Published in final edited form as:

J Am Acad Child Adolesc Psychiatry. 2017 February ; 56(2): 103–104. doi:10.1016/j.jaac.2016.12.005.

Substance use disorders among Indigenous youth in developmental perspective: Critical lessons in diversity, diagnostic tools, and resilience

Nancy Rumbaugh Whitesell, PhD¹, Carol E. Kaufman, PhD¹

¹Centers for American Indian and Alaska Native Health, Colorado School of Public Health, University of Colorado-Anschutz Medical Campus, MS F800, 13055 E. 17th Avenue, Aurora, Colorado, 80045.

An emerging research base investigating substance use and disorder among indigenous youth has outlined a compelling case for concern: Indigenous youth tend to initiate use at earlier ages and use with higher frequency compared to their White counterparts.^{1,2} Using what we know about other populations, such patterns warn of escalating use across the life course, with deleterious outcomes later in life. This issue contains two studies that challenge us to think beyond common patterns. They tell distinct yet related stories of the development of substance use disorder among indigenous youth in the United States and Canada. While these studies focused on diverse indigenous populations, examined different substance disorders using different diagnostic instruments and criteria, and used distinct analytic approaches, they also share a common story about resilience and the value of longitudinal research in unearthing the roots and sequelae of adolescent substance use within cultural context.

Diversity and the Fallacy of Ethnic Gloss

The indigenous populations of North America are diverse and numerous. They represent over 340 federally recognized American Indian (AI) tribes, 634 Canadian First (FN) tribes, and more than 220 federally recognized Alaska Native (AN) villages and corporations, each with a unique culture and socio-historical context. The majority are urban (in the US and Canada, more than 70% and 50%, respectively). Others are located on remote rural reservations, removed from daily interaction with mainstream culture (as in the Greenfield, et al. study);³ reside near urban centers; or live in integrated rural communities (as in the Copeland, et al. study).⁴ Some face inordinately high rates of poverty and unemployment (Greenfield, et al.); others are relatively rich in resources and economic opportunity (Copeland, et al.). A wide variety of governance structures, kinship networks, and spiritual traditions are evident within and across indigenous communities. These communities are robust. Over centuries, they have endured varying levels of federal intervention intended to strip them of rich cultural traditions, tribal languages, and land, even as many continue to

Corresponding author: Carol Kaufman, Centers for American Indian and Alaska Native Health, University of Colorado-Anschutz Medical Campus, MS F800, 13055 E. 17th Avenue, Aurora, Colorado, 80045, 303-724-1464 (p); 303-724-1464(f), carol.kaufman@ucdenver.edu.

The authors have no disclosures to report.

strengthen cultural resources and honor their heritage within and across their communities. This diversity is consequential for understanding substance use patterns, and both studies in this issues carefully describe their respective populations. As consumers of research findings, we may be tempted to ignore the distinctions in setting and apply results to indigenous youth broadly. Yet, such ethnic gloss may impede appropriate assessment and could exacerbate disparities.⁵ Respectful use of findings requires a commitment to learn about specific settings for each community and each client.

Shifting Definitional Landscape

The Greenfield et al. and Copeland et al. papers are distinguished by both the substances studied and the diagnostic criteria employed. Greenfield and colleagues used DSM-IV Diagnostic Interview Schedule for Children-Revised (DISC-R)⁶ criteria to determine the relationship of alcohol use disorder (AUD) diagnosis to conduct disorder (CD); Copeland and colleagues compared and contrasted DSM-IV⁷ and DSM-5⁸ criteria for cannabis use disorder (CUD) diagnosis. While these distinctions make direct comparisons impossible, the papers exemplify important DSM-related changes, especially for substance use disorders. For example, DSM-5 substance use disorders no longer include a criterion related to legal problems. Given racial biases inherent in the legal system, diagnostic determinations using such an item likely disproportionately affected ethnic minorities like AI and FN people. Additionally, while eliminating differences in substance abuse and dependence disorders, DSM-5 raised the bar for a disorder diagnosis from 1 or more symptoms to 2 or more symptoms. These changes, both independently and jointly, will likely affect prevalence estimates of substance disorders for indigenous populations going forward. Such changes humble psychiatric epidemiology researchers and mental health practitioners alike: The changes caution against any comparison of patterns determined under prior DSM versions, entreat a rethinking of assumptions rooted in prior patterns, and warrant careful consideration of elements of diagnostic tools currently in use for the possible (and as yet) undiscovered biases they may contain.

Resilience

Stereotypes of indigenous communities regarding substance use and disorder are particularly strong – and ethnic gloss, particularly evident. Perceptions of rampant substance use in this population – the “drunk Indian” stereotype – are common. As the two papers in this issue document, however, these stereotypes should be questioned. While many indigenous communities do struggle with substance disorder, others do not.⁹ Copeland et al. documented very similar patterns of cannabis use and CUD across White and AI youth and young adults in North Carolina. Greenfield et al. showed rates of AUD and comorbid CD among indigenous youth in the Northern Midwest and central Canada that compare favorably to a similar study among Whites. They found that the majority of youth in these remote, impoverished reservation/reserve communities *showed no symptoms* of either AUD or comorbid CD, demonstrating remarkable resilience.

Developmental Perspectives

These studies point to the importance of questioning the application of models of emergent substance use disorder built in mainstream samples onto indigenous communities. They also highlight the urgent need to add to the thin base of research on the developmental trajectories of substance use disorder in this population. Considerable research in other populations documents the link between early initiation of substance use and risk for subsequent substance use disorder,¹⁰ but Copeland et al. found uneven support for this risk pathway among indigenous youth in their sample. Early use – more common among AI youth – was associated with greater risk of daily cannabis use in adulthood but not of CUD. This finding is particularly puzzling, given the high correspondence between daily use and DSM-V CUD diagnosis. These authors also confirmed findings in other studies of higher risk among AI girls in early adolescence, contradictory to patterns in other populations. These findings highlight the need for greater attention to the complex patterns of use among AI youth and the ways in which emergent use, in these cultural contexts, is related to disorder.

The Greenfield et al. study attended to developmental trajectories of AUD in relation to trajectories of CD, delving deeper into understanding the relationship among symptoms of these disorders, both transient and persistent across time. They found that CD symptoms generally preceded AUD symptoms and that youth with comorbid AUD and CD, not surprisingly, had the highest concentration of risk factors (e.g., poverty, low parental support/warmth). Their findings demonstrate the importance of considering emergent substance disorder in the context of other risk factors and the value of longitudinal data for illuminating patterns that can inform prevention efforts.

Of note, these important findings were based on data collected over a considerable expanse of years (10 to 19), and that included an extraordinary number of assessments (8 to 11 waves of data collection) while maintaining high levels of sample retention (74%–94%). Such achievements in data collection duration and sample integrity are rare. Short data collection timeframes, often the only option under typical funding mechanisms, yield mere snapshots of complex processes and, as such, offer incomplete pictures.

Summary

Taken together, the Greenfield, et al. and Copeland, et al. studies show us that different indigenous populations with distinct patterns of substance use and disorder may also share common stories of remarkable resilience. As new research grapples with dynamic patterns of disorders, which may derive from both changes in DSM definitions and true changes in behavior, these studies demonstrate how a developmental perspective can shine a light on emergent patterns and prevention opportunities.

Acknowledgments

Support for this publication was made possible by grant R01 DA035111 (Whitesell, PI).

References

1. DeRavello L, Everett Jones S, Tulloch S, Taylor M, Doshi S. Substance Use and Sexual Risk Behaviors Among American Indian and Alaska Native High School Students. *J Sch Health*. 2014;84(1):25–32. [PubMed: 24320149]
2. Whitesell NR, Asdigian NL, Kaufman CE, et al. Trajectories of substance use among young American Indian adolescents: Patterns and predictors. *J Youth Adolesc*. 2014;43(3):437–453. [PubMed: 24136376]
3. Greenfield BL, Sittner KJ, Forbes MK, Walls ML, Whitbeck LB. Conduct disorder and alcohol use disorder trajectories, predictors, and outcomes for indigenous youth. *J Am Acad Child Adolesc Psychiatry*. 2017;56:xx–xx.
4. Copeland WE, Hill S, Costello EJ, Shanahan L. Cannabis use and disorder from childhood to adulthood in a longitudinal community sample with American Indians. *J Am Acad Child Adolesc Psychiatry*. 2017;56:xx–xx.
5. Trimble JE Ethnic specification, validation prospects, and the future of drug use research. *Int J Addict*. 1990–1991;25(2A):149–170.
6. Shaffer D, Schwab-Stone M, Fisher P, et al. The Diagnostic Interview Schedule for Children-Revised Version (DISC-R): I. Preparation, Field Testing, Interrater Reliability, and Acceptability. *J Am Acad Child Adolesc Psychiatry*. 1993;32(3):643–650. [PubMed: 8496128]
7. American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders*. 4th ed, text revision. Washington, DC: American Psychiatric Association; 2000.
8. American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders*. 5th ed Washington, DC: American Psychiatric Association; 2013.
9. Cunningham JK, Solomon TA, Muramoto ML. Alcohol use among Native Americans compared to whites: Examining the veracity of the ‘Native American elevated alcohol consumption’ belief. *Drug Alcohol Depend*. 2016;160:65–75. [PubMed: 26868862]
10. Richmond-Rakerd LS, Slutske WS, Lynskey MT, et al. Age at first use and later substance use disorder: Shared genetic and environmental pathways for nicotine, alcohol, and cannabis. *J Abnorm Psychol*. 2016;125(7):946–959. [PubMed: 27537477]