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ABSTRACT

This study assesses the differential substance use between male and female college students through the administration of a survey of recent use of six commonly used psychoactive substances (cigarettes, chewing tobacco, alcohol, marijuana, cocaine, and caffeine). It investigates the situational contexts associated with use of particular substances as well as the motivating factors prompting different types of substance use. The survey also explores the relationships between substance use and participation in college Greek organizations and athletics. It considers self-esteem deficits because of their association with underlying substance abuse problems. Students (males=69, females=126) attending college in suburban Northeastern United States completed the survey. Few significant differences emerged between men and women on the substance use measures. In considering the reasons why young adults use psychoactive substances, findings support the notion that men and women differ on the majority of items related to situational contexts in which substance use was likely. Failure to find any significant differences in substance use as a function of fraternity/sorority membership, athletic participation, or self esteem challenges several common stereotypes. The paper suggests that replication of this study with a larger, more representative sample would provide a better assessment of the generalizability of the findings. (Contains 16 references.) (JDM)

Effects of Substance Use Education Programs:

Gender Differences in Student Substance Use

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2000

Introduction

Several studies have noted differences between the ways that men and women make use of psychoactive substances. With the exception of certain sedatives and cocaine, rates of use are significantly higher for men for all types of substances (Sue, Sue, & Sue, 2000).

Others have argued that these apparent distinctions are in large part due to differences in willingness to report use, rather than to actual differential substance use (NIDA, 1991). Although studies have shown that women consume less alcohol, when adjustments are made in differences in body size, and ability to absorb alcohol, it turns out the women social drinkers achieve the same blood alcohol levels as men (Vogel-Sprott, 1984). Other substances also affect the bodies of men and women differently. The hormonal impact of marijuana has been found to be greater in men; no reproductive effects have been found for nonpregnant women (Jaffe, 1989).

There is some evidence suggesting that there has been a shift in recent years in gender-linked patterns of abuse (NIDA, 1991). Findings from a cross-cultural study by Helzer, Robins, Przybeck, and Regier (1988) suggest that rates of chemical abuse and dependency will soon be equal in the United States. The current young adult generation seems to endorse more egalitarian attitudes; this cohort was largely born after the feminist movement had challenged many traditional sex role attitudes and reshaped many parents' expectations of their sons and daughters. Along with more equal opportunities to participate in professional careers and athletics, some young women perceived greater freedom to drink and smoke like men (Fillmore, 1988). Some advertisement campaigns explicitly linked tobacco use and women's rights, asserting that use of a particular tobacco product conveyed a woman's successful liberation. In the 1950s estimates indicated that there were as many as five or six male alcoholics for every female; in the 1960s and 1970s, estimates were about four to one (Gomberg,

1976). By 1994 reports indicate that approximately 12.5% of American men and just over 5% of American women meet the diagnostic criteria for alcohol abuse or dependence (a ratio of 2.4 to 1) (Nelson, Heath, & Kessler, 1998; McNeece & DiNitto, 1994).

Some recent studies have found use of cigarettes to be growing more rapidly among adolescent girls than boys (Fiore, 1992). Many of these girls seem to be using tobacco as a means of weight control, exploiting its metabolic enhancement and appetite suppressant effects (Tomeo, Field, Berkey, Colditz, & Frazier 1999). However, in a study examining college students' subjective experience of cigarette smoking, appetite reduction was rarely reported among either male or female smokers (Hodges, Srebro, Authier & Chambliss, 1999). In this and a related study (Srebro, Hodges, Authier & Chambliss, 1999), the main motivation for college student smoking was a desire to relax, followed closely by concerns about image. Cognitive enhancement and weight control were rarely cited as reasons for smoking by students of either sex.

In the present study, differential substance use between men and women college students was assessed through administration of a detailed survey of recent use of six commonly used psychoactive substances (cigarettes, chewing tobacco, alcohol, marijuana, cocaine, and caffeine). Situational contexts associated with use of particular substances was also investigated, as were motivating factors prompting different types of substance use.

The survey also explored the relationships between substance use and participation in college Greek organizations and athletics. Since self-esteem deficits have frequently been assumed to underlie substance use problems, a measure of this variable was included as well.

Methods

Participants

Respondents were 195 college students (men=69, women=126) from a small liberal arts college from a suburban area in the Northeast United States. The mean age of participants was 19.6 years.

Survey Instrument

A three-page survey, completed by students, consisted of items pertaining to smoking and substance abuse, general attitudes towards these habits, and demographic items assessing membership in Greek life and athletics. Questions as taken from Wechsler et al. (1998) were used to determine cigarette and other drug use in the past 30 days and in the past year. Students were asked to indicate their likelihood of using five specific substances (tobacco, caffeine, alcohol, marijuana, and cocaine) in eight different situational contexts. They were also asked to rate on a four-point Likert scale (1= not at all important, 2= somewhat important, 3= important, and 4= very important) the importance of the motivations for using each of three substances (tobacco, alcohol, and marijuana). Also, questions regarding mental health were asked using a portion of the survey by Fisher and Farina (1979). To measure self-esteem, Rosenberg's (1965) self-esteem survey was also included.

Results

Directionally adjusted items were totaled to create a summary measure of total substance use for each participant. Between-group t-tests were conducted to assess differences associated with gender, involvement in a fraternity or sorority, and participation in collegiate athletics.

No significant gender differences were found on total substance use scores. However, males did report greater use of marijuana (males' x= 2.54, s.d.= 1.29, n= 69 versus females' x= 3.95, s.d.= 1.21, n= 126; t= 7.63, df= 1, p <.006), chewing tobacco (males' x= 3.19, s.d.= 1.13, n= 69 versus females' x= 3.95, s.d.= .21, n= 126; t= 54.43, df= 1, p <.000), and other substances (males' x= 3.54, s.d.= .99, n= 69 versus females' x= 3.80, s.d.= .69, n= 126; t= 4.76, df= 1, p <.03).

Significant differences between men and women were found on five of eight items relating to situations associated with substance use. Men reported more use of tobacco to celebrate their achievements (males' x= 1.68, s.d.= 1.24, n= 69 versus females' x= 1.30, s.d.= 1.13, n= 126; t= 4.70, df= 1, p <.031).

When compared with females, males reported greater use of alcohol when facing a task requiring creativity (t= 8.367, df= 1, p <.004). Males indicated that they smoke and experiment with other substances as a result of boredom on the weekend more so than women. Males were more likely than females to use marijuana when exhausted or depressed about a bad grade.

No significant gender differences emerged in terms of use of substances in situations where students were anxious before a social event, anxious before giving a speech, or angry at their parents. No significant gender differences were found on the items directly assessing conscious motivation underlying use of substances (to fit in with friends; reward for hard work; to feel comfortable with opposite sex; to get away from problems; because everyone else is doing it).

A triunal-split was performed on the summary measure of overall substance use, creating high, moderate, and low use groups. Oneway ANOVA were performed to assess the relationship between amount of substance use and participation in campus Greek organizations (fraternities and sororities) and collegiate athletics and exercise. No significant differences were found. Oneway ANOVA showed

no differences among the three substance use groups in terms of their scores on the Rosenberg measure of self-esteem. Correlational analyses corroborated these findings; substance use was not significantly associated with fraternity/sorority membership, athletic participation, or self esteem.

Discussion

Overall, relatively few significant differences emerged between men and women on the substance use measures. Total use did not vary as a function of gender, at least in this sample of undergraduates. Frequency of use of specific substances also did not generally differ by sex, although males reported more use of marijuana. This might reflect greater willingness to report such use, or actual higher preference for the effects of this drug.

In considering the reasons why young adults use psychoactive substances, the current findings support the notion that men and women differ in some regards. While no differences emerged on the measures of conscious motivations for substance use, on the majority of items related to situational contexts in which substance use was likely, significant differences were found on all but the items related to anxiety and anger.

When compared to women, men may actually make more instrumental use of psychoactive substances, they may use substances more as a function of situational context, or they may simply be more willing to admit to situational prompts for substance use. For example, males in this sample reported greater use of alcohol as an aid to creativity. It may be more socially acceptable for males to "free" themselves with alcohol. On the other hand, this difference may also be due to males' need for a socially acceptable attribution for being creative, possibly because such behavior is traditionally sex-typed as feminine. Alternatively, it is possible that their socialization makes men less likely to see

themselves as creative, which might contribute to their feeling a need for more assistance when faced with a task demanding creativity.

Future research might corroborate these self-report findings through use of more direct observational measures. This would enable an assessment of whether social desirability responding was responsible for the observed gender differences or whether men and women really vary in terms of the likelihood of their using particular substances across different situations.

The failure to find any significant differences in substance use as a function of fraternity/sorority membership, athletic participation, or self esteem challenges several common stereotypes. The expectation that fraternity/sorority members use substances more so than nonmembers may be a myth. Similarly, athletes did not differ from nonathletes in their reported substance use. The notion that "losers are users" because of low self esteem was also not supported by the present data.

It is possible that artifacts associated with the way data was collected in this study may have obscured actual group differences. Replication of these findings using a larger, more representative sample would enable a better assessment of the generalizability of these findings.

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