

Supplemental Table A. GEE logistic regression directly comparing males and females assessing the association between involvement in fraternities/sororities (ages 19-24) and substance use from ages 18 through 35.

College attendance and fraternity/ sorority involvement by sex (ages 19-24)	Model 1 Cigarette use (past 30 days) ¹ AOR (95% CI)	Model 2 Binge drinking (past two weeks) ¹ AOR (95% CI)	Model 3 Marijuana use (annual) ¹ AOR (95% CI)	Model 4 Other illicit drug use (annual) ¹ AOR (95% CI)	Model 5 Nonmedical Rx drug use (annual) ¹ AOR (95% CI)
Male active frat member/resident	Reference	Reference	Reference	Reference	Reference
Female active sor. member/resident	.723 (.465, 1.12)	.288 (.212, .391)***	.648 (.434, .970)*	.221 (.093, .526)***	1.00 (.634, 1.58)
Male active frat member/non-resident	1.10 (.759, 1.60)	.589 (.453, .767)***	.828 (.604, 1.13)	.996 (.628, 1.58)	1.48 (.983, 2.23)
Female active sor. member/non-resident	1.05 (.745, 1.48)	.208 (.162, .267)***	.479 (.358, .640)***	.271 (.171, .429)***	1.14 (.793, 1.66)
Male attended college not in frat.	1.08 (.793, 1.48)	.343 (.274, .429)***	.565 (.437, .731)***	.744 (.507, 1.09)	1.04 (.752, 1.45)
Female attended college not in sor.	1.25 (.917, 1.70)	.135 (.108, .169)***	.494 (.383, .638)***	.419 (.285, .614)***	1.29 (.935, 1.79)
Male never attended college	1.77 (1.26, 2.50)***	.334 (.260, .430)***	.493 (.368, .660)***	.647 (.428, .976)*	1.14 (.803, 1.61)
Female never attended college	1.98 (1.42, 2.75)***	.129 (.101, .165)***	.383 (.289, .508)***	.325 (.214, .493)***	1.23 (.866, 1.75)
Age (linear)	1.04 (1.01, 1.08)***	1.25 (1.21, 1.30)***	1.05 (1.01, 1.09)**	1.06 (1.00, 1.13)*	.739 (.704, .775)***
Age (quadratic)	.976 (.972, .981)***	.958 (.953, .962)***	.967 (.962, .973)***	.967 (.958, .976)***	1.03 (1.03, 1.04)***
	² n = 9,625	² n = 9,310	² n = 9,735	² n = 10,016	² n = 9,981

p<.05*, p<.01**, p<.001***; AOR = adjusted odds ratio.

¹Each model (1-10) included age 18 controls for the following: cohort year at baseline, race/ethnicity (i.e., White, Black, Hispanic, Other), parental education (i.e., at least one parent with a college degree vs. neither parent has a college degree), U.S. Census geographic region (i.e., Northeast, Midwest, South and West), metropolitan statistical area (i.e., large MSA, other MSA, and non-MSA), truancy (i.e., skipped school in past-month versus not), high school grades (i.e., C+ or lower versus B- or higher), and frequency of evenings out with friends (i.e., 3 times or more during a typical week versus 2 times or less). Also included as controls are age 18 past 30-day cigarette use, past two-week binge drinking, past-year marijuana use, past-year illicit drug use other than marijuana, and past-year nonmedical use of prescription drugs; however, note that the specific substance being assessed (e.g., binge drinking in Models 2 and 7) is not included as an age 18 control variable (e.g., binge drinking at age 18 is not included as control in Models 2 and 7) because it is part of the GEE outcome.

²Sample sizes vary due to missing data on the items used in the analyses. All models use weights to account for attrition at age 35.

Supplemental Table B. GEE logistic regression directly comparing males and females assessing the association between involvement in fraternities and sororities (ages 19-24) and SUD symptoms at age 35.¹

	Model 1 Two or More Alcohol Use Disorder Symptoms (age 35) ² AOR (95% CI)	Model 2 Two or More Cannabis Use Disorder Symptoms (age 35) ² AOR (95% CI)	Model 3 Two or More Other Drug Use Disorder Symptoms (age 35) ² AOR (95% CI)
College attendance and fraternity/sorority involvement by sex (ages 19-24)			
Male - Active member in frat. (frat. house resident)	Reference	Reference	Reference
Female - Active member in sor. (sor. house resident)	.539 (.309, .940)*	.296 (.084, 1.03)	.186 (.034, .993)*
Male - Active member in frat. (non-resident)	.674 (.435, 1.04)	.612 (.274, 1.36)	1.47 (.491, 4.44)
Female - Active member in sor. (non-resident)	.370 (.244, .563)***	.143 (.053, .383)***	.521 (.152, 1.78)
Male - Attended college (not in frat.)	.630 (.444, .896)**	.580 (.304, 1.10)	.958 (.352, 2.60)
Female - Attended college (not in sor.)	.339 (.239, .483)***	.250 (.128, .485)***	.807 (.298, 2.18)
Male - Never attended college	.622 (.418, .925)*	.529 (.256, 1.09)	1.28 (.447, 3.67)
Female - Never attended college	.288 (.193, .429)***	.341 (.162, .716)**	1.22 (.425, 3.54)
	³ n = 8,590	³ n = 8,861	³ n = 8,486

p<.05*, p<.01**, p<.001***; AOR = adjusted odds ratio

¹ Note that results using GEE logistic regression (i.e., XTGEE) or the regular logit option (i.e., logit) stratifying by an individual time point will produce identical results.

² Each model (1-6) included age 18 controls for the following: cohort year at baseline, race/ethnicity (i.e., White, Black, Hispanic, Other), parental education (i.e., at least one parent with a college degree vs. neither parent has a college degree), U.S. Census geographic region (i.e., Northeast, Midwest, South and West), metropolitan statistical area (i.e., large MSA, other MSA, and non-MSA), truancy (i.e., skipped school in past-month versus not), high school grades (i.e., C+ or lower versus B- or higher), and frequency of evenings out with friends (i.e., 3 times or more during a typical week versus 2 times or less), 30-day cigarette use, past two-week binge drinking, past-year marijuana use, past-year illicit drug use other than marijuana, and past-year nonmedical use of prescription drugs.

³Sample sizes vary due to missing data on the items used in the analyses. Note that SUDs are only measured at age 35, and only respondents who completed surveys at age 35 could be included into the analyses. All models use weights to account for attrition at age 35.