

Relationship of Gender to Licit and Illicit Drug Use among Adolescents

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ABSTRACT

This study examines the relationship of gender to licit and illicit drug use among adolescents. The licit drugs included alcohol and tobacco (specifically cigarettes), and the illicit drugs included marijuana, cocaine, heroin and methamphetamines. It was hypothesized that males would be more likely than females to engage in illicit drug use, and that females would be more likely than males to engage in licit drug use. Data was analyzed using the 1999 National School-based Youth Risk Behavior Survey (YRBS). The survey was completed by 15,349 students (grades 9-12) in 144 schools. Bivariate correlations were computed and results indicated that males were more likely than females to use both licit and illicit drugs. However, the correlation was stronger for males and illicit drugs, rather than males and licit drugs. Further research is needed to determine why these gender differences exist, and what other factors (besides gender) are related to adolescent drug use.

Introduction

Adolescent drug use is a serious concern in the United States. According to NIDA (National Institute on Drug Abuse), in 2003 the lifetime prevalence rates of alcohol use for 8th, 10th and 12th graders were 45.6, 66.0, and 76.6% respectively. The lifetime prevalence rates of illicit drug use for 8th, 10th, and 12th graders were 22.8, 41.4, and

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51.1% respectively. Such statistics are disturbing. Aside from the health risks associated with drug use, negative social interactions between the user and other individuals have also been associated with drug use. One such negative social interaction is aggressive/violent behavior. According to the U.S. Department of Justice (1996), the percentages of violent offenders in local, state and federal prisons estimated to have been under the influence of alcohol at the time of the offense are 41%, 38% and 20% respectively. Besides aggressive/violent behaviors, risky sexual behavior has also been associated with drug use. Lowry et al. (1994) provided evidence that those who had used marijuana, cocaine or other illicit drugs were more likely to engage in risky sexual behaviors (such as having four or more sex partners and neglecting to use a condom at last sexual intercourse) versus those who had not. According to another study, adolescents were more likely than adults to engage in unprotected sex when under the influence of alcohol (Leigh, 1990). Such risky sexual behaviors are troubling because of the heightened risk of HIV and other sexually transmitted diseases.

In an attempt to reduce aggressive behavior, risky sexual practices and the harmful consequences associated with them, and to understand why adolescents turn to drug use in the first place, research has focused on identifying risk factors that predict use and abuse of drugs by adolescents. A number of risk factors have been identified in predicting adolescent drug use. One of the more important of these factors is gender, which has been examined in numerous studies. One such study, conducted by Opland, Winters and Stinchfield (1995), examined gender differences among 2,281 drug-abusing adolescents (ages 12 to 18 years). Participants were recruited from 26 adolescent drug treatment programs located in eight different states. Data was collected from participants' responses to the PEI (Personal Experience Inventory). Overall, male adolescents reported somewhat higher usage levels of various drugs than did female adolescents. In addition, males had an earlier onset of regular marijuana use compared to females.

One might wonder what it is about gender that can account for such differences in drug use. In order to answer this question we must consider what is meant by the term gender. What distinguishes males from females? Gender refers not only to the physical and biological

differences that differentiate males from females. Gender also represents the many psychological, cognitive and behavioral differences that distinguish males from females. These differences are due, in most part, to the effects of gender role socialization, to society's role in dictating how the ideal male and the ideal female should behave, feel and think. In addition, gender role socialization accounts for the fact that certain personality characteristics tend to be characterized as either masculine or feminine. For instance, assertiveness would most likely be characterized as a masculine trait, whereas passivity would most likely be characterized as a feminine trait.

The association between gender and adolescent drug use may be due to the effect of gender role socialization. For instance, boys, compared to girls, are often encouraged, and even rewarded, for risk-taking behavior. In a study conducted by Morrongiello and Dawber (1999), interactions between parents and children (ages 2-4) were observed during a free-play episode. Results indicated that parents were more likely to encourage, even pressure, boys, rather than girls, to engage in somewhat risky play activities (such as sliding down a firehouse-type pole) without assistance. Such results suggest that the ways in which parents interact with their children may promote greater risk taking in boys versus girls. When boys reach adolescence this risk-taking tendency may influence more experimentation with drugs. Willis, Sandy and Yaeger (2000) examined the relationship between temperament and adolescent substance abuse based on the epigenetic theory, which predicts that effects of temperament (such as a heightened risk for substance abuse) are mediated through self-control and risk-taking tendency. Results confirmed the epigenetic theory, and risk-taking tendency in particular, was found to have a direct effect on substance use.

Is it the case, however, that risk taking has a direct effect on all drug use, or is this tendency a stronger predictor of the use of certain types of drugs (perhaps those of the illicit versus licit nature)? In other words, do males (who appear more strongly associated with a risk-taking tendency than females) tend to use all drugs more than females, or just certain types of drugs? Katims and Zapata (1993), in an attempt to answer such questions, conducted a study examining gender and the use of specific drugs. They surveyed 2,216 fourth,

fifth, and sixth grade Mexican American students to ascertain information pertaining to their use of four specific “minor” substances: cigarettes, beer, wine/liquor and marijuana. Results indicated that in each grade, males reported a greater use of minor substances than did females. However, while males use significantly more substances in the fourth and fifth grades, those differences virtually disappear in the sixth grade.

It is unclear, though, whether this gender difference would be robust when examining adolescent use of hardcore substances such as cocaine or heroin. In particular, would there be a gender difference when considering adolescents’ use of licit versus illicit drugs? It is predicted that males would be more likely to engage in illicit drug use than females. This prediction is drawn from evidence (from the Katims and Zapata study) suggesting that males begin to use minor substances before females do. Therefore, it is hypothesized that males would also begin to use other substances (such as illicit drugs) before females, as well. In addition, the use of illicit drugs is probably related to a higher rate of risk-taking within the individual, and risk-taking is a behavioral tendency that is more likely to occur with males than with females due to gender role socialization. Furthermore, since it is believed that the males will have begun using illicit drugs at this point, it is predicted that they would begin to use licit drugs less (compared to the females). Therefore, it is also predicted that females would be more likely than males to engage in licit drug use during adolescents.

In summary, the first hypothesis of this study is that males would be more likely than females to engage in illicit drug use during adolescence. The second hypothesis is that adolescent females would be more likely than adolescent males to engage in licit drug use.

Method

Participants

A nationally representative sample of students in grades 9-12 participated in the 1999 National School-based Youth Risk Behavior Survey (YRBS). Questionnaires were completed by 15,349 students in 144 different schools. The overall response rate was 66% (the school response rate was 77%, and the student response rate was 86%). The

participants were selected using a three-stage cluster sample design. The first stage of the design contained 1,270 primary sampling units (PSUs). These PSUs consisted of large counties or groups of smaller, adjacent counties. Fifty-two of the 1,270 PSUs were selected based on the degree of urbanization and the relative percentage of black and Hispanic students in the PSU. The third stage of sampling consisted of randomly selecting one or two intact classes at each school. The classes selected were of a required subject (e.g., English or social studies). A small number of PSUs were selected with certainty. These “certainty PSUs” consisted of very large enrollments, and were recorded as their own strata.

Materials

The YRBS focuses on health-risk behaviors beginning in adolescence that tend to result in significant problems during both adolescence and adulthood. These behaviors include such things as alcohol and other drug use, and risky sexual behaviors. This study in particular, examined questions regarding drug use (licit versus illicit). The licit drugs included alcohol and tobacco (specifically cigarettes), and the illicit drugs included marijuana, cocaine, heroin and methamphetamines.

Procedure

Before surveys were administered, parental consent was obtained. Students completed the questionnaires in their classrooms during a regular class period. They recorded their responses on a computer-scannable booklet or answer sheet. By allowing for anonymous and voluntary participation, the privacy of students was protected.

Results

A Pearson correlation was computed to test the association between gender and drug use. This analysis revealed that males reported greater use of both licit drugs [$r(14,165)=.084, p<.01$] and illicit drugs [$r(14,927)=.110, p<.01$] than did females.

Regarding the use of licit drugs, the mean was 4.06 (SD=2.92), meaning that the average respondent reported having a cigarette and/or drink of alcohol 2 to 5 times in the past 30 days (depending on if

they had just one of the two or both). Forty-four percent of the respondents reported not having a cigarette or a drink of alcohol in the past 30 days. Only 99 (.6%) participants reported having at least one cigarette and one drink of alcohol every day for the past 30 days.

When considering the use of illicit drugs, the mean of the sample was 6.09 (SD=2.80), meaning that the average respondent reported having used one illicit substance (marijuana, cocaine, heroin, or methamphetamines) 1 or 2 times, either during the past 30 days or in their lifetime. Seventy-one percent of the respondents reported not using marijuana or cocaine in the past 30 days, or heroin or methamphetamines in their lifetime. Only 42 (.3%) participants reported having used marijuana and cocaine more than 40 times in the past 30 days, and heroin and methamphetamines more than 40 times in their lifetime.

Discussion

The aim of this study was to determine whether or not gender is related to the use of licit and illicit drugs in adolescents. Two hypotheses were proposed. The first was that males would be more likely than females to use illicit drugs. The second was that females would be more likely than males to use licit drugs.

Results indicated a significant relationship supporting the first hypothesis – males were more likely than females to use illicit drugs. This result is certainly interesting, and carries many important implications. Future researchers might want to look at what exactly it is about males that makes them more likely to use illicit drugs. It was suggested that risk-taking tendency may be more common in males than females due to gender role socialization. This may be the case, but perhaps other personality characteristics (such as sensation-seeking or impulsivity) could also be more common in males than females, causing males to be more likely than females to use illicit drugs.

Chen et al. (2001) examined many potential risk factors for the use of illicit drugs in their study. They surveyed 6,318 participants (ages 13 to 35) in I-Lan, Taiwan. Chen et al. found the strongest predictors of illicit drug use to be: perceived use of illicit drugs by peers, smoking tobacco, chewing tobacco, and male gender. Based on these results, perhaps what separates males from females is that they

perceive their peers as engaging in more drug use than do females (such as smoking and chewing tobacco). If this is the case, then we should expect that our second hypothesis – that females will be more likely than males to engage in licit drug use – will not be supported, since tobacco is a licit drug.

This was the case. Our second hypothesis – that females would be more likely than males to use licit drugs – was not supported by the findings of this study. In fact, results indicated the opposite finding – males were more likely than females to use licit drugs. Now we must ask ourselves the same question as before. What is it about males that makes them more likely than females to engage in licit drug use? Svensson (2003) thought that perhaps parental monitoring and peer deviance have something to do with the gender difference in adolescent drug use. He collected data from two surveys done in Falkenberg, Sweden. In the first survey study 467 participants were recruited. In the second survey study responses were obtained from 392 participants. Both studies used identical questionnaires. The results indicated that one reason why females report less use of drugs than males might be that they are exposed to higher levels of control and supervision by their parents. The study also found that males tended to exhibit a higher level of exposure to deviant peers than females, which may be another reason why males tend to engage in drug use more often than females.

One major problem with this study was that the only predictor variable examined was gender. This was important for determining whether or not there is a gender difference in adolescent drug use (licit and illicit). However, it tells us nothing about why these gender differences may occur. In order to determine that, many other factors must be examined. Researchers (such as Chen et al. and Svensson) have begun to examine potential risk factors that may account for the gender differences in drug use. However, much more research is needed to help further address the many factors that play a part in why adolescents (and in particular, males) initiate drug use.

I would suggest examining different personality types that may influence this behavior. Perhaps males are more likely than females to have a risk-taking tendency, or a sensation-seeking, impulsive personality type. This might drive males to experiment with, and use

drugs more often, than females. Wills, Gibbons et al. (2000) found that the primary predictor of risk-taking tendency is activity level. That being said, it would be interesting to see if activity levels of males and females differ during adolescents. Perhaps females engage in more activities (besides things like drug use), and that is why they tend to use drugs less. If males were using drugs out of boredom, then simply engaging in other more positive activities could make a real difference.

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