

# Methodology Report for the 2015 Texas Survey of Substance Use Among College Students

August 31, 2015

## Contents

<b>1</b>	<b>Introduction . . . . .</b>	<b>2</b>
<b>2</b>	<b>Survey Instrument . . . . .</b>	<b>3</b>
<b>3</b>	<b>Survey Development and Administration . . . . .</b>	<b>5</b>
<b>4</b>	<b>Weighting . . . . .</b>	<b>6</b>
<b>5</b>	<b>Conclusion . . . . .</b>	<b>7</b>

# 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 Department of State Health Services (DSHS), conducted this survey in 2015 to assess the state of drug and alcohol use amongst college age students in Texas. Similar surveys had previously been conducted in 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 four 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 2014, we sampled 79 universities and community college districts in the state and requested emails from each of them. A total of 49 colleges provided addresses. Nearly 831,000 invitations to participate in the survey were sent out over the course of about five weeks and received 32,311 responses. After removing incomplete surveys and those who did not meet the study criteria (too young, too old, graduate student, and/or <4 hours of courses)

Table 1: Demographics of the sample, with raw  $n$  and weighted percentage.

<b>Gender</b>	$n$	Weighted	<b>Parent's Income</b>	$n$	Weighted
Male	7,232	44.18%	<20k	1,896	13.24%
Female	12,785	55.46%	20k-60k	4,240	28.16%
Not Listed	74	0.36%	60k-100k	3,311	20.80%
			>100k	3,596	19.27%
			Don't know	2,934	18.52%
<b>Ethnicity</b>			<b>Class Standing</b>		
Hispanic/Latino	7,461	37.68%	Freshman	5,803	28.11%
Not Hispanic/Latino	12,429	62.32%	Sophomore	5,507	27.70%
			Junior	4,417	21.63%
<b>Race</b>			Senior	4,185	21.56%
White	15,352	75.86%	Other	179	1.00%
African Am./Black	1,138	10.80%	<b>Grade Point Average</b>		
American Indian	303	1.75%	A	6,495	42.37%
Asian	1,192	6.34%	B	6,841	41.51%
Pacific Islander	94	0.57%	C	1,898	10.73%
Other	820	4.68%	D or F	159	0.81%
			Don't know	742	4.58%
<b>Age</b>					
18-20	11,146	52.54%			
21-23	6,835	34.39%			
24-26	2,129	13.07%			

20,152 usable responses were present. The survey included a fictitious drug, rosafedrin. Students who reported using this drug were also excluded, leaving a final total of 20,110 responses used in the final analyses. Table 1 provides descriptive statistics of the final survey sample.

The rest of this report details preparation and administration of the survey. The next section discusses development of the survey instrument and the changes that were made between 2013 and 2015. The third section details the sampling procedure used and discusses delivery of the survey and the response we received. Finally, the weighting scheme is discussed.

## 2 Survey Instrument

The survey instrument was closely modeled after the 2013 survey instrument, which was in turn based on surveys conducted in 1997 and 2005 by the Texas Commission on Alcohol and Drug Abuse. 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, and 2015 surveys are fairly similar, with only minor modifications.

First, respondents answer a number of screening questions. To be eligible, a student had 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 four hours of classes. Respondents who did not meet these eligibility requirements did not take the remainder of the survey and were instead directed to a page explaining the eligibility requirements and thanked them for their participation.

The remainder of the survey is divided into nine 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 247 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.

Most of the changes made between 2013 and 2015 were minor, but a few questions were added and others were deleted. A detailed list of differences between the 2013 instrument and the 2015 instrument, with specific wording changes noted, is provided in Appendix A. These changes were made based on research of similar instruments in the nation and based on consultations with DSHS research and evaluation staff members.

### 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 having 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 four strata: small four-year colleges, large four-year colleges, small two-year colleges and large two-year colleges in Texas. Large four-year and two-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. Large universities and community college districts were sampled with a probability of one (21 and 17 respectively). We sampled 20 of 55 small universities and 17 of 38 small 2-year colleges/districts. Sampled schools were contacted and asked to provide student emails. Tables 2 through 5 outline the schools/districts sampled and their participation in the survey by providing emails. The final sample (those participating) consists of 49 schools/districts: 16 large four-year universities, 8 small four-year universities, 12 large 2-year colleges/districts and 13 small 2-year colleges/districts. All students from directory listings provided by each school were sampled to receive invitations to the survey.

In one case, the school itself sent email invitations to its student body themselves.

Students were emailed in groups over the course of about ten days. Students also periodically received emails reminding them about the survey. Each student received up to four reminders if they had not opted out or completed the survey. The reminder emails were sent in 4 to 6 day intervals in order to ensure that students did not always get reminders on the same day of the week. After accounting for bad email addresses and bounced emails, about 816,000 invitations were sent out. 32,311 individuals provided information, for a completion rate of about 4%. After removing ineligible responses, 20,152 of these were available for analysis, representing about 2.5% of all survey invitations sent out. In addition, 42 individuals who reported the use of the fictitious drug, rosafedrin, 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. The research team did, however, work with Microsoft (a major third-party email vendor for schools) to design the emails to best ensure delivery.

## 4 Weighting

The weights for the sample are composed of two 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
- $j$ =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
- $nSample_{ijs}$  =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), or for private schools, the institution itself. The data provided by THECB are provided in categories, for instance, number of students of age 25-29 or credit hours of 6-8. Unfortunately, these categories do not perfectly match our needs. In order to estimate the number of students eligible, the research team calculated the percentage of students who took 6 or more hours and those between the ages of 18-24. We then applied the product of these values to the total number of students from each gender from each campus. The variable "weight" is the final weight as calculated by the statistical software package Stata. It incorporates all of the above elements.

The 2015 study's weight is very similar to the weight used in 2013. However, the 2013 study did not account for the full-time status or age characteristics of the student bodies' of each institution. In order to utilize "fair" comparisons, the 2013 survey was reweighted to match the weighting protocol used in this survey. For this reason estimates for 2013 reported in this survey may differ slightly from the 2013 report.

## 5 Conclusion

The 2015 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 substantially increase the 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.

It is somewhat unfortunate that each iteration of the survey has resulted in changes to the survey instrument, the method of survey administration, and the weighting scheme used. These changes limit the analytical ability to make comparisons between the current survey and previous surveys. The changes from 2005, 2013 to 2015, however, were considerably more modest than those made from 1997 to 2005. Now that administration of the survey by telephone has been eliminated and the school sampling procedure has been rigorously tested, we believe that the future surveys can be conducted in a way that is largely identical to the 2015 methodology. These methodological developments will make comparisons between the years simpler and provide policy-makers with better and more reliable data. The survey instrument has also matured, and should require minimal adjustment in any future iterations of the survey.

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.



Table 2: List of sampled schools and participating schools, and number of surveys received from each school that participated, large 4-year universities.

Strata: Large, 4-year Universities	
Sampled Schools	Participated
Lamar University	Yes
Sam Houston University	Yes
Stephen F. Austin State University	Yes
Texas A&M University	Yes
Texas A&M University - Commerce	Yes
Texas A&M University - Corpus Christi	Yes
Texas Women's University	Yes
The University of Texas at Arlington	Yes
The University of Texas at Austin	Yes
The University of Texas at Dallas	Yes
The University of Texas at El Paso	Yes
The University of Texas at San Antonio	Yes
The University of Texas, Pan American	Yes
University of Houston	Yes
University of Houston, Downtown	Yes
University of North Texas	Yes
Baylor University	No
Southern Methodist University	No
Tarleton State University	No
Texas State University	No
Texas Tech University	No

Table 3: List of sampled schools and participating schools, and number of surveys received from each school that participated, small 4-year universities.

Strata: Small, 4-year Universities

Sampled Schools	Participated
Prairie View A&M University	Yes
Southwestern Adventist University University	Yes
Sul Ross State University	Yes
Texas A&M International University	Yes
Texas A&M University - San Antonio	Yes
The University of Texas of the Permian Basin	Yes
University of Houston - Clear Lake	Yes
West Texas A&M University	Yes
Abilene Christian University	No
College of St. Thomas Moore	No
Concordia University	No
Dallas Baptist University	No
Jarvis Christian College	No
LeTourneau University	No
McMurry University	No
Rice University	No
St. Mary's University of San Antonio	No
University of St. Thomas	No
University of Incarnate Word of San Antonio	No
Wiley College	No

Table 4: List of sampled schools and participating schools, and number of surveys received from each school that participated, Large 2-year colleges.

Strata: Large 2-year Colleges	
Sampled Schools	Participated
Alamo Community College District	Yes
Amarillo College	Yes
Austin Community College	Yes
Blinn College	Yes
Central Texas College District	Yes
Dallas County Community College District	Yes
Del Mar College	Yes
El Paso Community College District	Yes
Lone Star College System District	Yes
North Central Texas Community College District	Yes
San Jacinto College	Yes
Texas State Technical Colleges	Yes
Collin County Community College District	No
Houston Community College System	No
Navarro College	No
South Texas College	No
Tarrant County College District	No

Table 5: List of sampled schools and participating schools, and number of surveys received from each school that participated, Small 2-year colleges.

Strata: Small 2-year Colleges	
Sampled Schools	Participated
Cisco College	Yes
Frank Phillips College	Yes
Grayson County College	Yes
Hill College	Yes
Howard County Junior College District	Yes
Lamar Institute of Technology	Yes
Lamar State College-Orange	Yes
Lee College	Yes
Midland College	Yes
Odessa College	Yes
Texarkana College	Yes
Trinity Valley Community College	Yes
Weatherford College	Yes
Jacksonville College	No
Laredo Community College	No
Paris Junior College	No
Ranger College	No

## A. Survey Instrument Changes Between 2013 and 2015

The following lists every change made to the 2013 survey instrument, organized by section.

### A.1 Ethnicity/Demographics

sex: Are you male or female?

- Added “Not Listed”

### A.2 Student Life Section

All questions moved to later in the survey

sl1: How old were you when you first began college?

- Deleted

sl3: “Do you currently live alone or with other people?”

- Changed option “With others” to separate options “With family members” and “With others (non-family members)”

sl7: About how many close friends do you have at school?

- Deleted

sl8\_sl8a: During a typical semester, how often do you...Attend religious services/classes?

- Added “outside of school”

sl8\_sl8e: During a typical semester, how often do you... Attend academic lectures or presentations on campus?

- Added “outside of class”

sl8\_sl8f: During a typical semester, how often do you... Participate in community service projects?

- Added “(school or community groups)”

sl8\_slak: During a typical semester, how often do you...Participate in a social tailgating event or pre-game party?

- Added Question

### A.3 Alcohol Use

al1: Think back over the last 30 days. How many times have you had five or more drinks in a row?

- Added “within a two-hour period”

al2: Think back over the last 30 days. How many times have you had four or more drinks in a row?

- Added “within a two-hour period”

al5: Now consider ready-mixed drinks like wine coolers, hard lemonade, or hard sodas, etc.: When did you last have a can or bottle of a mixed drink (again more than a few sips)?

- Added “hard cider”

al9: On those occasions what did you typically drink?

- Added “hard cider” to the ready-made drinks description

al12: In the past 30 days, about how many drinks did you have when you attended...

- Added option F, “a social tailgating event or pre-game party”

al14: A lot of people believe that there are many places around campuses that provide alcohol without asking students for proper ID. Can you usually get alcohol without being carded at the following places?

- Deleted “A lot of people believe that there are many places around campuses that provide alcohol without asking students for proper ID.”

al15: “Since the beginning of the academic year, how often has your drinking contributed to you...

- Deleted option D “Forgetting where you were or what you did?”
- Deleted option E “Arguing with friends or roommates?”
- Deleted option M “Doing something you regretted later? “

al16: “Here is a list of potential reasons why people might limit or stop drinking. To what extent did the following factor into your decision?”

- Deleted option I “There is a history of alcohol problems in my family”
- Deleted option K “My friends don't drink”

al18: “How old were you the first time you drank alcohol (not counting childhood sips you may have had from an adult’s glass or wine you may have drunk as part of a religious ceremony)?”

- Deleted

al19: “Now thinking back to your last year in high school, how often did you normally drink alcohol (beer, wine, liquor)?”

- Deleted option “Less than once a year”

al20: “During your last year in high school, about how many drinks did you usually have when you drank alcohol?”

“Deleted”

al21: “During your last year in high school, how often did you have five or more drinks in a row?”

- Females now see “four or more drinks”

al23: “The following is a list of potential reasons why people don’t drink at all. To what extent have the following factored into your decision to not drink?”

- Deleted

al24: Thinking about the time you were growing up. How would you describe your father’s use of alcohol during most of the time you were growing up (if you did not live with your father, think about the person who served as your father in raising you)?

- Deleted

al25: Think about your mother’s use of alcohol during most of the time you were growing up (or that of the person who served as your mother in raising you). How would you describe her drinking?

- Deleted

## A.4 Use of Drugs Other Than Alcohol

t1, t2 & t3: “When was the last time, if ever, you (used smokeless tobacco) (smoked cigarettes) (smoked cigars)?”

- Converted to a question matrix
- Added t5, “used vaporizer or e-cigarettes?”
- Added t6, “smoked tobacco in a hookah or shisha?”

t4: “How old were you the first time you used tobacco (smokeless tobacco, cigarettes, or cigars)”

- Deleted

d1: “When was the last time, if ever, you used any of the following drugs? Only include those drugs you have purposely used WITHOUT a prescription from a doctor or contrary to the prescription’s orders?”

- Option C: removed “Ritalin, Adderall”
- Option D: added “Xanax. Sleeping pills”
- Option E: Removed “PCP...2C-B”; added “Salvia, dimethyltryptamine (DMT)”
- Option G: Added “Vicodin”
- Option J: Added “Dextromethorphan”
- Option K: Removed “GHB (e.g., gamma hydroxybutyrate, Fanatsy),” replaced with “Synthetic Cathinones (e.g., Bath Salts, Cloud 9, Purple Wave, Zoom)”
- Option L: Added “Molly, 2CB, Ketamine”
- Option N: Added fake drug “Rosafedrin”
- Option Other: Removed

d2: “How old were you the first time you used:”

- Deleted

d4a: “On those occasions what did you typically use?”

- Converted to a question matrix
- Option C: removed “Ritalin, Adderall”
- Option D: added “Xanax. Sleeping pills”
- Option E: Removed “PCP...2C-B”; added “Salvia, dimethyltryptamine (DMT)”
- Option G: Added “Vicodin”
- Option J: Added “Dextromethorphan”
- Option K: Removed “GHB (e.g., gamma hydroxybutyrate, Fanatsy),”
- Option L: Added “Molly, 2CB, Ketamine”
- Option O: New “Synthetic Cathinones (e.g., Bath Salts, Cloud 9, Purple Wave, Zoom)”
- Option Other: Removed

d5: “Since the beginning of the academic year, how often has your drug use”

- Deleted option H: ”Getting in trouble with campus or local police”



- Deleted option I: “Getting in trouble with a professor, residence hall supervisor, or college administrator”
- Deleted option K: “Damaging property”
- Deleted option L: “Needing medical treatment for an overdose or adverse reaction”

d7: “Have you ever obtained a drug from an online pharmacy, store, or seller for nonmedical purposes?”

- Deleted

d8: “Have you ever wanted to cut down or stop your use of drugs but couldn't?”

- Deleted

d9: “Have you ever thought you had a drug problem?”

- Deleted

d10: “Have you ever sought help or been to counseling because you or someone else thought that you had a problem with either alcohol or drugs?”

- Deleted

d11: Since starting college, have you received counseling or treatment for an alcohol or drug problem or attended a meeting Alcoholics Anonymous or Narcotics Anonymous or another kind of group for alcohol or drug problems?

- Deleted

d12: “Some people believe that drug use is dangerous. How dangerous do you think it is for a person your age to use?”

- Option C: removed “Ritalin, Adderall”
- Option D: added “Xanax. Sleeping pills”
- Option E: Removed “PCP...2C-B”; added “Salvia, dimethyltryptamine (DMT)”
- Option G: Added “Vicodin”
- Option J: Added “Dextromethorphan”
- Option K: Removed “GHB (e.g., gamma hydroxybutyrate, Fanatsy),”
- Option L: Added “Molly, 2CB, Ketamine”
- Option N; New fake drug “Rosafedrin”
- Option O: New “Synthetic Cathinones (e.g., Bath Salts, Cloud 9, Purple Wave, Zoom)”

## A.5 Use of Prescription Drugs

pr1: Changed “When was the last time, if ever, you used any of the following prescription drugs to get high?” to “When was the last time, if ever, you used any of the following prescription drugs not prescribed to you or only for the experience or feeling it caused even one time?”

- Option 1: changed to “Ritalin, Adderall, Dexedrine, Concerta, Folcalin, or other prescription stimulants.”
- Option2: changed to “OxyContin, Vicodin, Oxycodone, Percodan, Percocet, Lortab, Lorcet, Hydrocodone, Codeine or other pain killer in pill format.”
- Option 3: added “Diazepam”
- Option 4: added “Dextromethorphan/”
- Option other: removed

pr1a: “How did you get the prescription drug(s)? Select all that apply.”

- Option other: removed

## A.6 Other Personal Behaviors`

pb1: During a typical month, about how often do you drive a car, truck or motorcycle?

- Removed

pb4: “have you ever been in an automobile accident involving a driver that had been drinking?”

- Added: “Since you started college,”

dd2: “How many drinks did you have the last time you were driven by a designated driver?”

- Made driven all caps

pb5a: “How old were you when you first had sexual intercourse? (If you don't know, please enter 88)”

- Removed

pb6: “How many people have you had sexual intercourse with during the past 30 days?”

- Changed “30 days” to “3 months”

pb8: “When you have sexual intercourse, how often do you or your partner use a contraceptive other than a condom?”

- Removed

pb10: “Did you use a recreational drug (e.g., marijuana, ecstasy, methamphetamine, etc.) the last time you had sexual intercourse?”

- Added: “molly”

pb11: “Since you began college, has someone had sexual contact with you when you were unable to provide consent or to stop what was happening because you were: passed out, drugged, drunk, incapacitated, or asleep?”

- Question added

## A.7 Mental Health

mh1: “If you had a personal problem while you were at school, is there a member of the campus faculty or staff that you would discuss it with?”

- Removed

## A.8 Campus Polices and Programs

cp1: “Based on what you have heard or experienced on campus, to what extent is each of the following a problem at your school?”

- Option G: Added “/binge drinking”
- Option H: New question: “Hazing”
- Option I: New question: “Bullying”

cp2: “Think about all of the students at your school. Based on what you have heard or experienced, approximately what percentage of the student body drinks alcohol at least once a month?”

- Removed

cp3: Based on what you have heard or experienced, approximately what percentage of the student body are “heavy” or “problem” drinkers?

- Removed

cp4: “Think only about your friends at your school. What percentage of them do you think drink alcohol at least once a month?”

- Removed

cp5: Approximately what percentage of your friends do you think are “heavy” or “problem” drinkers?”

- Removed

cp6: “To what extent do you agree with the following statements? On our campus...”

- Removed

cp10: “Since the beginning of the school year last fall, have you received information on any of the following during one of your classes, a student meeting, student orientation, or other campus event?”

- Option E: Changed “overdose” to “poisoning”
- Option G: New option: “Information about how (and where) to get help with a personal emotional and/or mental health issue?”

cp11: Please tell us to what extent you support or oppose the following campus rules and policies on alcohol and drug use:”

- Option B: Removed option: “setting aside some dorms as alcohol-free”
- Option K: Removed option: “Making the alcohol rules on campus more clear”
- Option L: Removed option: Enforcing the alcohol rules more strictly”

## A.9 Background Information

bi10: “What was your zipcode (five-digit only) while you were in high school?”

- Removed

bi11: “How far did your father (or the person who served as your father) go in school?”

- Removed

bi12: “How far did your mother (or person who served as your mother) go in school?”

- Removed