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TEXAS SURVEY OF SUBSTANCE USE  
AMONG  
COLLEGE STUDENTS

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2021

**METHODS REPORT**

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# 1 Introduction

College age students are a particularly important demographic when it comes to understanding substance use and abuse statewide. College attendees live in an environment where many substances are easily available and where some substances are ubiquitous components of the social environment. Moreover, this population is often living away from home for the first time, putting them beyond the reach of their parents during an important developmental phase.

The Public Policy Research Institute (PPRI), acting at the behest of the Health and Human Services Commission (HHSC), conducted this survey in 2021 to assess the state of drug and alcohol use among college age students in Texas. Similar surveys had previously been conducted in 2019, 2017, 2015, 2013, 2005 and 1997. Like those surveys, the study population has been limited to undergraduate students between the ages of 18 and 26 who are enrolled in more than 4 hours of classes.

Surveying college students presents several unique problems. Traditional random-digit dialing telephone methods may not be successful, since many students are exclusive cell phone users. Students who do have land lines may frequently change phone numbers as they move between dorms, or from on-campus housing to off-campus housing. Even if these problems could be overcome, students have unusual schedules, in that they may have classes or study commitments throughout the day, making it difficult to reach them at a specified time.

For all these reasons, this survey embraces online administration. In late 2020, we sampled universities and community college districts in the state and requested emails from each of them. Just over 890,000 invitations to participate in the survey were sent out over the course of about 1 month.

## 2 Survey Instrument

The survey instrument mirrors the 2019 survey instrument, which was in turn based on surveys conducted in 1997, by the Texas Commission on Alcohol and Drug Abuse and in 2005, 2013 and 2015 by the Department of Health and Human Services. The instrument has undergone changes with each iteration, but in contrast to the 1997 and 2005 surveys, which are substantially different from one another, the 2005, 2013, 2015, 2017, and 2019 surveys are fairly similar, with only minor modifications.

First, respondents answer a number of screening questions. To be eligible, a student had

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to be college-aged, which we defined as between the ages of 18 and 26. Each student also had to be an undergraduate registered in more than 4 hours of classes. Respondents who did not meet these eligibility requirements did take the remainder of the survey but are not included in the analyses (except for those under age 18 who were not permitted to continue).

The remainder of the survey is divided into 9 sections dealing with various thematic areas related to the target population. These sections are: ethnicity/demographics; student life (living situation, major, etc.); alcohol use; use of drugs other than alcohol; prescription drug use; other personal behaviors (drunk driving and sexual behaviors); mental health; campus policies; and background info, which covers the respondent's marital status, religion, and details about the respondent's parents.

Although there were about 200 questions on the survey, no single respondent answered all these questions because some questions would be skipped depending on previous answers. Respondents who did not report drinking, for example, were not asked about their drinking habits. This approach represented a significant improvement over the 2013 survey, which had 306 questions and therefore took longer for respondents to complete.

### **3 Survey Development and Administration**

Prior to administering the survey, it was tested extensively by PPRI employees and survey lab members. Depending on a respondent's questions, certain parts of the survey could be skipped. For example, respondents who did not report ever having sex were not asked if they used protection the last time they had intercourse. Rigorous pre-testing ensured that this survey logic was functioning correctly. Pre-testing was also necessary to ensure appropriate question wording. Collectively, PPRI research staff members have several decades of experience writing and administering surveys. Over the course of pre-testing by these employees, question wordings were subtly tweaked to adhere to good survey practice.

Additionally, the survey was tested for length. An online survey that takes half-an-hour or more to complete could suffer from very poor response rates and unreliable answers. Although the time necessary to complete the survey will vary considerably from respondent to respondent, PPRI staff consider the final survey instrument to be of an appropriate length.

The survey sample consists of 4 strata: small 4-year colleges, large 4-year colleges, small 2-year colleges and large 2-year colleges in Texas. Large 4-year and 2-year colleges in the sample are those with more than 10,000 students enrolled. Where applicable, community college districts were sampled rather than individual campuses. Schools that did not include

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emails as “directory information” under the Family Educational Rights and Privacy Act of 1974 (FERPA) were excluded from the sample due to their inability to provide the research team with emails. Large universities and community college districts were sampled with a probability of 1 (23 and 15 respectively). All students from directory listings provided by each school were sampled to receive invitations to the survey. We are unable to ascertain the number of emails that were caught by institutions’ filters or went to accounts that students rarely use; however, we do exclude students from campuses that had extremely low response rates—indicating they most likely were flagged as spam. The research team did, though, use advice from Microsoft (a major third party e-mail vendor) to ensure that our e-mails were formatted in a manner that would minimize the likelihood of triggering a spam flag.

Students were emailed in groups over the course of about 2 weeks. Students also periodically received emails reminding them about the survey. Each student received up to 5 reminders if they had not opted out or completed the survey. The reminder emails were sent in 6 day intervals in order to ensure that students did not always get reminders on the same day of the week. Individuals who reported the use of the fictitious drug, somatajin, were eliminated as exaggerators. Determining an actual response rate is impractical because we do not know how many emails were flagged as spam or went to addresses the student rarely checks. Examining differences in rates of completion by school suggests that some spam filters are more robust than others.

Based on a 2017 field experiment to determine the effects of incentives, a random drawing for a \$100 Amazon gift card was used as an incentive to those who completed the survey.

## 4 Weighting

The weights for the sample are composed of 2 components: a weight based on the sampling design and sizes of the strata population, strata sample sizes, and the gender-specific population of the sampled campus.

The sample design involved sampling schools from within each stratum and then sampling students from each of the sampled schools. The design weight is shown below.

$$Weight_{ijs} = (NSchool_i/nSchool_i)(NEnroll_{ijs}/nSample_{ijs})$$

Where:

- $i$ =strata

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- $j$ =school
  - $NSchool_i$  =Number of schools in the  $i^{th}$  strata
  - $nSchool_i$  =Number of schools participating from the  $i^{th}$  strata
  - $NEnroll_{ijs}$  =Total number of students of the  $s^{th}$  gender enrolled in the  $j^{th}$  school meeting qualifications
  - $nSample_{ijs}$  =Number of students of the  $s^{th}$  gender participating from the  $j^{th}$  school

When calculating the number of students at a campus, we utilized figures provided by the Texas Higher Education Coordinating Board (THECB) for the Spring 2019 semester, or for private schools, the institution itself. The private schools reported counts in categories, for instance, number of students of age 18-26 and the number with 5+ credit hours. The variable “weight” is the final weight as calculated by the statistical software package Stata. It incorporates all of the above elements. In addition, extreme outliers are trimmed by truncated weights to the 95th percentile within each strata. Following this trimming a final post-hoc adjustment is made to ensure the weighted gender distribution matched the state gender distribution. This was accomplished by multiplying the weight by the quotient found by dividing the actual gender distribution by the weighted gender distribution for each sex.

The 2021 study’s weight calculation is same as the weight used in 2019 with the addition of the post-hoc gender adjustment.

## 5 Conclusion

The 2021 survey continues to improve upon the design of the previous college drug and alcohol surveys administered by PPRI. The online survey administration made it possible to survey a high number of respondents while also keeping the cost per respondent reasonably low. This method of survey administration is uniquely suited to the college-age student population, because many of these students cannot be contacted via the traditional phone methods.

The survey process has not been without challenges. Gathering student emails from sampled schools is a time consuming, rigorous, and complicated process which requires high levels of staff time and effort. It has been especially difficult to convince private schools to participate. Although this version of the survey was considerably shorter than the 2013 version, we continue to believe that participation in the survey and reliability of answers would be significantly improved with a shorter survey. Refining the survey instrument and paring away unnecessary questions needs to be a priority for future surveys. Further, it is unclear how the COVID-19 pandemic affected the survey.