Nonmedical Use of Prescription Medications Among Young Adults in the United States

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Abstract

Background—Despite decreases in the use of illicit drugs in the United States, prescription medications have become a major category of abused substances.

Objective—This study examines the relationship between the socioeconomic status (SES) of young adult respondents (ages 24–32) and their history of nonmedical use of prescription medications (NUPM).

Method—A secondary analysis was conducted with nationally representative data gathered from several waves (N=15,701) of the National Longitudinal Study of Adolescent Health (Add Health). Four categories of NUPM were examined: 1) Sedatives; 2) Tranquilizers; 3) Stimulants; and 4) Pain killers. SES was defined by several measures in the Add Health survey. Given the complex sampling plan of the Add Health, all analyses were weighted appropriately.

Results—The results of the logistic regression models revealed that health insurance was negatively associated with NUPM in all models while financial hardship was positively associated with the use of sedatives, stimulants and painkillers. Parent education was positively correlated with NUPM tranquilizers and stimulants. Other risk factors included being white and having a history or alcohol or illicit drug use. Results indicated no significant association between respondent gender, education and NUPM.

Conclusions—The results of this study suggest parental SES may have a stronger influence over NUPM than personal levels of SES, particularly for the categories of tranquilizers and stimulants. These results suggest the population of tranquilizer and stimulant users may differ from sedative and pain killer users. The implications for the treatment of NUPM abuse as a function of client risk factors are discussed.

Keywords

NUPM; young adult; prescription; drug use; SES

Introduction

While national reports show adolescent use of illicit drugs continues to decrease, prescription medications have become a major category of abused substances (1). Between 1999 and 2006, the number of 12- to 17-year-olds who reported nonmedical use of prescription medications (NUPM) almost doubled from 1,653,000 to 2,952,000 (2). Four major categories of abusable prescription medications are recognized: sedatives, tranquilizers, stimulants, and painkillers (3). These four categories are focused upon in

NUPM research due to their abusable qualities, and because they are often prescribed to adolescents to treat common health issues (4). While illicit drug use may be decreasing, the United States has seen a significant rise in NUPM in all four of these categories (5).

Prescription painkillers are the most frequently used, the deadliest, and the most costly to society of any NUPM category. Prescription opioids are now being used more often used as a gateway drug than marijuana (6). While the number of deaths as a result of heroin overdose decreased between 1999 and 2004, non-suicidal prescription opioid deaths increased by 142% (7). Since then, unintentional overdose deaths have continued to rise and prescription painkillers continue to be the most commonly involved substance. (8).

Identifying the demographic characteristics of individuals who use alcohol, nicotine, and other drugs has been an important tool for policymakers and prevention efforts. The research regarding what populations are participating in NUPM is inconclusive. Although some findings are contradictory, there seems to be a consensus that females are at higher risk for NUPM, especially in the case of opioids (9). This comes as a surprise as males historically have higher rates of substance use (10).

Some research suggests socioeconomic status (SES) is associated with substance use. In regards to a correlation between NUPM and SES, current studies have found conflicting results (11). For example, Simoni-Wastila and Strickler (2004) identified having a yearly income of less than $40,000 as a protective factor against the nonmedical use of prescription opioids (12). Meanwhile, Sung et al. (2005) identified teenagers of lower SES as a particularly at-risk sub-group for nonmedical use of prescription opioids (13). Additionally, Herman-Stahl et al. (2007) found that young adults from families with annual household incomes between $30,000 and $75,000 had lower odds of nonmedical prescription stimulant use (14).

Despite the equivocal support linking SES to the nonmedical use of prescription drugs, the present study hypothesizes a positive relationship between these factors; specifically, that participants with higher SES will be more likely to report lifetime NUPM. It is assumed that higher SES individuals have had greater access to abusable prescription narcotics over their lifetime because of more ready access to higher quality healthcare by these individuals, their family members, and their peer network. Greater lifetime access is predicted to have led to higher rates of lifetime abuse. Furthermore, it is hypothesized that analyses will show females to be more likely than men to report a history of NUPM across all categories.

Methods

Sample

This secondary analysis was conducted utilizing data from the National Longitudinal Study of Adolescent Health (Add Health) and was approved by the SDSU IRB as a secondary analysis of data. The following statement was retrieved from the Add Health website: "Add Health participants provided written informed consent for participation in all aspects of Add Health in accordance with the University of North Carolina School of Public Health Institutional Review Board guidelines that are based on the Code of Federal Regulations on

the Protection of Human Subjects." The Add Health study combined social, behavioral, and the biomedical sciences in forming its research objectives in order to gain a strong understanding of adolescent development and health over a period of 14 years. Add Health is a nationally representative study of adolescents that was initiated in 1994 and began with an in-school questionnaire administered to a nationally representative sample of 90,118 students in grades 7–12 during the 1994–1995 school year. From the in-school sample of participants, a total of 20,745 were interviewed more extensively for an in-home interview (Wave I). These participants were re-interviewed in 1996 (Wave II), 2001–02 (Wave III), and 2007–08 (Wave IV).

For this study we utilized data from Wave I and Wave IV of the Add Health survey. Data collected from Wave I was used to identify respondents' race, gender, age, and the educational level of their highest-educated in-home parent. Wave IV data was used to establish the respondents' most current SES by looking at monetary hardship, highest educational level achieved, current health insurance status, and personal income. Furthermore, Wave IV included questions concerning a participants' lifetime use of the four categories of NUPM (sedatives, tranquilizers, stimulants, and painkillers). Nearly all of the participants in Wave IV were between the ages of 24–32 (52 were 33–34 years old) at the time of the survey. A total of 15,701 individuals participated in Wave IV of the study. As certain populations were oversampled, Add Health created sample weights to account for oversampling and to ensure generalizability to the national population of young adults in the U.S. (15).

Study Measures

Participant Demographics—The following demographic variables were obtained from Wave I of the Add Health: sex (male/female), age (at wave IV), ethnicity (Hispanic/non-Hispanic) and race (white, African American, Asian, Native American or other). Respondent age was calculated by adding the difference in months between the administration of the Wave I and Wave IV surveys to Wave I recorded age. A multiple race category was created by Add Health for individuals who indicated more than one racial category. Age, race, and ethnicity have all been found to have significant associations with NUPM (16).

Socioeconomic Status—SES is often investigated for a relation to substance use, although its link is unclear (17). SES is commonly measured by separate indicators (i.e. income, education, etc.) that are intended to represent an individual's access to resources in the forms of financial, human, and social capital. Some of the most commonly used measures of financial capital in research are household income, occupational status, and household wealth (18). Other indicators have included parent education, parent income, respondents' educational status and personal earnings, and material hardship (19). Lower SES has been strongly correlated to poorer access to quality healthcare, exposure to violence, greater frequency of economic hardships, higher rates of depression, and shorter lifespan expectancy (20).

Five measures of SES were utilized for this study: parent education, respondent education, financial hardship, healthcare insurance coverage and household income. The Wave I in-

home questionnaire interviewed each parent residing with the respondent and asked for their highest educational attainment. A parent education variable was created based off of the highest educational level attained by either parent. In Wave IV, respondents were also asked their highest level of education achieved at the time of the interview. A dichotomous (yes/no) variable was created to measure whether the respondent had experienced financial hardship during the previous 12 months before the Wave IV interview. This variable was created using 6 questions that measured whether or not the respondent had been unable to afford basic services, pay debts, or felt insecure in their ability to afford food until the next pay period. Participants were asked about their current health insurance status at the time of the interview (having no health insurance, insurance through work, insurance through a union, etc.). These responses were collapsed into a dichotomous variable (yes/no) indicating whether or not the respondent had any form of health insurance at the time of the interview. Although initially included as a measure of SES for this study, respondent household income was ultimately excluded as predictor variables due to large number of missing responses (n = 976) to this question and the absence of significance with this variable in bivariate analyses.

Use of Other Drugs—Previous studies have established an association between other forms of drug abuse and NUPM (20). In the Wave IV survey, respondents were also asked if they had ever (i.e., lifetime use) used other substances, including alcohol, marijuana, cocaine, crystal meth, and other illicit drugs (i.e., LSD, PCP, ecstasy, heroin, mushrooms, or inhalants).

Nonmedical Use of Prescription Medication—In the Wave IV survey, respondents were asked a screener question regarding NUPM, phrased: "Have you ever taken any prescription drugs that were not prescribed for you, taken prescription drugs in larger amounts than prescribed, more often than prescribed, for longer periods than prescribed, or taken prescription drugs that you took only for the feeling or experience they caused?" If respondents answered "yes" or "don't know" to this question, they were asked if they had ever used prescription sedatives such as barbiturates, sleeping pills, Quaalude, or Seconal in the manner described in the screener question. Participants were also asked if they had ever taken prescription tranquilizers (i.e., Librium, Valium, or Xanax), prescription stimulants or uppers (amphetamines, diet pills, Ritalin, Preludin, or speed), or prescription painkillers or opioids (Vicodin, OxyContin, Percocet, Demerol, Percodan, or Tylenol with Codeine).

Data Analysis

Using the complex samples analysis package in SPSS (ver. 21), logistic regression analyses were performed to model the predictors of NUPM. Complex sample plans take into account the complex sampling plan, data clustering, respondent non-response, oversampling, etc. Stratification variables (region), primary sampling unit (school), and a final weight all provided by Add Health was used to properly weight the data for these analyses. Bivariate logistic regression analyses were performed first between all predictor variables (i.e., demographics, SES, other drug use) and the four NUPM outcome variables (sedatives, tranquilizers, stimulants, pain killers) using the complex sample analysis tool. The predictor variables that showed a bivariate significance with an outcome variable were included in

multivariate logistic regression analyses. A total of 15,701 respondents participated in Waves 1 and IV of the Add Health Study. A total of 901 respondents did not have a weight variable and thus were dropped from all analyses. Missing values were deleted listwise and final model Ns are shown in table 2.

Results

As shown in Table 1, the average age of the sample was 28.37 and slightly more than half (50.7%) were males. A majority (70.5%) of the respondents reported their race as White, followed by Black (15.2%), multi race (7.2%), other (3.1%), Asian (3.0%), and Native American (0.9%), while 12% identified their ethnicity as Hispanic. Among respondents, 30% completed college or post-graduate training while 34% of their parents completed college or had a post–graduate degree. Nearly 90% graduated from high school. A majority (77.5%) of respondents reported having some form of health insurance, and 25.4% reported experiencing financial hardship during the 12 months prior to the Wave IV interview. The highest represented NUPM category was painkillers (15.1%), followed by sedatives (9.8%), tranquilizers (9.7%), and stimulants (7.2%). Other drug use ranged from a high of nearly 80% (lifetime drinking) to a low of 9% for lifetime use of methamphetamine.

Use of Sedatives

The results of the bivariate analyses indicated that gender, race, age, parent education, respondent education, health insurance, financial hardship, and all other substance categories were all significantly associated with NUPM sedatives. Ethnicity was not significantly correlated with NUPM sedatives in the bivariate analyses. As observed in table 2, increasing age was associated with the lower odds of using NUPM sedatives as was reporting having health insurance while experiencing financial hardship significantly increased the odds of ever using NUPM sedatives. Blacks and Asians were less likely to engage in NUPM sedatives relative to whites and the historical use of every other substance use category was associated with the increased odds of engaging in NUPM sedatives. In terms of parent education, only respondents whose highest educated parent completed some college were significantly more likely to engage in NUPM sedatives compared to respondents whose parents did not graduate from high school. Respondent education, and gender were not significantly associated with NUPM sedatives.

Use of Tranquilizers

Bivariate results showed that gender, race, ethnicity, age, parent education, respondent education, health insurance, financial hardship, and other substance categories were all significantly associated with NUPM tranquilizers. Respondent education was not significantly correlated with NUPM tranquilizers in the bivariate analyses. As shown in table 2, Blacks and Asians, and multi race respondents were less likely to engage in NUPM tranquilizers relative to whites. Reporting having health insurance was associated with the lower odds of using NUPM tranquilizers. Every category of parent education above 'less than high school' was associated with the increased odds of having ever used NUPM tranquilizers. Historical use of alcohol, marijuana, cocaine, and other illicit drug use were associated with the increased odds of engaging in NUPM tranquilizers. Ethnicity, gender,

age, experiencing financial hardship, and historical use of crystal meth were not significantly associated with NUPM tranquilizers.

Use of Stimulants

The results of the bivariate analyses indicated that gender, race, ethnicity, age, parent education, respondent education, health insurance, financial hardship, and all other substance use categories were significantly associated with NUPM stimulants. Respondent education was not significantly correlated with NUPM stimulants in the bivariate analyses. As observed in table 2, multivariate results indicated Blacks were less likely to have engaged in NUPM stimulants relative to whites. Respondents who reported having health insurance were less likely to use NUPM stimulants while experiencing financial hardship significantly increased the odds of ever using NUPM stimulants. Every category of parent education above 'less than high school' was associated with the increased odds of having ever using NUPM stimulants, as was every category of other substance use. Ethnicity, age, and gender were not significantly associated with NUPM stimulants.

Use of Painkillers

Bivariate analyses results showed that gender, race, ethnicity, age, parent education, respondent education, health insurance, financial hardship, and all other substance categories were all significantly associated with NUPM painkillers. As can be seen in table 2, increasing age was associated with the lower odds of engaging in NUPM painkillers as was reporting having health insurance. Blacks and Asians were less likely to engage in NUPM painkillers relative to whites. Experiencing financial hardship significantly increased the odds was ever engaging in NUPM painkillers. Historical use of every other substance category was associated with increased odds of engaging in NUPM painkillers. Gender, ethnicity, respondent education, and parent education were not significantly associated with NUPM painkillers.

Discussion

Results of most of the logistic regression models indicated that age was negatively associated with NUPM, supporting previous studies using young adult populations (22). These findings support evidence suggesting whites have the highest rates of NUPM use compared to other racial groups (23). Based upon the current literature, we expected to find that females were significantly more likely to use prescription opiates nonmedically than men (24). In fact, gender was not associated with NUPM in any of the models tested in this study. Most epidemiological studies find males to be heavier users of alcohol and other illicit drugs (25); however, it appears both men and women are similar in lifetime use rates of NUPM.

We hypothesized a positive relationship between a history of NUPM and having higher-educated parents, higher respondent education, and having health insurance; experiencing a financial hardship during the past twelve months was expected to be negatively associated with NUPM use. However, not all of the results of our analyses were congruent with these predictions. As noted earlier, personal measures of SES were significantly associated with

NUPM. Specifically, respondents who reported that they had health insurance were *less* likely to report any history of NUPM while individuals who had experienced financial hardship during the twelve months prior to the Wave IV interview were significantly *more* likely to report a history of NUPM than those who had not experienced financial hardship for every model except that predicting lifetime non-prescription use of tranquilizers. Thus, from these results it appears that lower SES (at least on these measures) predicts NUPM. These results appear to contradict the results of several other studies (26) demonstrating a relationship between high SES and NUPM use.

In contrast to the results testing the relationship between personal measures of SES and NUPM use, respondents whose highest-educated parent graduated high school or attained a higher level of education were more likely to report a history of NUPM tranquilizers and stimulants than respondents whose highest-educated parent did not graduate high school. Within NUPM sedatives, respondents whose highest educated parent reported completing some college were more likely to engage in NUPM sedatives than respondents whose parents did not graduate from high school. Although low levels of personal SES appear to be a risk factor of NUPM, higher levels of parental SES (i.e., parental education) appear to be a risk factor for NUPM stimulants and NUPM tranquilizers. Thus, these findings support our hypothesis as well as what other investigators have found (27).

At least for several of the prescription drugs included in Wave IV of the Add Health, the results from the measure of parent education supports our prediction that respondents from higher SES backgrounds would have higher rates of NUPM. However, these results directly contradict the relationship found between NUPM and the personal SES variables. The discrepancy between personal and parental measures of SES may be explained by the possibility that an early adolescent introduction to abusable prescription drugs by virtue of higher parental SES led to the abuse of NUPM at some point in a respondent's lifetime (28). This, in turn, may have resulted in increased problems with employment and finances in early adulthood which may affect in the future whether an individual experiences financial hardship or whether an individual can afford or has employment that provides health insurance as both of these variables are associated with NUPM. Thus, the contradictory relationship observed between lower levels of personal SES and NUPM could have been an artifact of engagement in NUPM at an earlier age that resulted in economic difficulties in later adolescence or early adulthood. Additionally, it is difficult to discern utilizing a cross sectional research design if respondents' economic difficulties are the result of their substance use, or if their economic difficulties provide a drive or desire to abuse substances.

The fact that the relationship between parent education and NUPM exists only within the categories of tranquilizers and stimulants suggests that the population of tranquilizer and stimulant users differs from nonmedical prescription sedative and pain killer users. In the case of stimulants, the difference may be related to findings of concentrated nonmedical use of prescription stimulants among college students in the United States (29). Parent education serves as an indicator of the socioeconomic environment in which the respondent grew up. Therefore, these results suggest that individuals who grew up in higher socioeconomic environments are more likely to have ever engaged in NUPM stimulants and tranquilizers. With higher educated parents, we may be able to assume the majority of these individuals

had ready access to better healthcare and financial resources than individuals whose parents did not graduate high school or an equivalent (30).

Limitations

Because of the high number of missing values for the survey item asking about personal income, this measure of SES could not be included in these analyses which limits the ability to directly compare these results with others in the literature. Furthermore, the participants in Wave IV of the Add Health sample were aged 24 to 32, which could limit the range of employment and/or income opportunities of the individuals reflected in this sample. An additional limitation to the present study is that wave IV of the Add Health study only asked respondents about lifetime NUPM use and did not include additional questions asking about frequency or intensity of use. Therefore, it is not possible to establish frequency or intensity of NUPM.

Strengths

Many studies, which have made valuable contributions to the scientific literature concerning the nonmedical use of prescription medications have been unable to acquire large, population-based samples of respondents. Thus, one of the strengths of the present study is that the results are based upon a large, nationally representative sample of young adults. This increases the generalizability of the results, at least to young adults in this age range. This age range is important, as substance use generally peaks in young adulthood (31). The Add Health study was also conducted in a manner that minimized the likelihood of over-or under-reporting. For example, each of the in-home data collections was conducted using in-home computer-assisted self-interviewing techniques (CASI) designed to increase the validity of participant responses.

Implications and Future Directions

The differences between the findings of this study and the current literature are compelling and speak to the lack of current understanding of NUPM in the United States. Much more nationally representative research is needed to gain valuable knowledge regarding the NUPM epidemic. Add Health is in a unique position to collect valuable data which could be used in longitudinal analyses, but much more in-depth questioning regarding NUPM is needed than what was provided Wave IV of the study. Because previous studies have investigated only recent use and this study investigated only historical use, it is important for subsequent studies to investigate both. This will allow researchers to discern whom in the population is experimenting with NUPM and who are becoming frequent users. In addition, further studies need to be conducted to investigate the patterns of divergence of these prescription medications. The results of such studies have important implications for policies concerning the control of distribution, manufacturing, and prescribing of abusable prescription medications.

Implications for the treatment of individuals abusing NUPM concern care-giving approaches and proper conceptualization of client risk factors. There is need for a clear definition of what specific behaviors constitute NUPM, which may include measures of frequency and intensity of medication misuse. Different studies have defined NUPM in different ways,

some defining NUPM only as use without a legal prescription, while others have expanded it to meaning using in larger amounts than prescribed, or used only for the experience it caused (32). Furthermore, some studies combined the categories of tranquilizers and sedatives. Therefore, direct comparability across studies is difficult. Common language and method of study ought to be established in order to allow for the accumulation of comprehensive and complimentary data. Further studies establishing the comparability of NUPM users and those who abuse other controlled substances are necessary for caregivers, researchers, and policy-makers to effectively strategize intervention and prevention approaches.

Acknowledgments

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Table 1

Participant demographics, socioeconomic measures and substance use history

Demographics	Percent (%)	N
Age		
Mean (SD)	28.37 (1.774)	14792
Gender		
Female	53.1	7866
Race		
Native American	1	150
Asian	5.8	865
Black	20.5	3031
White	60	8881
Mixed	8.8	1297
Other	3.7	549
Hispanic		
Yes	15.9	2358
Parent Education		
Less than High School	11.5	1696
High School Graduate	28.4	4200
Some College	20.4	3015
4-Year Degree	22.2	3292
Post-Graduate Degree	12.1	1788
Respondent Education		
Less than High School	7.7	1142
High School Graduate	16.2	2396
Some College	44.1	6521
4-Year Degree	23.4	3468
Post-Graduate Degree	8.6	1269
Health Insurance		
Yes	78.4	11603
Financial Hardship		
Yes	24.5	3631
Any NUPM		
Yes	15.1	2231
Sedatives		
Yes	8.3	1225
Tranquilizers		
Yes	8.3	1226
Stimulants		
Yes	6.3	927
Painkillers		
Yes	13.1	1935

Demographics	Percent (%)	N
Ever Drank		
Yes	79.2	11718
Ever Used Marijuana		
Yes	53.2	7868
Ever Used Cocaine		
Yes	18.1	2681
Ever Used Crystal Meth		
Yes	8.9	1322
Ever Used Other Illicit Drugs		
Yes	20.9	3093

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Table 2

Multivariate Analysis Results

	Any NUPM (n = 13,687)		Sedatives (n = 13,714)		Tranquilizers (n = 13,685)		Stimulants (n = 13,687)		PainKillers (n= 13,691)	
	AOR	95% CI	AOR	95% CI	AOR	95% CI	AOR	95% CI	AOR	95% CI
Age	0.94**	0.89–0.98	0.93**	0.88–0.98	0.96	0.90–1.02	0.96	0.89–1.03	0.94*	0.89–0.99
Gender										
Female	0.94.	0.79–1.11	1.00	0.83–1.20	1.11	0.93–1.33	1.05	0.85–1.30	0.88	0.74–1.04
Male	Ref									
Race										
Native-American	0.59	0.23–1.52	0.59	0.23–1.53	0.47	0.17–1.32	1.50	0.42–5.32	0.74	0.29–1.88
Asian	0.50**	0.32–0.78	0.32***	0.18–0.56	0.21***	0.10–0.43	0.51	0.22–1.18	0.51**	0.31–0.84
Other	1.31	0.89–1.93	0.79	0.44–1.41	0.62	0.37–1.03	1.22	0.66–2.25	1.24	0.81–1.88
Mixed	0.63	0.40–1.01	0.65	0.42–1.00	0.62*	0.39–0.99	0.93	0.46–1.86	0.59	0.34–1.00
Black	0.47***	0.33–0.66	0.61*	0.37–0.99	0.40**	0.23–0.69	0.37**	0.20–.680	0.40***	0.26–0.60
White	Ref.									
Hispanic										
Yes	0.86	0.60–1.23	-	-	1.04	0.66–1.66	0.78	0.48–1.27	0.86	0.59–1.25
Parent Education										
Post-graduate	1.16	0.83–1.61	1.17	0.83–1.65	1.67*	1.12–2.49	2.80**	1.53–5.14	1.05	0.75–1.48
4-Year	1.28	0.90–1.80	1.14	0.81–1.60	1.54*	1.05–2.26	2.62**	1.44–4.75	1.18	0.84–1.67
Some College	1.26	0.91–1.75	1.39*	1.03–1.89	1.57*	1.08–2.28	2.39**	1.35–4.21	1.12	0.82–1.53
H.S. Grad	1.32	0.98–1.78	1.13	0.82–1.54	1.54*	1.05–2.27	1.83*	1.05–3.18	1.25	0.93–1.69
< H.S.	Ref.									
Respondent Education										
Post-graduate	1.00	0.63–1.57	1.61	0.87–3.01	-	-	-	-	0.93	0.59–1.47
4-Year	1.17	0.79–1.73	1.31	0.79–2.15	-	-	-	-	1.10	0.71–1.70
Some College	1.27	0.94–1.71	1.52	0.99–2.34	-	-	-	-	1.30	0.93–1.82
H.S.	1.19	0.88–1.62	1.45	0.98–2.13	-	-	-	-	1.16	0.81–1.67
< H.S.	Ref.									
Health Insurance										

	Any NUPM (n = 13,687)		Sedatives (n = 13,714)		Tranquilizers (n = 13,685)		Stimulants (n = 13,687)		PainKillers (n= 13,691)	
	AOR	95% CI	AOR	95% CI	AOR	95% CI	AOR	95% CI	AOR	95% CI
Yes	0.58 **	0.63–0.90	0.71 **	0.55–0.91	0.69 ***	0.57–0.84	0.76 *	0.61–0.95	0.71 ***	0.60–0.85
Financial Hardship										
Yes	1.37 **	1.15–1.64	1.21 *	1.01–1.45	1.11	0.91–1.34	1.34 *	1.06–1.70	1.39 ***	1.16–1.66
Alcohol										
Yes	1.70 ***	1.27–2.28	1.48 *	1.03–2.14	1.57 *	1.05–2.35	1.79 **	1.17–2.74	1.75 ***	1.29–2.38
Marijuana										
Yes	2.10 ***	1.69–2.61	2.24 ***	1.58–3.20	2.23 ***	1.05–2.39	1.66 *	1.08–2.56	2.01 ***	1.58–2.55
Cocaine										
Yes	4.00 ***	3.24–4.95	4.01 ***	3.07–5.23	4.37 ***	3.36–5.68	5.12 ***	3.62–7.24	3.98 ***	3.22–4.93
Meth										
Yes	1.37 *	1.06–1.78	1.85 ***	1.37–2.51	1.28	0.98–1.68	1.63 ***	1.26–2.10	1.34 *	1.06–1.70
Other Illicit										
Yes	2.92 ***	2.39–3.57	3.08 ***	2.43–3.90	3.98 ***	3.08–5.14	4.15 ***	2.90–5.93	2.88 ***	2.31–3.60

*
p < 0.05,

**
p < 0.01,

***
p < 0.001

Note: AOR = Adjusted Odds Ratio; For Yes/No response options, "No" serves as the reference category.