

DRUG AND ALCOHOL POLICIES AT TRIBAL COLLEGES: A DESCRIPTIVE STUDY ASSESSING VARIATIONS IN ALCOHOL AND DRUG POLICY BY SETTING

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Abstract: This paper explores drug and alcohol policies at Tribal Colleges and Universities (TCUs). A research team conducted a needs assessment of Alcohol and Other Drug (AOD) use and policies in 27 TCUs, surveying key informants on perceived AOD prevalence. Student body size did not affect levels of AOD training or treatment. Larger TCU size increased the likelihood of on-campus housing, which increased the prevalence of zero-tolerance policies and greater access to AOD services. Reservation policies, local resources, and cultural practices did not appear to affect TCU AOD policies. Designed properly, these policies can support desirable academic outcomes for TCU students.

INTRODUCTION & BACKGROUND

Substance use among college students has long been a recognized public health priority. Among college students, 44.7% report episodic heavy drinking, an estimated 22% endorse current use of illicit substances, and 36% of students report use of illicit substances within the last year (Hingson, Zha, & Weitzman, 2009; SAMHSA, 2013; Dennhardt & Murphy, 2013). Alcohol and drug use among college students is associated with increased levels of high-risk behaviors and has been associated with risky sexual practices, poorer school performance, increased legal problems, and increased risk of subsequent substance dependence (Simons, Maisto, & Wray, 2010; Dennhardt & Murphy, 2013). An estimated 1,825 students die annually as a direct or indirect result of alcohol use, and greater than half a million experience significant morbidities including physical assault and poor school performance (Hingson et al., 2009; Hingson, Heeran, Winter, & Wechsler, 2005; Thombs et al., 2009). A great need for relevant treatment interventions exists, with studies

indicating that as many as 20% of college students would benefit from substance abuse treatment (Weitzman, Nelson, Seibring, & Wechsler, 2005).

Alcohol remains a major public health concern in American Indian/Alaska Native (AI/AN) communities across the age demographic. Alcohol use can start long before college with studies among AI/AN students (grades 7-12) indicating that while behavioral trends (choice of substance, etc.) parallel those of the general student population, AI/AN students tend to use at a higher rate (Beauvais, Jumper-Thurman, & Burnside, 2008). In 2013, AI/ANs greater than 12 years of age had the highest rate of substance dependence or abuse among population groups and were noted to start drinking alcohol earlier, with eighth graders on or near reservations two to three times as likely to report having gotten drunk or participated in binge drinking (SAMSHA, 2014; Stanley, Harness, Swaim, & Beauvais, 2014). Once arriving at college, it has been noted that AI/AN college students reported greater rates of negative consequences associated with alcohol use when compared to their peers (Skewes & Blume, 2015). While understanding alcohol use in AI/AN populations is complex (for example, AI/ANs report higher rates of total alcohol abstinence [59.9%] compared to whites [43.1%]; Cunningham, Solomon, & Muramoto, 2016), 10.7% of AI/AN deaths between 1999-2009 were related to alcohol, essentially triple that of the white population, with a separate 11-state study showing alcohol-related deaths resulting in higher rates of years of life lost than nearly any other population (Landen, Roeber, Naimi, Nielsen, & Sewell, 2014; Gonzalez et al., 2014). AI/ANs report the highest rates of meeting symptoms of alcohol abuse (5.8%) or dependence (6.4%) in the past year (Delker, Brown, & Hasin, 2016), and in states with higher populations of AI/ANs death rates due to alcohol-related cirrhosis are higher, on average (Hadland et al., 2015). With such a high burden of suffering and loss of life addressing the issues around alcohol use are crucial at every junction and age, including college students.

When considering the Tribal Colleges and Universities (TCUs) education network and the issue of alcohol and drug use among college students, it is important to contextualize the epidemiology and history regarding alcohol and drug use and AI/AN populations, as well as to understand the framework of TCUs. Established in conjunction with Tribal leadership and the needs of the AI/AN populations in mind, TCUs are institutions of higher learning aimed at providing education for AI/AN students from a supportive, culturally representative base (American Indian Higher Education Consortium [AIHEC], 2012). As of 2016, the TCU network within the United States included 37 colleges spread over 16 states, serving 80% of Indian Country. Individual TCU student enrollment ranges from 50 students to nearly 2,000, with variation in rural

versus urban settings as well as on- and off-reservation locations. Institutions span the spectrum to include full-fledged universities and smaller scale community-based colleges. This network reaches approximately 19,000 students directly and an estimated 47,000 AI/AN community members indirectly through community education and support programs (AIHEC, 2012). However, developing a consistent understanding of alcohol use among AI/AN colleges students remains challenging, in part related to the limitations of available data.

Unfortunately, the views, concerns, and context of AI/AN peoples have frequently been absent from the conversations aimed at addressing substance abuse issues among AI/AN people (Beals et al., 2009). The right to enforce alcohol prohibition in Indian Country was only returned to tribal sovereignty in 1953 and varies greatly from Tribal Nation to Tribal Nation (IHS, 1999). Thus, while alcohol and other drug (AOD) use among AI/AN populations has long been a concern of public health, the actual use of substances among AI/AN people varies substantially among Tribal Nations and regions (Whitesell et al., 2012).

The Drug Free School/Communities Act of 1989 obligates secondary institutions to have an AOD prevention policy in place (Faden & Baskin, 2002). The Drug Fee Act added Section 1213 to the Higher Education Act requiring that, as a condition of receiving Department of Education funding or any other form of financial assistance under any Federal program, an institution of higher education must certify that it has adopted and implemented a drug prevention program (U.S. Department of Education, 2006). Colleges and universities across the United States vary in regards to policies surrounding substance use, particularly alcohol. It has been noted in at least one study that small colleges and universities are slightly more likely to have more prohibition policies than larger schools, but also that the specific permissive policies vary (Lenk, Erickson, Nelson, Winters, & Toomey, 2012). In one study, larger schools (enrollment > 2,500) were found to have more robust AOD screening in some cases as compared to smaller schools (enrollment < 2,500), but when the data was analyzed further, this tended to be school specific and related to certain types of encounters (mental health visits, court related, etc.; Lenk, Erickson, Winters, Nelson, & Toomey, 2012). In another study assessing 365 two-year and four-year colleges, only 20% reported any formal assessment of the implementation of their AOD policies (DeJong & Langford, 2002). However, studies assessing trends and issues surrounding AOD use, college policies, and enforcement of policies within the network of TCUs has been largely absent. Furthermore, because the policies regarding alcohol and drug use in Indian Country vary widely

with tribal sovereignty and location, the governing Tribe associated with a given TCU may affect the AOD policies and enforcement context in a way that is unique to this network.

Desiring to address issues of AOD use and treatment as applied to TCUs, the Tribal Colleges and Universities: Drug and Alcohol Problems and Solutions Study (TCU-DAPSS) represents the first TCU-wide study aiming to assess the particular needs of TCUs in regards to drug and alcohol use for TCU students. Using a Community-Based Participatory Research Model and partnering with the American Indian Higher Education Consortium, university researchers and leaders from TCUs nationally built the surveys and framework for TCU-DAPSS as a three-phase project: Phase 1) completion of TCU-wide community needs assessment and acquisition of perceptions data regarding substance use at TCUs from students and faculty; Phase 2) epidemiologic study targeting student behaviors regarding substance use; and Phase 3) development of efficacious and appropriate interventions. The university researchers completed the first phase of data collection for this project in September 2012. This study represents a secondary analysis of the survey data collected.

Using the TCU-DAPSS perceptions data, this study provides a descriptive framework and preliminary understanding of the AOD policy-related data collected in the TCU-DAPSS study. TCU size as a possible predictor of AOD policies and resources for enforcement will be explored. Furthermore, it is hypothesized that the presence of on-campus housing may play a role in policy and enforcement patterns. Thus, how on-site housing connects to number of staff and AOD prevention resources will be examined in addition to questions regarding TCU size and reservation policy. Finally, accounting for the complex history of AI/AN populations and both Federal and Tribal AOD policies the relationship between reservation alcohol policy and nearby TCU AOD policies will be briefly described.

METHODS

This study is a descriptive secondary analysis of cross sectional perceptions survey data drawn from TCUs within the United States, plus one TCU in Canada. Students hail from over 250 Tribal affiliations with 76% of the students enrolled identifying as AI/AN. The TCU network is spread over 16 states (AIHEC, 2016); 27 of the 37 TCUs in the United States and Canada comprised the schools included in this study. Further demographics describing the TCU network from which

this data was drawn are shown in Table 1 (see Appendix to compare several demographic measures for TCU-DAPSS participating schools compared to larger TCU population).

Table 1
Institutional Characteristics of Tribal Colleges and Universities (TCUs) that Participated in the TCU AOD Needs Assessment Study

| | |
|---|-------------|
| Rural location** (N = 25) | <i>n</i> |
| Yes | 22 |
| No | 3 |
| TCU On or Near Reservation (N = 26) | |
| Yes | 20 |
| No | 6 |
| Highest degrees offered (N = 25) | |
| Associates | 13 |
| Bachelors | 10 |
| Masters | 2 |
| Percentage of TCU Students Completing Degree (n = 22) | Mean (SD) |
| Women | 27.0 (23.6) |
| Men | 17.1 (14.4) |
| AI/AN | 23.6 (22.9) |
| Total | 24.6 (22.9) |
| Annual Retention Rates, 2012 (N = 22) | |
| Full time students | 51.3 (20.7) |
| Part time students | 35.2 (27.2) |

**Institutional level data where number of TCUs varies from field to field (n) due to availability of specific question data for the subset of TCUs included in this study.

AI/AN: American Indian/Alaska Native

TCU: Tribal Colleges and Universities

TCU AOD NAS: Tribal Colleges and Universities: Alcohol and Other Drugs Needs Assessment Study

A full IRB application for this study was submitted to the Principal Investigator’s university. The content included details of the following sections: (1) Background and purpose of research; (2) Research procedures involved, including design, sequence and timing of procedures; (3) Human subject information, including target number, recruitment, and incentives; (4) Risks & benefits to participants; (5) Adverse events or effects; (6) Confidentiality of research data; and (7) Consent forms. The same detailed information was submitted to TCU IRBs or other approval bodies. In some cases, the consent form was tailored to include local or TCU contact information in the case of an inquiry or an adverse event.

With regard to approval processes, of the 27 TCUs in the study,

- 10 had their own TCU IRB
- 4 deferred to their tribal IRB
- 2 required approvals from both the TCU IRB and tribal IRB

- 4 had tribal council / TCU board / committee approval
- 3 required the TCU president's or regents' approval
- 2 accepted the Principal Investigator's university IRB as their IRB-of-Record
- 2 accepted a different TCU IRB (Northwest Indian College IRB) as their IRB-of-Record

Three separate survey instrument questionnaires were developed by the university investigative team and a TCU Community Action Board comprised of administrators representing several of the largest TCUs. The questionnaires were developed for administration to 1) students, 2) faculty/staff, and 3) one key informant (usually an administrator) at each participating TCU. The questionnaires asked demographic and descriptive questions as well as explored perceptions of substance use patterns, availability, substances used, and TCU AOD policies and enforcement. As survey content changed and study procedures adjusted with input from TCU liaisons (through frequent, scheduled webinars), the investigative team sought and received IRB modifications or other approvals that reflected those changes from each TCU.

Participants were drawn from a sample of persons knowledgeable about their respective campuses and recruited by a designated TCU advocate from each TCU. A convenience-sampling model was used that helped to achieve high response rates. This study used the data from 27 TCUs that represented complete data collection with participation by the key informant, students, and faculty/staff. Five students, five faculty members, and one key informant from each TCU yielded a total of 340 responses from 27 participating schools, with a response rate of 61.5% for students ($n = 112$), 67.8% for faculty/staff ($n = 228$), and 96.3% for key informants (KI; $n = 26$). Questionnaires were administered to chosen participants in waves from November 2011 to September 2012.

Data analysis of the TCU-DAPSS perceptions data set was performed on both an institutional level ($n = 27$) and an individual participant level, depending upon the variable in question. For some variables, data from the KI questionnaire was collapsed to allow for analysis of variables at the institutional level ($n = 27$). There were several questions of interest for which there is missing key informant data ($n = 25$). Where this is the case, it is noted in the analysis.

TCU school size as an independent variable was based on institution enrollment and used as a continuous variable with enrollment numbers for the colleges of interest based on fall enrollment numbers from 2011, culled from the Integrated Postsecondary Education Data System (IPEDS) data set and showing a range in TCU size spanned from 58 to 2,319 students. When

assessing the size of school versus presence of housing, the TCUs were grouped into categories based on size of total enrollment, in this case categories being < 400 students, 400-700 students, and 700-2,400 students. TCU size was also grouped by small (< 400 students) versus large (> 400 students) categories for some analysis, as noted in Table 4. Student-to-faculty ratio was also used as an independent variable related to school size and was culled from the IPEDS and AIHEC datasets and run against TCU-DAPPS variables of interest. For the purposes of some analyses, TCU AOD policy was analyzed as zero tolerance versus other policy (2-3 strikes, access/treatment, multiple, none), collapsing of all categories of TCU policy other than “zero tolerance” into the “other” category. Reservation policy was broken into categories for analysis according to type of tribal policy reported by the KI regarding the reservation the TCU was either on or nearest to. Policy categories were total prohibition, controlled access, legal consumption, and no policy. These were more simply categorized as total prohibition versus other to more broadly assess the effect of reservation prohibition policies on TCU variables of interest (collapsing all reported reservation policies other than “total prohibition” types into “other” category). For the several missing KI responses for TCUs on/near a reservation, the reservation policy was either categorized as “no policy” or independently verified through tribal documents where possible.

Statistical Analysis

Statistical methods were used to describe data at 1) institution-level or 2) individual student or faculty/staff-level of analysis. At the institution level, independent variables were initially looked at using bivariate relationships between policy, treatment, and funding variables of interest to examine whether a relationship existed between these variables. Due to the limited sample size in these analyses, many of the analysis provided chiefly descriptive statistics. When appropriate, Fisher’s exact test for categorical predictor (e.g., housing) and one-way Analysis of Variance (ANOVA) for continuous predictor (e.g., size of institution) were used to determine if there was evidence to suggest a relationship between the predictor and dependent variable. For instance, we examined TCU AOD policy as a group variable using ANOVA to examine whether means differed by TCU policy group for a number of variables of interest.

Analyses using other statistical techniques were used when examining the relationship between size, housing, and the variables selected from the perceptions data collected at the individual-level including Pearson’s chi-squared test for categorical and ordinal logistic regression with maximum likelihood estimation (where perceptions of AOD enforcement were assumed to

be in the naturally ordered responses: 1) strongly enforced, 2) moderately enforced, or 3) weakly enforced or not enforced at all). Ordinal logistic regression was used to assess evidence for the possible relationship between enforcement perceptions and size of the institution. Additionally, in order to take into account the impact on the size of the standard deviations of potential non-independence of response within a given institution, clustered sandwich estimators were used when running regression analyses. All statistical analyses were performed using Stata 12.1 (StataCorp, 2011).

RESULTS

Size of TCUs

No relationships of significance were found to exist between TCU size and the variables of TCU policy type, AOD designated funds, presence of AOD treatment services, presence of health services, AOD training for staff, AOD information in student orientation, presence of outside AOD treatment services, and perceptions of AOD treatment (Table 2). Presence of housing for students did vary significantly by school size ($p = 0.012$), with more housing available at progressively larger schools (Table 3).

Table 2
Relationship of TCU Size to TCU Policy and AOD-Related Resources / Funding Using Analysis of Variance

| | Fall 2011 Enrollment, Mean (SD)* | <i>p</i> -value (F-test) |
|-------------------------------|-------------------------------------|-----------------------------|
| TCU Zero Tolerance | | 0.17 |
| No | 402 (207) | |
| Yes | 731 (674) | |
| Funding for AOD programs | | 0.83 |
| No | 589 (608) | |
| Yes | 523 (122) | |
| TCU Health Services Counselor | | 0.36 |
| No | 528 (466) | |
| Yes | 751 (718) | |
| Treatment Services | | 0.51 |
| No | 557 (599) | |
| Yes | 734 (385) | |
| Any Trained AOD Staff | | 0.91 |
| No | 571 (586) | |
| Yes | 651 (553) | |
| AOD included in orientation | | 0.22 |
| No | 702 (640) | |
| Yes | 417 (304) | |

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Table 2 Continued
Relationship of TCU Size to TCU Policy and AOD-Related Resources / Funding Using Analysis of Variance

| | Fall 2011 Enrollment, Mean (SD)* | p-value (F-test) |
|--|-------------------------------------|---------------------|
| Staff trained to identify AOD problems | | 0.58 |
| No | 643 (642) | |
| Yes | 507 (306) | |
| IHS facility available | | 0.95 |
| No | 676 (529) | |
| Yes | 667 (563) | |

TCU: Tribal Colleges and Universities, AOD: Alcohol and Drug, IHS: Indian Health Services

*Enrollment numbers culled from IPEDS 2011

Table 3
On-Campus Housing Availability and Association with Size of Institution, as Measured by Enrollment

| | Housing | | p-value* |
|----------------------|-------------|--------------|----------|
| Size of School | No (N = 12) | Yes (N = 13) | 0.009 |
| <400 | 6 (50.0) | 5 (38.5) | |
| 400-700 | 6 (50.0) | 2 (15.4) | |
| 700-2400 | 0 | 6 (46.2) | |
| Mean Enrollment (SD) | 370 (192) | 811 (690) | 0.012 |

*The significance of the statistical association was measured using Fisher’s exact test for the categorized size, and by the F-test from one-way ANOVA to test for the difference in means.

Presence of Student Housing

There appeared to be no significant difference between on-campus housing and AOD designated funds, presence of health services, increased training for staff regarding AOD, inclusion of AOD education in student orientation, and number of staff dedicated to AOD issues (Table 4). However, relationships approaching significance existed between TCUs with on-campus housing and a higher number of zero tolerance policies (ten of the 13 schools with housing had zero tolerance policies as opposed to four of the 13 schools without housing) as well as on-campus housing and greater availability of TCU AOD treatment services (five of the 13 schools with housing reported presence of treatment services, whereas only one of the 13 schools without housing; Table 5). Similarly, the relationship between availability of AOD referral services and presence of housing and larger school size approached significance, suggesting increased likelihood of availability in these settings (Tables 4 and 5).

Table 4
Relationship of School Size Category to TCU Policy and AOD Related Resources / Funding

| | Size category of TCU (number of TCUs) | | <i>p</i> -value* |
|---|---|---|------------------|
| | Small (<400 students) (<i>N</i> = 10) | Large (>400 students) (<i>N</i> = 15) | |
| TCU AOD Zero Tolerance Policy | | | 1.00 |
| No | 4 (40.0) | 5 (35.7) | |
| Yes | 6 (60.0) | 9 (64.3) | |
| Designated TCU funding for AOD programs | | | 0.62 |
| No | 9 (90.0) | 11 (78.6) | |
| Yes | 1 (10.0) | 3 (21.4) | |
| TCU Health Services Counselor | | | 1.00 |
| No | 7 (70.0) | 10 (66.7) | |
| Yes | 3 (30.0) | 5 (33.3) | |
| Treatment Services | | | 0.35 |
| No | 9 (90.0) | 10 (66.7) | |
| Yes | 1 (10.0) | 5 (33.3) | |
| Alcohol Referral Services | | | 0.07 |
| No | 5 (55.6) | 2 (14.3) | |
| Yes | 1 (44.4) | 12 (85.7) | |
| Any Trained AOD Designated Staff | | | 1.00 |
| No | 3 (33.3) | 6 (40.0) | |
| Yes | 6 (66.7) | 9 (60.0) | |
| AOD issues included in orientation | | | 0.09 |
| No | 4 (40.0) | 12 (80.0) | |
| Yes | 6 (60.0) | 3 (20.0) | |

*Fisher's exact 2-sided test of significance

Table 5
Relationship of On-Campus Housing to TCU Policy and AOD Related Resources/ Funding

| | On Campus Housing, <i>n</i> (%) | | <i>p</i> -value* |
|---|---------------------------------|------------------------|------------------|
| | No (<i>N</i> = 13) | Yes (<i>N</i> = 13)** | |
| TCU AOD Zero Tolerance Policy | | | 0.11 |
| No | 7 (58.3) | 3 (23.1) | |
| Yes | 5 (41.7) | 10 (76.9) | |
| Designated TCU funding for AOD programs | | | 0.32 |
| No | 12 (92.3) | 9 (75.0) | |
| Yes | 1 (7.7) | 3 (25.0) | |
| TCU Health Services Counselor | | | 0.20 |
| No | 11 (84.6) | 7 (53.9) | |
| Yes | 2 (15.4) | 6 (46.2) | |
| Treatment Services | | | 0.16 |
| No | 12 (92.3) | 8 (61.5) | |
| Yes | 1 (7.7) | 5 (38.5) | |
| Alcohol Referral Services | | | 0.07 |
| No | 6 (46.2) | 1 (8.3) | |
| Yes | 7 (53.9) | 11 (91.7) | |

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Table 5 Continued
Relationship of On-Campus Housing to TCU Policy and AOD Related Resources/ Funding

| | On Campus Housing, <i>n</i> (%) | | <i>p</i> -value* |
|------------------------------------|---------------------------------|------------------------|------------------|
| | No (<i>N</i> = 13) | Yes (<i>N</i> = 13)** | |
| Any Trained AOD Designated Staff | | | 0.43 |
| No | 6 (50.0) | 4 (30.8) | |
| Yes | 6 (50.0) | 9 (69.2) | |
| AOD issues included in orientation | | | 0.41 |
| No | 10 (76.9) | 7 (53.9) | |
| Yes | 3 (23.1) | 6 (46.2) | |

* Fisher’s exact 2-sided test of significance

***n* = 13 for schools with housing; however, for several of the dependent variables, *n* = 12 due to missing data from the KI survey.

Reservation Policy

There did not appear to be any specific relationships of significance between types of reservation policy (prohibition, controlled access, legal consumption, no policy) and type of TCU AOD policy (zero tolerance, 2-3 strikes, access/referral, multiple; Table 6). Similarly, no relationship appeared to exist between the TCU AOD policy types and location on or off of a reservation.

Questions regarding bootlegging (illegal acquirement of alcohol), though not representing a formal TCU AOD policy, represents a possible policy influenced behavior at TCUs. There were no relationships of significance between student and faculty in regards to perceptions of bootlegging and TCU AOD policy. When perceptions of bootlegging were compared to reservation AOD policies, relationships suggesting less bootlegging where AOD policies are more lenient did appear significant among faculty (*p* = < 0.005). However, low student and faculty response (*n* = 76 and 161, respectively) as well as large response groups indicating “Don’t know” (*n* = 19 and 27, respectively) in regards to the question make this difficult to interpret (Table 7).

Table 6
Relationship of TCU AOD Policy to Alcohol Policy of Hosting or Nearby Reservation

| | Reservation Policy | | <i>p</i> -value* |
|------------------|--|--|------------------|
| | Alcohol Prohibition Number of TCU (%) | Alcohol Permitted Number of TCU (%) | |
| TCU AOD Policy | | | 0.23 |
| Zero Tolerance | 7 (50.0) | 3 (60.0) | |
| 2-3 Strikes | 3 (21.4) | 0 (0.0) | |
| Access/Treatment | 3 (21.4) | 0 (0.0) | |
| Multiple | 1 (7.1) | 1 (20.0) | |
| None | 0 (0.0) | 1 (20.0) | |

* Fisher’s exact 2-sided test of significance

Table 7
Relationship of Hosting/Nearby Reservation to TCU Student/Faculty Perception of Alcohol Bootlegging

| | Reservation Policy | | Chi-square <i>p</i> -value |
|---|-------------------------------------|-----------------------------------|-------------------------------|
| | Alcohol Prohibition <i>n</i> (%) | Alcohol Permitted <i>n</i> (%) | |
| Student Perceptions of presence of bootlegging (<i>N</i> = 76) | | | 0.18 |
| No | 10 (55.6) | 39 (67.2) | |
| Yes | 4 (22.2) | 4 (6.9) | |
| Don't know | 4 (22.2) | 15 (25.9) | |
| Faculty/Staff Perceptions of presence of bootlegging (<i>N</i> = 161) | | | <0.005 |
| No | 21 (51.2) | 92 (76.7) | |
| Yes | 14 (34.2) | 7 (5.8) | |
| Don't know | 6 (14.6) | 21 (17.5) | |

TCU: Tribal Colleges and Universities, AOD: Alcohol and Drug

Enforcement of Policy

Student perceptions of enforcement did not appear to vary with TCU enrollment numbers. However, at smaller TCUs, faculty perceived that TCU AOD policy was more strongly enforced. An increase of 100 students in size of institution resulted in odds being 1.06 (95% CI = 1.00, 1.10; $p = 0.03$) times greater that faculty perceptions of enforcement fell into a lower enforcement category (data not shown in table). Interestingly, this did not seem to correlate with a change in student-to-faculty ratio. However, this is complicated by the overall small spread of school sizes and significant standard deviations for each size category.

There appeared to be no relationship between presence of AOD-designated staff and perceptions of strength of TCU AOD policy enforcement by faculty. Furthermore, no significant relationships were noted between perceptions of enforcement strength and student-to-faculty ratio.

DISCUSSION

No relationship appeared to exist between size of TCUs and type of AOD policy in place, perhaps due to the diverse geographic locations as well as the overall size spread of TCU enrollment. Whereas it was predicted that smaller schools would be more likely to have zero-tolerance and stricter policies as a function of enforcement capacity, the data from other studies studying this trend among colleges do not necessarily apply to TCUs as the overall enrollment tends to be lower in addition to low numbers of TCUs total in the sample size. TCU enrollments lie in the 50-2,500 student range rather than the 500-25,000+ student enrollment variations seen in

mainstream colleges and universities; thus, basically all TCUs would fall within the “small school” categories of other studies (Institution of Education Sciences, 2014).

Despite aforementioned limitations in interpreting TCU size as an independent variable, note that TCU size did not appear to clearly predict other potentially resource-bound variables, such as AOD-designated funds, presence of AOD treatment services, etc. More than illustrate differences in TCU size, this may suggest that access to necessary AOD intervention funding is a problem experienced by most TCUs, with more than 50% of nearly every AOD funding/staffing category analyzed indicating low resources or absence (Table 4).

This study suggested a significant relationship between size of TCUs and presence of on-campus housing with increasing availability as TCU size increased. This makes intuitive sense considering the need for housing to accommodate larger numbers of students, but introduces potential layers of policy in regards to housing rules, etc. that were not addressed in this study.

It was noted that TCUs with on-campus housing had a relationship approaching significance indicating that on-campus housing may be related to no-tolerance AOD policies and greater access to AOD treatment services. Again, this could be connected to the way in which resources are allotted at TCUs where on-campus housing is a priority and where more oversight of students at schools in which students spend 24-hours/day on campus is required (Table 5), though what was considered “treatment services” at each TCU is unclear given that formal treatment on any TCU is rare. Also, interestingly, in non-TCU studies, on-campus housing is actually associated with alcohol use, but often in the context of fraternities, sororities, and athletic teams (Tachine, 2015).

In one study of 52 mainstream colleges, the presence of substance-free residences (i.e., a ban on alcohol and tobacco) appeared to predict lower heavy alcohol use among those student residents and fewer secondhand negative effects when compared to students living in unrestricted housing (Walters, Simoni, & Evans-Campbell, 2002). However, restricted housing did not correlate with less overall alcohol involvement (Walters et al., 2002). How this applies to TCU housing situations is not yet clear.

No direct relationship appeared to exist between the AOD policies of the nearest reservation and that of the on-reservation or near reservation TCUs. Neither students nor faculty perceived a change in strength of policy enforcement based on the location of the TCU. Relationships between the lower rates of illegal acquirement of alcohol and more lenient reservation policy were suggested by the data, but only among faculty. This finding again would

make intuitive sense in regards to access to alcohol, and to illegal procurement where it is unavailable legally, but may indicate interesting differences in faculty versus student perceptions and norms. Again, this data is somewhat difficult to interpret as the overall number of TCUs on reservations represents a small sample. Outside studies have suggested that local and state laws regarding AOD do affect college student use within that jurisdiction, for example, less binge drinking at colleges in states with stricter alcohol policy (Nelson, Naimi, Brewer, & Wechsler, 2005). Furthermore, reservation policy is a difficult variable to assess in this context as it varies from Tribal Nation to Tribal Nation. It is conceivable that variations in enforcement of even similar AOD policies may vary significantly by local resources, by cultural practices, and by geography (May, 1992; O'Connell, Novins, Beals, Spicer, & AI-SUPERPPF Team, 2005; Wood & Gruenewald, 2006).

Faculty appeared to feel that AOD policy enforcement was stronger and better applied at smaller schools, becoming progressively less confident in enforcement of policy as the TCU size increased. This was not true for student perceptions and did not vary with student-to-faculty ratio. This finding may represent a difference in faculty versus student perceptions of drinking norms, perhaps faculty at smaller schools feel better connected to students and more aware of the social context surrounding them. However, no relationship was noted between change-in-enforcement perceptions and student-to-faculty ratio, a postulated measure of faculty-to-student contact. However, it is still possible that unique characteristics of smaller TCUs endow faculty with more perceived insight into student AOD use patterns.

Interpreting student perceptions of norms regarding AOD issues is notoriously opaque; however, Bourgeois and Bowen (2001) note that college students frequently overestimate the drinking patterns of their peers and even tend to perpetuate perceived drinking norms that have no valid data supporting them. Having access to accurate information regarding college student drinking norms has been shown to affect drinking behavior, with misperceptions leading to increased drinking and accurate portrayals of norms predicting reduction in excessive drinking (Bourgeois & Bowen, 2001).

No relationship was found between TCU policy type and amount of AOD-designated funds and faculty. In many ways, this is consistent with the national pattern in which even where trained AOD staff are present, other staff have decidedly limited training in regards to recognition of AOD issues among their students (Bourgeois & Bowen, 2001). However, this lack of resources dedicated to staff who can identify and treat AOD problems with students is concerning as studies

nationwide indicate that only 3.6% of students needing help seek it and that untreated AOD-related issues can carry serious negative outcomes (Caldeira et al., 2009).

TCUs have fielded criticism in terms of graduation/retention rates and their connection to federal funding, with some calling into question the success of the TCU strategy for making education more accessible to AI/AN students (Butrymowicz, 2014). However, TCUs offer educational opportunities within a cultural and, frequently, a regional context more familiar to many AI/AN students, one supportive of AI/AN heritage and culture and in a unique position to leverage community strengths. While only 12% of AI/AN young adults are noted to have completed a bachelor's degree (compared to 37% of white young adults), overall employment for this sector equaled that of their white peers (84% to 87%; Ross et al., 2012). Thus, access to higher education continues to be seen as an important social determinant for many AI/AN students, with renewed calls for root cause analysis of low retention rates and challenges for alternatives sounding out from TCU proponents (Tachine, 2015).

It has been suggested that indigenous models of AOD interventions focus less on individuality and more on the community aspects of AOD use, addressing underlying issues such as historical trauma and ongoing oppression (Walters et al., 2002). Thus, using a community-based participatory research (CBPR) approach can allow for harnessing of inherent community strengths. No TCU exists in a vacuum; thus, addressing the community aspect is a huge issue—making community-based approaches seem highly appropriate for TCUs (Radin et al., 2015). AOD prevention that involves more than just designated AOD staff is supported in the literature with studies in regards to AOD college policy suggesting that enforcement is most efficient when consistently practiced by many faculty (Tachine, 2015). Furthermore, TCUs may be a place where treatment can occur not only for students, but for their communities at large as this is a notoriously underfunded and underserved area (Dennis & Momper, 2012; Gone & Trimble, 2012).

One successful screening/intervention approach that has been developed at the University of Washington and is being adapted for other settings is the Brief Alcohol Screening and Intervention for College Students (BASICS; Dimeff, Baer, Kivlahan, & Marlatt, 1999). BASICS uses a harm reduction approach that centers around understanding the social norms related to AOD use among college students. This intervention shows significant promise for use in a CBPR model at TCUs and is in fact being adapted by the researcher for that purpose as part of the larger TCU study discussed in the introduction.

Limitations

The TCU-DAPSS study is the first of its kind to study this educational network and started with gathering data from faculty and students about their perceptions of AOD issues on their TCU campuses. This sub-study looked specifically at how size of TCU, presence of on-campus housing, and AOD policies of the reservation that the TCU is on or nearest might affect TCU AOD policies and perceptions of AOD policy enforcement. Some of the interesting and unique characteristics of TCUs also made interpretation of the TCU-DAPSS data difficult. The overall limited spread in school size and number of schools made TCU size a difficult variable to draw strong conclusions about, while the rich and varied nature of different Tribal Nations and reservations make neat conclusions about reservation policy difficult. Also, because of the unique nature of TCUs, the data from TCU students may be less generalizable when compared to mainstream college students and campuses.

CONCLUSION

This limited study serves largely to promote thought and further study within the TCU network. Tribal Colleges and Universities represent a unique and important educational network within the United States—one rich with cultural and historical meaning as well as community influence. TCUs also represent an opportunity for many communities to promote learning of indigenous culture and values in a setting where educational opportunities have been either scarce and/or oppressive. AOD issues plague AI/AN peoples across North America, notably among AI/AN young people and college students. It is well established that AOD use can have negative consequences in terms of health and social damage as well as harder to measure losses such as future opportunity or community connections. Thus, addressing this issue as a factor in student success is crucial in improving and supporting AI/AN students and communities. However, noting that TCUs represent a unique educational system with traditionally smaller numbers of students and historical, regional, and cultural factors differing from other institutions, this study invites further thought on how to answer questions around AOD use among students within this network.

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APPENDIX

Institutional Characteristics of Tribal Colleges and Universities (TCU) that participated in Integrated Postsecondary Education Data System (IPEDs) Survey, 2011.

TCU Institutional Characteristics System-Wide (N=31)

| | Mean (SD) |
|---|-------------|
| Percentage of TCU Students Completing Degree (2008 Cohort) | |
| Women | 25.1 (22.0) |
| Men | 17.3 (14.6) |
| AI/AN | 22.2 (22.2) |
| Total | 23.1 (23.1) |
| Annual Retention rates, 2010 | |
| Full time students | 49.4 (20.1) |
| Part time students | 35.4 (26.0) |

AI/AN: American Indian/Alaska Native

TCU: Tribal Colleges and Universities