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Associations between Community Attachments and Adolescent Substance Use in Nationally Representative Samples

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Abstract

Purpose—Social capital and social attachment theories of substance use argue that positive bonds to society and the conventional values they promote deter adolescents from substance use. Using nationally representative samples of U.S. high school seniors, we hypothesized that adolescents' community attachments, measured by social trust, social responsibility, and religiosity, would be negatively associated with lifetime and 30-day substance use.

Method—We used repeated cross-sectional nationally representative high school senior data from 1976–2008 Monitoring the Future Study cohorts (weighted N = 64,246; 51.6% female). Participation rate ranged from 77% to 86% across years. A series of multiple linear and logistic regressions examined unique associations of adolescents' social trust, social responsibility, and religiosity with lifetime and 30-day use of cigarettes, alcohol, marijuana, hallucinogens, cocaine, amphetamines, barbiturates, tranquilizers, and narcotics. Models controlled for gender, race, college aspirations, high school grades, parents' education, and survey year.

Results—Social trust, social responsibility, and religiosity showed independent negative associations with use of cigarettes, alcohol, marijuana, and six other types of drugs. After

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Implications and Contributions: Using national samples of high school seniors, this study found that adolescents higher on social trust, social responsibility, and religiosity reported lower substance use of many types. By implication, prevention efforts that focus on these community attachments may protect against substance use while also enhancing positive contributions to society.

accounting for controls, community attachments related to lower lifetime and past 30-day use. Associations were consistent across measures, except social responsibility was not associated with binge drinking or lifetime illicit drugs besides marijuana.

Conclusions—Study strengths included the nationally representative sample, diverse substance use measures, and inclusion of controls. We extend theory by suggesting that distinct aspects of adolescents' community attachments uniquely relate to lower substance use. Results suggest potential public health benefits of integrating promotion of community attachments with substance use prevention.

Keywords

substance use; drugs; social trust; social responsibility; religiosity; values; adolescence; social capital; Monitoring the Future; prosocial development; protective factors

Adolescent substance use is a serious public health problem. In 2010, Monitoring the Future's (MTF) nationally representative study of high school seniors documented high lifetime prevalence rates for cigarettes (42%), alcohol (71%), marijuana (44%), and illicit drugs other than marijuana (25%; 1). Adolescent substance use has both acute and cumulative health risks, and is associated with leading causes of death in adolescence and adulthood (2). Although many risk factors have been identified, it is also important to identify protective factors for adolescent substance use. Research and practice that integrates the promotion of adolescent strengths with the prevention of problems is urgently needed (3–5).

Our study examined the role of adolescents' community attachments as protective factors against substance use. We tested the hypothesis, grounded in social capital and substance use theories, that adolescents' social trust, social responsibility values, and religiosity (three indicators of community attachment) would be negatively associated with cigarette, alcohol, marijuana, and other drug use. We utilized data from 33 successive cohorts in the annual, nationally representative MTF study of U.S. high school seniors (1).

Social Capital and Substance Use

The social capital perspective suggests that social connections can produce healthier individuals, safer communities, and more effective governments. Social capital originates from relationships between people (6) and is defined as "features of social organizations such as networks, norms, and social trust that facilitate coordination and cooperation for mutual benefit" (7, p. 67). A central tenet is that positive bonds with others prompt community contributions via norms of reciprocity and cooperation (6, 8).

Social capital has also been applied to health (9–10). Various social capital indicators (e.g., social trust, sense of community) have been positively linked to self-rated and community-level health (9). Thus, some argue that building caring communities founded on prosocial norms and cohesive social networks is a viable strategy for promoting public health (10).

Using a social capital lens, we argue that community attachments may help to counter adolescents' substance use. Prominent theories of adolescent problem behavior cohere with the social capital perspective: Social attachment substance use theories posit positive relationships and personal values as explanatory factors for adolescent substance use, including social control theory (11), the social development model (12), problem behavior theory (13), and the multistage social learning model (14). Although specific tenets of these theories differ, they share the idea, congruent with social capital theory, that positive attachments to society and conventional values promoted by social institutions can divert

adolescents from substance use. Causality cannot be tested with the present cross-sectional data, although theories suggest that causality flows predominantly from social attachments to substance use. For example, stronger community attachments may enable more social support for positive choices, more positive role models who avoid illegal and heavy substance use, and more personal investment in upholding prosocial community norms. When adolescents are surrounded by social capital, they may also perceive greater personal and social consequences of engaging in heavy and illegal substance use. When community attachments, and thus social capital, are lower, higher substance use may result from adopting norms of a deviant subgroup (11–13).

Community Attachments

Social trust – a positive belief that most people are fair, helpful, and trustworthy – is a key marker of social capital because it reflects positive experiences and bonds with other people (6–8). More trusting individuals are more likely to join community-based organizations, volunteer, and vote (8). Several studies link social trust to substance use. Among Swedish adolescents, social trust was associated with lower probabilities of cigarette and illicit drug use, yet was not related to binge drinking (15). Studies of adults outside the U.S. have linked high social trust to lower cannabis use (16), smoking cessation (17), and less heavy drinking among men (18). Our study builds on theory and this existing empirical work by examining social trust in relation to substance use in nationally representative samples of U.S. high school seniors.

Social responsibility values reflect personal priorities to make positive contributions to society, and offer a way to operationalize commitment to the prosocial values promoted by many communities. Social responsibility values motivate socially responsible actions, and these values typically oppose hedonistic values that reflect a tendency toward risk-taking and self-rewarding behavior (19). Abstaining from all substance use during adolescence can be considered socially responsible, given the serious social and public health consequences of substance use and abuse (20) and the illegality of adolescents' substance use. For non-abstainers, *low* substance use is more socially responsible than *high* use, given that low use reduces risk of negative consequences including morbidity, addiction, and disease (21).

Across studies, social responsibility was related to lower alcohol use (22), tobacco and marijuana use (23), high-risk sexual behaviors (24), and interpersonal violence (25). For example, college freshmen who believed that alcohol use could negatively affect others reported drinking less per week (22). Social responsibility at age 21 predicted lower tobacco and marijuana use at age 43, but unexpectedly, predicted higher alcohol use (23). Another study reported contradictory results: Adolescents' humanitarian values (a prosocial orientation related to social responsibility) related to higher marijuana use (26). Conflicting results may be related to differences in how social responsibility is operationalized, the substance being examined, or the use of non-representative samples. For example, alcohol use may not be at odds with community attachments, and may even enhance social connections, particularly in adulthood (18). Our investigation with national samples aims to add to limited evidence that social responsibility is associated with lower substance use among late adolescents.

Religiosity is our third community attachment indicator, chosen because it reflects connection to a social institution and the beliefs and values promoted therein. Religious affiliation and participation may provide a moral community that offers social support and promotes conformity to prescribed values and beliefs (8, 27). The relationship between religiosity and lower substance use has been fairly well documented (27–31). A meta-analysis found that higher religiosity related to lower cigarette, alcohol, marijuana, and other

drug use; effect sizes were small but consistent across substances, regardless of how religiosity was operationalized (28). We build on previous research by isolating independent associations of religiosity from community attachment indicators in relation to adolescent substance use. Further, because religiosity can be an early emerging protective factor for adolescent substance use (29–30), it is important to account for religiosity to accurately understand the role of other community attachments.

Present Study

This study sought to explore the role of social capital for adolescents' substance use. Three elements of community attachments are proposed by substance use theories to help deter substance use: social attachments (e.g., social trust), conventional values (e.g., social responsibility), and institutional attachments (e.g., religiosity). It is an untested assumption of this study that our measures of social and institutional attachments reflect bonds to individuals or groups that encourage prosocial behaviors; multiple measures of community attachments allow us to thoroughly examine associations with substance use. Addressing limitations of previous research, we relied on a strong theoretical rationale, nationally representative samples of U.S. high school seniors across three decades, and multiple measures of substance use, namely lifetime and 30-day use of cigarettes, alcohol, marijuana, and six other types of drugs (i.e., hallucinogens, cocaine, amphetamines, barbiturates, tranquilizers, and narcotics).

Most previous studies of social responsibility and social trust have not accounted for potential confounding factors in these associations (32); we considered adolescents' gender, race, high school grades, college aspirations, and parents' education. Associations have been documented between these factors and substance use (29–31, 33), social trust (34), and religiosity (29–31). Accounting for these correlates allowed us to better ascertain the role of community attachments in adolescents' substance use. In addition, we used 33 consecutive years of nationally representative cross-sectional samples to enhance generalizability of findings; analyses controlled for changes in adolescent substance use over historical time.

Method

We used 33 survey years (1976 to 2008) of data from Monitoring the Future, an ongoing nationally representative study of high school seniors in the United States that examines adolescent substance use as well as values, behaviors, and lifestyles (35). The study draws samples of the same age group (high school seniors, modal age 18) from different cohorts (successive graduating classes) at different times (each year from 1976 to 2008). Each year, 12^{th} grade students were selected using a multistage random sampling procedure of public and private high schools nationwide; schools were asked to participate for two consecutive years, and matched replacement schools were found when a school declined participation. Data were weighted to ensure that results are representative of U.S. high school seniors; weights account for unequal probability of selection at the individual and school levels (1). Prevalence rates of substance use are not biased by school turnover and participation rates (1). Participants were randomly assigned to one of five (1976–1988) or six (1989 and later) survey forms, containing identical core questions plus additional unique content. Parents of adolescents had a chance to decline participation, and active assent was sought from adolescents. Student participation rate ranged from 77% to 86% across survey years (median = 83%). Almost all non-participation was due to absence from class at the time of data collection; explicit refusals amounted to less than 1.5% of each sample.(1). Present analyses used complete cases from Form 1 across 1976 to 2008 (Ns varied across analyses, maximum weighted $N = 64{,}246$). The sample was 51.6% female, and available self-reported race categories were White (69.0%), Black (11.3%), and Other or Missing (19.7%).

Separate multiple linear and logistic regression models were estimated for each substance use measure. Given the large sample size and correlated dependent variables, we used a conservative criterion of $p < .001$ for evaluating parameters.

Measures

Means, standard deviations, and ranges for social trust, social responsibility, religiosity, and substance use measures are reported in Table 1.

Social trust—Adolescents' social trust was measured by averaging three items also used in the General Social Survey and other national surveys across several decades (34): most people are fair, most people are helpful, and most people can be trusted ($\alpha = .61$). Response options corresponded with low trust (1), neither trusting nor untrusting (2), and high trust (3). Items sufficiently interrelate in the General Social Survey (34).

Social responsibility—Social responsibility values were measured by asking adolescents, "How important is each of the following to you in your life?" Three items were averaged: the importance of making a contribution to society, being a leader in my community, and working to correct social and economic inequalities ($\alpha = .70$). Response options ranged from *not important* (1) to *extremely important* (4).

Religiosity—One item measured frequency of attending religious services on a 4-point scale: *never* (1), *rarely* (2), *once or twice a month* (3), and *about once a week or more* (4). A second item asked how important religion was in their lives using a 4-point scale: *not important* (1), *a little important* (2), *pretty important* (3), and *very important* (4)[1]. Items were positively correlated, $r = .60$, $p < .001$. Regression analyses were originally conducted with religious behavior and religious importance as separate predictors; each measure showed similar associations with substance use (results available upon request). We combined items for parsimony and to more fully represent the contribution of this broad dimension, in accordance with other work (27). Given distinct response scales, items were standardized and averaged.

Substance use—Lifetime cigarette use was assessed by asking how often adolescents ever smoked cigarettes; response options were *never* (1), *one or two times* (2), *occasionally* (3), *regularly in the past* (4), and *regularly now* (5). Past 30-day cigarette use was measured on a continuous scale from *none* (1) to *more than two packs per day* (7). Lifetime and past 30-day use of alcohol [or marijuana/hashish] assessed the number of times adolescents consumed alcohol [or marijuana/hashish] on a 7-point [continuous] scale from *never* (1) to *40 or more occasions* (7). Binge drinking was measured by asking how often adolescents drank five or more drinks in a row in the past two weeks; response options were *none* (1), *once* (2), *twice* (3), *3–5 times* (4), *6–9 times* (5), and *10 or more times* (6). Lifetime and past 30-day use of other illicit drugs were computed by calculating *any* (1) versus *no use* (0) of LSD, other hallucinogenic drugs, crack, cocaine, amphetamines, barbiturates, tranquilizers, heroin, and other narcotics; measures were dichotomized due to low prevalence rates and thus positively skewed data (see Table 1). In addition, lifetime use for each of six drug types was dichotomized into *any use* (1) and *no use* (0) and examined separately: (1) Hallucinogens (including LSD), (2) cocaine (including crack), (3) amphetamines, (4) barbiturates, (5) tranquilizers, and (6) narcotics (including heroin).

[1]Religiosity items were not included in surveys in California starting in 1997. Thus, all California respondents have missing data from 1997–2008. When religiosity data were singly imputed, results were identical to those presented here using complete case analysis.

Control variables included gender (*male* = 1, *female* = 0), race (*White* = 1, *Black* = 0; Other and Missing coded as missing data), and self-reported high school grades (coded from 1 = *D or lower* to 9 = *A*). Adolescents reported likelihood of graduating from a 2-year and 4-year college. College aspirations were coded into three mutually exclusive categories: youth with 4-year college plans (i.e., definitely or probably will graduate from a 4-year college), 2-year college plans (i.e., definitely or probably will graduate from a 2-year but not a 4-year college), and no college plans (i.e., definitely or probably will not graduate from a 2- or 4-year college). Dummy codes contrasted *no college plans* (1) with *other aspirations* (0) and *2-year college plans* (1) with *other aspirations* (0) (Reference group = *4-year college plans*). Adolescents reported mother and father education levels; reports were combined to reflect the higher of mother or father education, measured on a scale from *grade school* (1) to *graduate school* (6). To account for historical trends in substance use across years (1), we included 32 dummy variables for survey year into regression models, with 1976 as the reference. We also conducted analyses separately for each survey year (results available upon request); associations were replicated across all years, in line with previous evidence (31), giving us further confidence in combining years.

Results

Social responsibility and religiosity correlated .19; these measures also showed very small positive correlations with social trust (see Table 2). As expected, community attachments were negatively correlated with all substance use measures.

Regression Models

Multiple linear regression models examined community attachments in relation to cigarette and alcohol use (see Table 3). After controls for gender, race, high school grades, college aspirations, parents' education, and survey year, adolescents' social trust, social responsibility, and religiosity showed unique negative associations with lifetime and 30-day use of cigarettes and alcohol. Social trust and religiosity were related to lower binge drinking, but social responsibility was not. Effect sizes (f^2; calculated from R^2 change in stepwise regressions; 35) for community attachment indicators as a unit were .02 for lifetime cigarette use, .04 for lifetime alcohol use, .01 for binge drinking, and .02 for both 30-day cigarette use and 30-day alcohol use.

Lifetime and past 30-day use of marijuana/hashish were negatively associated with social trust, social responsibility, and religiosity (see Table 4). Assessing community attachment indicators as a unit, effect sizes (f^2) were .05 for lifetime and .03 for 30-day use.

In logistic regression models, social trust and religiosity were associated with lower odds of lifetime other illicit drug use (*OR*s = .68 and .75; see Table 4). Adolescents with higher social trust and religiosity had .72 and .66 lower odds, respectively, of engaging in past month other illicit drug use. Social responsibility was not associated with lifetime use, but was related to .93 lower odds of 30-day other illicit drug use.

Logistic regression models examined any lifetime use of each of six illicit substances other than marijuana – hallucinogens (including LSD), cocaine (including crack), amphetamines, barbiturates, tranquilizers, and narcotics (including heroin) – to provide additional evidence for unique associations between community attachments and substance use. After accounting for controls, social trust (*OR*s = .72 to .79) and religiosity (*OR*s = .57 to .73) were associated with lower odds of lifetime use of each drug type (see Table 5). Adolescents' social responsibility was not uniquely associated with lifetime use of any of these drugs.

Discussion

Adolescents who reported greater social trust, social responsibility, and religiosity engaged in less use of cigarettes, alcohol, marijuana, and other illicit drugs. Results support social capital and numerous substance use theories suggesting that community attachments may deter adolescents from substance use. This study, based on large nationally representative U.S. samples, has implications for adolescent development and substance use prevention.

Contributions to Theory

By examining social attachments via social trust, conventional values via social responsibility values, and institutional attachments via religiosity, our study adds specificity to theories suggesting that attachments to society and the values promoted therein insulate adolescents from engagement with deviant peers and from health-risk behaviors (11–13, 33). Each indicator connotes a unique community attachment, and each is independently related to adolescents' substance use. Because correlations among social trust, social responsibility, and religiosity were small, constructs are considered community attachments on conceptual rather than empirical grounds. Despite consistency in regression results, effect sizes were small. We presume that our measures do not fully capture the ways adolescents conceive of and express community attachments. Given diverse operationalizations of social capital in the literature, this concept is difficult to capture precisely (9). The distal nature of the present constructs may explain small effect sizes, but the consistent, distal associations make our results all the more intriguing. None of our community attachment indicators specifically reference health or substance use; rather, these broad prosocial indicators of positive views of and personal investment in society relate to diverse behaviors beyond substance use, such as volunteering, voting, philanthropy, and psychological well-being (8). Moreover, the small protective effects of community attachments may accumulate for adolescents as they transition to adulthood (29–30).

Unique Roles of Community Attachments

Social trust, religiosity, and social responsibility were each uniquely associated with adolescent substance use; speculations on reasons for these unique roles may be fruitful for future research. As social trust reflects positive views of others, social trust may relate to lower substance use via influences from one's social network that support positive choices (15–16). Commitment to a religious institution and related beliefs confer social capital via a moral community that offers social and ideological support for positive choices, such as substance use avoidance (27). Thus, social trust and religiosity may motivate adolescents to avoid substance use via social and institutional attachments, respectively.

Social responsibility values motivate socially responsible actions (19), such as abstaining from illegal or irresponsible substance use (23). Thus, social responsibility values may offer a personal, internal motivation to avoid harmful substance use. Unlike the other two community attachments, social responsibility did not uniquely relate to adolescents' binge drinking or lifetime use of illicit drugs other than marijuana. Previous research also found inconsistent results with social responsibility, depending on the substance (23, 26). Although reasons for these discrepancies deserve further exploration, it is important to note that effect sizes for social responsibility appeared smaller across all models. Perhaps personal commitment to help one's community is a weaker motivation than a social or institutional attachment for avoiding heavy and illegal substance use. Social responsibility values may not require adherence to community norms in the same way as social trust and religiosity. Moreover, values are likely still developing during adolescence (37), suggesting that social responsibility may be less relevant for some than other community attachments in relation to substance use or that social responsibility values may be less reliably measured in

adolescence. Longitudinal examinations could better address which community attachments best predict substance use over time, whether community attachment indicators better predict long-term or concurrent substance use, and whether observed differences depend on age.

Limitations

This study's methodological strengths include nationally representative samples of youth, over three decades of data, and multiple measures of community attachments and substance use. That the findings were consistent across the multiple cohorts highlights their robustness. Some limitations are notable. Community attachment measures were brief and narrow in scope; more in-depth measures are needed to more fully represent adolescents' attachments to community. Directions of effects cannot be determined. We imply that community attachments deter behaviors, yet the opposite is also plausible. For example, substance use abstainers may come to view themselves as more socially responsible or have fewer reasons to distrust others. Longitudinal studies and randomized controlled prevention trials would better address causal direction. Indeed, longitudinal work already suggests that religiosity likely precedes various types of substance use in causal sequences (29–30). Potential confounding factors may have been omitted: For example, a risk-seeking personality trait may explain higher substance use and lower community attachments, or social desirability could account for greater prosocial responses across variables. Thus, community attachments and substance use may not be causally related; associations could be spurious. Although we assumed that community attachments have protective functions for adolescent health, and theory and results supported this assumption, we did not examine positive attachments to community institutions that promote deviant norms. In-depth analysis of norms promoted in communities would better address this issue.

Implications

Adolescent substance use and later addiction are serious public health issues (2), and the modest effectiveness of substance use prevention programs leaves much room for innovation and improvement (38). Prevention programs that bolster commitments and connections to society may augment existing efforts to reduce adolescent substance use.

This study's results give further reason to seriously contemplate the overlap between fields of positive youth development and prevention science (3–5). Combining these approaches may enhance adolescent health (through lower substance use) and thriving (through community contribution). Encouraging community attachments could have dual-pronged effects, reducing adolescents' substance use (and likely other deviant behaviors) while also fostering active community participation and capacities to be responsible for the health of oneself and others. Melding promotion and prevention would add to developmental research that aims to fully consider the "whole child" (5, 39).

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Table 1

Descriptive Statistics for Adolescents' Community Attachments and Substance Use

Measures	Range	Mean	*SD*
Community Attachments			
Social trust	1 – 3	1.81	0.60
Social responsibility	1 – 4	2.37	0.72
Religiosity[a]	−1.7 –1.2	0.00	0.90
Substance Use			
Cigarettes – *Lifetime*	1 – 5	2.43	1.44
Cigarettes – *30 Day*	1 – 7	1.73	1.29
Alcohol – *Lifetime*	1 – 7	4.73	2.17
Alcohol – *30 Day*	1 – 7	2.33	1.53
Binge drinking	1 – 6	1.68	1.21
Marijuana/Hashish – *Lifetime*	1 – 7	2.90	2.37
Marijuana/Hashish – *30 Day*	1 – 7	1.73	1.57
Other illicit drugs – *Lifetime*[b]	0, 1	0.29	0.46
Other illicit drugs – *30 Day*[b]	0, 1	0.11	0.31
Hallucinogens – *Lifetime*[c]	1 – 7	1.29	0.97
Hallucinogens – *30 Day*[d]	1 – 7	1.06	0.37
Cocaine – *Lifetime*[c]	1 – 7	1.27	0.97
Cocaine – *30 Day*[d]	1 – 7	1.06	0.42
Amphetamines – *Lifetime*[c]	1 – 7	1.50	1.35
Amphetamines – *30 Day*[d]	1 – 7	1.13	0.61
Barbiturates – *Lifetime*[c]	1 – 7	1.22	0.88
Barbiturates – *30 Day*[d]	1 – 7	1.05	0.34
Tranquilizers – *Lifetime*[c]	1 – 7	1.21	0.81
Tranquilizers – *30 Day*[d]	1 – 7	1.04	0.30
Narcotics – *Lifetime*[c]	1 – 7	1.22	0.84
Narcotics – *30 Day*[d]	1 – 7	1.04	0.34

Note. Means collapsed across survey years.

[a] Measure was standardized.

[b] Combines any use of hallucinogens (including LSD), cocaine (including crack), heroin, and any use not under medical supervision of amphetamines, barbiturates, tranquilizers, and narcotics into a dichotomous measure of no use versus any use.

[c] Lifetime use was dichotomized for analyses due to low prevalence rates.

[d] 30-day use of these individual drugs was not examined in analyses, but instead was combined into a single indicator.

Table 2

Correlations between Community Attachments and Substance Use

	Social Trust	Social Responsibility	Religiosity
Community Attachments			
Social trust	1		
Social responsibility	.04*	1	
Religiosity	.06*	.19*	1
Substance Use			
Cigarettes – *Lifetime*	−.07*	−.13*	−.18*
Cigarettes – *30 Day*	−.07*	−.12*	−.18*
Alcohol – *Lifetime*	−.03*	−.14*	−.22*
Alcohol – *30 Day*	−.03*	−.11*	−.18*
Marijuana/Hashish – *Lifetime*	−.08*	−.13*	−.24*
Marijuana/Hashish – *30 Day*	−.06*	−.11*	−.19*
Other illicit drugs – *Lifetime*	−.06*	−.10*	−.17*
Other illicit drugs – *30 Day*	−.05*	−.08*	−.12*

Note. Correlations are collapsed across survey years.

* $p < .001$.

Table 3

Five Multiple Linear Regression Models for Adolescents' Cigarette and Alcohol Use

	Cigarettes				Alcohol					
	Lifetime		30 Day		Lifetime		30 Day		Binge	
	B	*β*	B	*β*	B	*β*	B	*β*	B	*β*
Community Attachments										
Social trust	−0.16*	−0.07	−0.12*	−0.06	−0.21*	−0.06	−0.12*	−0.05	−0.09*	−0.05
Social responsibility	−0.03*	−0.02	−0.02*	−0.01	−0.06*	−0.02	−0.03*	−0.01	−0.02	−0.01
Religiosity	−0.22*	−0.14	−0.18*	−0.13	−0.46*	−0.19	−0.24*	−0.14	−0.14*	−0.10
Control Variables										
Gender: Male	−0.27*	−0.10	−0.16*	−0.06	0.23*	0.06	0.30*	0.10	0.39*	0.17
Race: White[a]	0.69*	0.16	0.51*	0.14	1.25*	0.20	0.70*	0.15	0.51*	0.14
High school grades	−0.16*	−0.21	−0.12*	−0.19	−0.14*	−0.13	−0.10*	−0.13	−0.08*	−0.13
No college plans[b]	0.25*	0.09	0.23*	0.09	−0.06*	−0.01	−0.01	0.00	0.03	0.01
Two-year college[b]	0.19*	0.04	0.15*	0.03	−0.12*	−0.02	−0.06	−0.01	−0.02	0.00
Parents' education	0.00	0.00	−0.01	−0.01	0.11*	0.07	0.07*	0.06	0.02*	0.02
R^2 *total*	.14		.11		.17		.12		.10	
N (weighted)	63,641		61,373		62,595		62,592		60,648	

Note. Unstandardized (B) and standardized (β) beta coefficients are reported. Not pictured in tables but included in analyses are 32 dummy variables for survey year. Sample weights were used.

*$p < .001$.

[a]Reference group = Black.

[b]Reference group = Four-year college plans.

Table 4

Multiple Linear and Logistic Regression Models for Adolescents' Drug Use

	Marijuana				Other Illicit Drugs			
	Lifetime		30 Day		Lifetime		30 Day	
	B	***β***	**B**	***β***	**B**	***OR***	**B**	***OR***
Community Attachments								
Social trust	−0.28*	−0.08	−0.13*	−0.06	−0.29*	0.75	−0.33*	0.72
Social responsibility	−0.07*	−0.02	−0.05*	−0.03	−0.01	0.99	−0.07*	0.94
Religiosity	−0.56*	−0.22	−0.27*	−0.17	−0.38*	0.68	−0.42*	0.66
Control Variables								
Gender: Male	0.11*	0.02	0.15*	0.05	−0.27*	0.76	−0.21*	0.81
Race: White[a]	0.47*	0.07	0.15*	0.03	1.26*	3.52	1.35*	3.84
High school grades	−0.22*	−0.18	−0.10*	−0.13	−0.16*	0.85	−0.15*	0.86
No college plans[b]	0.13*	0.03	0.12*	0.04	0.12*	1.13	0.18*	1.20
Two-year college[b]	0.10	0.01	0.03	0.01	0.08	1.08	0.06	1.07
Parents' education	0.11*	0.06	0.05*	0.05	0.07*	1.07	0.08*	1.08
R^2 *total*	.15		.10		.12		.11	
N (weighted)	63,152		62,838		63,116		62,828	

Note. Unstandardized (B) and standardized (β) beta coefficients are reported for marijuana use. Unstandardized coefficients and odds ratios are reported for other illicit drug use. Not pictured in tables but included in analyses are 32 dummy variables for survey year. Sample weights were used.

[a]Reference group = Black.

[b]Reference group = Four-year college plans.

*$p < .001$.

Table 5

Logistic Regression Models for Any Lifetime Use of Six Other Types of Illicit Drugs

	Hallucinogens	Cocaine	Amphetamines	Barbiturates	Tranquilizers	Narcotics
	OR	***OR***	***OR***	***OR***	***OR***	***OR***
Community Attachments						
Social trust	0.72*	0.72*	0.76*	0.72*	0.76*	0.77*
Social responsibility	0.99	1.00	0.98	0.95	1.02	0.96
Religiosity	0.57*	0.57*	0.69*	0.71*	0.73*	0.74*
Control Variables						
Gender: Male	1.10*	1.07	0.62*	0.78*	0.70*	0.91*
Race: White[a]	6.14*	2.42*	4.75*	3.42*	3.89*	4.01*
High school grades	0.84*	0.82*	0.85*	0.86*	0.91*	0.90*
No college plans[b]	1.25*	1.19*	1.24*	1.34*	1.13*	1.06
Two-year college[b]	1.12	1.11	1.23*	1.20	1.01	0.94
Parents' education	1.13*	1.16*	1.02	1.04	1.06*	1.11*
R^2 *total*	.13	.14	.14	.10	.09	.07
N (weighted)	62,796	62,518	62,531	62,094	62,362	62,538

Note. Logistic regressions were conducted and odds ratios are reported. Not pictured in tables but included in analyses are 32 dummy variables for survey year. Sample weights were used.

[a]Reference group = Black.

[b]Reference group = Four-year college plans.

*$p < .001$.