use

Community

- Opportunity to Contribute to the Community
- Positive Adult Role Models
- Adult Modeling of Sobriety
- Transmission of Cultural Expectations and Values
- Cultural Concept of “Interconnectedness”

School

- School Attachment
- School Bonding
- Sense Of Belonging In School
- Perceived Availability of Extracurricular Activities

Peers

- Relationships with Pro-social Peers

Family

- Family Income Supplements
- Parental Education
- Communication
- Support
- Positive Family Relationships
- Parental Attachment
- Family Sanctions Against Drugs
- Non-Parental Adult Role Model

Individual

- Involvement In Religious Group Or Church
- Stronger Christian Beliefs
- Cultural Pride/Spirituality
- More Native-Oriented, Enculturation (Participation In Cultural Activities And Spiritual Practices)

SOURCE: Adapted from SAMHSA (2013); Moilanen, Markstrom, & Jones (2014); Allen et al. (2014)

Analyses

Using SPSS

RQ1: Marijuana Use Prevalence

- Analysis of variance (ANOVA) used to compare prevalence rates for lifetime and 30-day use of marijuana between AI/AN-only, AI/AN multiracial, and non-Native youth.



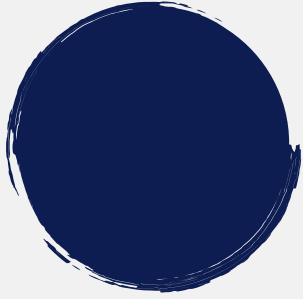
RQ2: Risk & Protective Factors

- Chi square tests were used to compare responses to each risk or protective factor variable between the three groups.



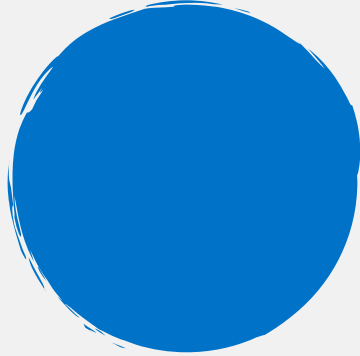
RQ3 - Predicting Marijuana Use

- Multiple logistic regression was used to analyze the relationship of risk and protective factors to marijuana lifetime and 30-day use between the three different groups.



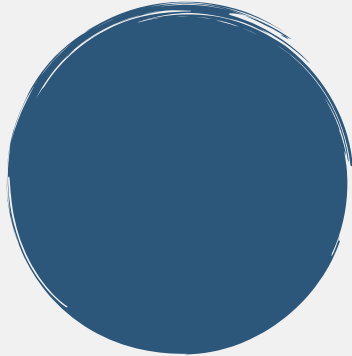
Model One

- Age
- Gender
- Mother's Education



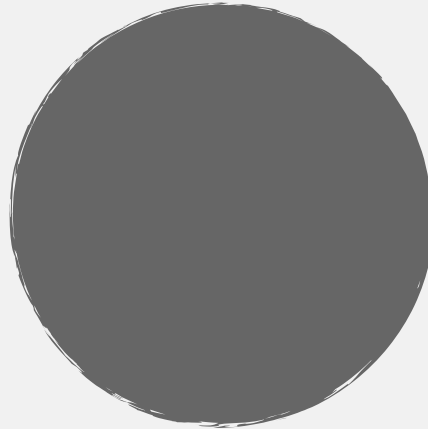
Model Two

- Community
- School



Model Three

- Peer
- Family



Model Four

- Individual

Multiple Logistic Regressions



Measures: Marijuana Use

Prevalence rates for marijuana lifetime and past 30-day use were measured by two items:

- on how many occasions respondents have used marijuana in their lifetime, and
- on how many occasions have they used marijuana in the last 30 days.

Age of Initiation

- age of first marijuana use



Measures: Community Domain

Risk Factor: Laws and Norms Favorable To Drug Use

- “How wrong would most adults in your neighborhood or community think it was for kids your age: to use marijuana?”

Protective Factor: Opportunities for Prosocial Involvement

- “There are adults in my neighborhood or community I could talk to about something important.”
- Clubs, sports, recreation available

Measures: School Domain



Risk Factor: Low Commitment to School

- “How often do you feel the schoolwork you are assigned is meaningful and important?”
- “How often do you enjoy being in school?”

Protective Factor: Opportunities for Prosocial Involvement in School

- “I have lots of chances to be part of class discussions or activities”
- “There are lots of chances for students in my school to get involved in sports, clubs, and other school activities outside of class.”

Measures: Peer Domain



Risk Factor: Friends' Use of Drugs

- “Think of your four best friends (the friends you feel closest to). In the past year (12 months), how many of your best friends have: used marijuana?”

Protective Factor: Interaction with Prosocial Peers

- “Think of your four best friends (the friends you feel closest to). In the past year (12 months), how many of your best friends have: participated in clubs, organizations, or activities at school?”



Measures: Family Domain

Risk Factor: Parental Attitudes Favorable Toward Drug Use

- “How wrong do your parents feel it would be for you to: use marijuana?”

Protective Factor: Opportunities for Prosocial Involvement

- “My parents give me lots of chances to do fun things with them.”
- “If I had a personal problem, I could ask my mom or dad for help.”



Measures: Individual Domain

Risk Factor: Favorable Attitudes Toward Drug Use


- “How wrong do YOU think it is for someone your age to: Use marijuana?”

Protective Factor: Perceived Risks of Drug Use

- “How much do you think people risk harming themselves if they try marijuana once or twice?”
- “How much do you think people risk harming themselves if they use marijuana regularly (at least once or twice a week)?”

MULTICULTURAL
AI/AN USE
PATTERNS MIRROR
THOSE OF AI/AN-
ONLY YOUTH



- 
- Difficulty generalizing because of diversity of Tribal nations and communities
 - Large sample size means very small differences could be statistically significant.

Limitations