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Boost Your High: Cigarette Smoking to Enhance Alcohol and Drug Effects among Southeast Asian American Youth

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Abstract

The current study examined: 1) whether using cigarettes to enhance the effects of other drugs (here referred to as “boosting”) is a unique practice related to blunts (i.e., small cheap cigars hollowed out and filled with cannabis) or marijuana use only; 2) the prevalence of boosting among drug-using young people; and 3) the relationship between boosting and other drug-related risk behaviors. We present data collected from 89 Southeast Asian American youth and young adults in Northern California (35 females). 72% respondents reported any lifetime boosting. Controlling for gender, results of linear regression analyses show a significant positive relationship between frequency of boosting to enhance alcohol high and number of drinks per occasion. Boosting was also found to be associated with use of blunts but not other forms of marijuana and with the number of blunts on a typical day. The findings indicate that boosting may be common among drug-using Southeast Asian youths. These findings also indicate a need for further research on boosting as an aspect of cigarette uptake and maintenance among drug- and alcohol-involved youths.

Keywords

cigarettes; marijuana; blunts; alcohol; youth; Asian American

Introduction

Associations between use of cigarettes and alcohol and other drugs are well-established (Anthony & Echeagaray-Wagner, 2000; Barrett, Tichauer, Leyton, & Pihl, 2006; Meyerhoff et al., 2006; Room, 2004). These associations continue to be borne out by recent data. In the USA, use of alcohol and illicit drugs was more common among cigarette smokers than among non-smokers, and associated as well with heavy episodic drinking and heavy drinking (SAMHSA, 2008). Such associations among adolescents (Dee, 1999; Hoffman, Welte, & Barnes, 2001; Orlando, Tucker, Ellickson, & Klein, 2005) are particularly troubling. The co-occurrence of substances in the formative period of adolescence may represent not only increased risks of drug dependence and related problems in adulthood, but possibly increased difficulties in reducing and quitting drug use, depending on the strength of the relationships between substances for users.

Due to these concerns, much of the research on the joint use of cigarettes, alcohol and other drugs among youths has focused on pathways between use of one substance to another, as in

the “gateway theory” (Ellickson, Hays, & Bell, 1992; Fergusson, Boden, & Horwood, 2006; Torabi, Bailey, & Majd-Jabbari, 1993; Vega & Gil, 2005; Yamaguchi & Kandel, 1984), or alternate models such as a “reverse gateway” (Golub & Johnson, 2002; Hall & Lynskey, 2005; Morral, McCaffrey, & Paddock, 2002; Patton, Coffey, Carlin, Sawyer, & Lynskey, 2005; Tarter, Vanyukov, Kirisci, Reynolds, & Clark, 2006). Studies more narrowly addressing associations between use of tobacco and alcohol and between tobacco and cannabis have allowed for the development of some explanatory frameworks, including biochemical, socio-psychological and cultural supports for concurrent substance use (Amos, Wiltshire, Bostock, Haw, & McNeill, 2004; Bierut, Schuckit, Hesselbrock, & Reich, 2000; Bobo & Husten, 2000; Highet, 2004; Little, 2000; McKee, Hinson, Rounsaville, & Petrelli, 2004; Stoltz & Sanders, 2000).

Recent studies in the USA on the practice of smoking cigarettes to enhance the effects of cannabis consumed in the form of “blunts” (small cheap cigars hollowed out and filled with cannabis) have allowed for focused analyses of the relationship between cannabis and tobacco within specific socio-cultural frameworks, use settings, and drug delivery methods (Lee, Battle, Lipton, & Soller, 2010; Ream, Benoit, Johnson, & Dunlap, 2008; Ream, Johnson, Sifaneck, & Dunlap, 2006). In particular, qualitative findings from these studies described the rationale for the practice—called “boosting” or “chasing”—as an explicit attempt by blunts smokers to “boost” their “high,” or enhance and extend the effects of cannabis. For example, in qualitative interviews with 164 urban Southeast Asian youth and adults, stratified by tobacco use status, many younger respondents said they smoked tobacco in conjunction with blunts to increase the effects of the marijuana, a practice they referred to as “boosting” (Lee et al. 2010). The rationale expressed by respondents for this practice (i.e., to enhance and extend the effects of cannabis) distinguishes it from other forms of concurrent use of cigarettes, alcohol and other drugs. This practice has been associated with some cannabis dependence symptoms among marijuana users in New York City (Ream et al., 2008). Quantitative data describing the prevalence of the practice among substance users has, however, only been reported in one study (Ream et al., 2008), and then only in conjunction with cannabis. However, in qualitative interviews respondents in our project also linked boosting with use of alcohol and other drugs (Lee et al., 2010).

The current study has three primary aims: 1) to examine whether using cigarettes to enhance the effects of other drugs (here referred to as “boosting”) is a unique practice related to blunts or marijuana use only; 2) to describe the prevalence of boosting among drug-using young people; and 3) to characterize the relationship between boosting and other drug-related risk behaviors. We present data from a second wave of a quantitative component of a mixed-methods study of substance use among Southeast Asian American youth and young adults in Northern California. Data were collected from 89 respondents, and we included items to measure boosting and use of blunts as distinct from other forms of marijuana and drug-related behaviors.

Design and Methods

Research population

The overall aims of the project were to investigate the social meanings of drugs and drug use for second-generation Southeast Asian American youth in Northern California. The population was of interest because although there was some available data on substance use among Southeast Asians in Asia and as new arrivals in the USA (Westermeyer, Lyfoung, M., & Neider, 1991; Westermeyer, Lyfoung, & Neider, 1989) there is very little available data on substance use among the second generation of youths born in the diaspora. Fleeing war, political turmoil and genocide in Indochina, Southeast Asians arrived as refugees to the USA in large numbers almost exclusively between the 1970s to 1990s. The majority of

Cambodian and Laotian immigrants came from rural backgrounds and arrived with no or limited resources to establish themselves in a new life in the USA. The largest numbers settled in California, primarily clustering in impoverished and predominantly ethnic minority urban areas with high rates of community violence and easy access to alcohol and drugs. A previous project conducted by the authors had found that use of drugs, particularly marijuana, was highly normative for these youths and associated with their identification with an alternative “ghetto” youth subculture (Lee & Kirkpatrick, 2005).

Small, socially-insular populations such as immigrants and substance users constitute “hard-to-reach” populations. Recruiting these groups to research studies is extremely challenging. For this project we relied on a community sample which was primarily respondent-driven. Youth-serving community-based organizations provided an initial set of candidates who were then screened by self-report for use of any illicit drugs in the past 6 months. Qualified candidates were interviewed and received additional incentives to provide snowball referrals. Of the final sample of 153 respondents, 70% of the respondents were recruited via snowball referral.

The current study is based on data from 89 youth and young adults (35 females) who re-recruited for a second wave of interviews. All data were collected during confidential in-person interviews. The interviews included a brief survey (interviewer-administered) of approximately 20 minutes duration with measures of alcohol, cigarettes and other drug use. Responses were recorded on paper, cleaned and entered in SPSS. Respondents received a cash stipend for their participation in the project. All protocols were approved for the protection of human subjects by the Institutional Review Board of the Pacific Institute for Research and Evaluation.

Measures

Respondents were asked to report on their age group (youth or young adults), and gender as well as on standard measures for current use of cigarettes, alcohol, and specific drugs. Current cigarette smoking was measured by the number of occasions in the past 30 days in which they had smoked at least one whole cigarette. Frequency of alcohol use was measured by reports of at least one whole drink of each of these alcoholic beverages: “Beer (not included malt liquor),” “Malt liquor,” “Flavored malt liquor or wine coolers,” “Hard liquor” and “Wine.” Similar measures have been used in various national and other youth surveys (e.g., Youth Tobacco Survey of the Centers for Disease Control and Prevention, National Youth Risk Behavior Survey, and California Healthy Kids Survey). A single past-30-day alcohol use factor score (mean=0, SD=1) was derived from the five past-30-day frequency measures ($\alpha = .78$). Quantity of alcohol use was measured by reports of number of whole drinks on a typical occasion for each of the five listed beverage types. For analysis purposes, the average number of the different types of drinks was calculated. Frequency of heavy episodic drinking was measured by the number of occasions in the past 30 days in which they had consumed five or more drinks of alcohol within two hours.

Additionally, because at the time of data collection there were no available data collection instruments specific to blunts, several novel measures were developed for this project. Participants reported the number of occasions in the past 30 days in which they had used (1) blunts (defined as “marijuana cigars”) as separate from (2) other forms of marijuana (defined as “grass, weed, herb; hash; NOT blunts”). To measure the quantity of blunts use, we asked respondents, “On a typical day when you smoke blunts, about how many blunts do you usually smoke in that whole day? (For the purposes of this study, a blunt contains about a ‘ten sack, or about one-half gram, of marijuana).” This quantity measure was based on qualitative data collected with respondents during the first wave of data collection regarding the amount of marijuana typically consumed in a blunt. Two items collected data on use of

cigarettes specifically for “boosting.” A lifetime use measure asked: “Have you ever smoked cigarettes when drinking alcohol or using drugs in order to ‘boost your high’ or enhance the effects of alcohol or drugs? By ‘drugs’ we mean any substances used to get high, including marijuana.” Respondents who reported any boosting then were asked two further items on the frequency of boosting: “When drinking alcohol/when using drugs, how many times did you use cigarettes to boost your high?” Five possible response options to these items ranged from “Never” to “All or almost all the times.”

Data analysis

We first examined any lifetime use of cigarettes to enhance alcohol or drug effects and other sample characteristics. All subsequent analyses were limited to participants who reported any lifetime use of cigarettes to enhance alcohol or drug effects. We used linear regression analyses with SPSS version 16.0 software to examine the relationship between frequency of using cigarettes to enhance alcohol/drug high and various alcohol and drug use behaviors. We analyzed responses to the following drugs: marijuana in blunts and marijuana in other forms, since other listed drugs received no or too few responses to merit analysis. Also, since the majority (60 out of 64) were young adults (ages 18-23), age group was not included as a covariate. Gender was included as a covariate in all models. We also investigated possible interaction effects between gender and frequency of cigarette use to enhance alcohol or drug effects on the various alcohol and drug use behaviors. Gender and frequency of cigarette use to enhance alcohol/drug effects variables were centered to minimize multicollinearity between interaction terms and main effects in regression models.

Results

Sample characteristics including any lifetime use of cigarettes to enhance alcohol or drug high are in Table 1. The majority (73%) were past-30-day cigarette smokers. Moreover, 52.8% were daily smokers. Also, 72% of the respondents ($N=64$) reported any lifetime use of cigarettes to enhance alcohol or drug high. A significant relationship was found between any lifetime use of cigarettes to enhance alcohol or drug high and past-30-day cigarette smoking ($\chi^2 (1, N=89) = 17.51, P = .000$) as well as smoking daily ($\chi^2 (1, N=89) = 8.06, P = .005$). No significant relationship was found with regard to the respondents' genders, $\chi^2 (1, N=89) = .002, P > .05$.

Further analyses were limited only to respondents who reported any lifetime use of cigarettes to boost alcohol or drug high ($N=64$). Of this group, the majority (81%) reported both smoking cigarettes to boost an alcohol high and smoking cigarettes to boost a drug high. Table 2 displays the results of three regression analyses to examine the relationship between frequency of using cigarettes to enhance an alcohol high and various alcohol behaviors, controlling for the respondents' genders. Results indicate that increased frequency of boosting to enhance an alcohol high is related to an increased number of drinks per occasion. No significant associations were found with past-30-day alcohol use and heavy episodic drinking. In additional analyses we explored the possibility that a respondent's gender might moderate the relationship between frequency of using cigarettes to enhance alcohol effects and prevalence of past-30-day alcohol use, heavy episodic drinking and number of drinks on a typical drinking occasion. Because these interactions were not statistically significant, they were not included in the final models.

Table 3 displays the results of three regression analyses to examine the relationship between frequency of using cigarettes to enhance drug effects and marijuana use behaviors, controlling for the respondents' genders. Interestingly, a significant positive relationship was found between frequency of using cigarettes to enhance drug effects and prevalence of past-30-day blunts use, but not with prevalence of past-30-day marijuana use (other than

blunts). A positive relationship was also found with the number of blunts on a typical day. As before, in additional analyses we explored the possibility that a respondent's gender might moderate the relationship between frequency of using cigarettes to enhance drug effect and prevalence of past-30-day marijuana use, past-30-day blunts use and number of blunts on a typical day. Because these interactions were not statistically significant, they were not included in the final models.

Discussion

The findings of this study suggest that the practice of using cigarettes to enhance the effects of other substances may be common among drug-using Southeast Asian American youths, especially daily smokers. Moreover, boosting appears to be associated with heavier substance use for this population. Boosting was also found to be associated with use of blunts but not other forms of marijuana; and it was found to be related to the number of blunts on a typical day. These findings concur with other reports of a close association between use of blunts and cigarette smoking after cannabis use based in urban areas in the East Coast of the USA (Ream et al., 2008; Sifaneck, Johnson, & Dunlap, 2005) and with reports of an association between boosting and blunts smoking in the Southern USA (Jolly, 2008). Elsewhere we have reported on the similarities between the cultural contexts of blunts smoking for our respondents and reports from an East Coast sample, i.e. associations between blunts smoking and hip-hop music and a normative rejection of injected drugs (Soller & Lee, 2010). By adding the association of boosting with blunts smoking, the present findings further bolster assertions of a distinctive USA-based subcultural youth movement oriented to smoking marijuana in blunts (Golub, Johnson, & Dunlap, 2005; Golub, Johnson, Dunlap, & Sifaneck, 2004; Ream et al., 2006). Just as youthful marijuana users have been shown to learn to both manage and interpret their marijuana-smoking experiences through drug-use settings with other more experienced users (Becker, 1953), youths may be socialized to the practice of boosting through their involvement in the blunts-smoking subculture. Immigrant and second-generation youths, seeking to establish social identities distinct from their parents, may be particularly susceptible to drug subcultures if these are highly salient in their new communities (Lee, Battle, Soller, & Brandes, 2010; Soller & Lee, 2010).

Additionally, however, the present study confirms our qualitative findings of a relationship between boosting and alcohol use. Results of this study show that for the respondents in our project boosting was not a unique practice related to blunts or marijuana use only but also to alcohol. While research has shown that nicotine interacts with alcohol (Lajtha & Ser-shen, 2010) as well as with cannabis (Valjent, Mitchell, Besson, Caboche, & Maldonado, 2002), studies of boosting elsewhere had found the practice was unrelated to use of other drugs or alcohol (Ream et al., 2006). This suggests that subcultural patterns of substance use may be conditioned by specific features of groups such as race/ethnicity or geographic locale, as indeed has been shown for other drugs, for example club drugs in dance settings (Hunt & Evans, 2003). Our findings may derive from a stronger tendency to heavy drinking among Southeast Asian American youths, as we have reported elsewhere (Lee, Battle, Antin, & Lipton, 2008), compared to the African American and Latino blunts smokers of other studies (Ream et al., 2006).

These findings suggest that other cultural, social or psychological factors may also be of importance here. Positive expectancies related to boosting may also contribute to the prevalence of this practice. Personal beliefs, including positive expectancies, have been shown to predict substance use (Lipperman-Kreda, Paschall, & Grube, 2009; Lipperman-Kreda, Paschall, & Grube, 2009). These findings are limited by sample size and non-random sample frame and thus cannot be said to represent all Northern California youths, nor all

Southeast Asian youths. Nevertheless, our study suggests the importance of studying the social or cultural context of boosting as a tool for prevention. There have been relatively few studies on boosting and less on the social or cultural context of this practice. Also, boosting and its relationships with heavier drinking and blunts use should be taken into account in prevention efforts. The findings presented here indicate a need for further research on boosting as an aspect of cigarette uptake and maintenance among drug- and alcohol-involved youths.

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Table 1Sample characteristics, percent or mean (SD) (*N*= 89)

Variable	% or mean (SD)
Gender (%)	
Male	60.7
Female	39.3
Age Group (%)	
Youth (15-17)	7.9
Young Adults (18-23)	92.1
Any lifetime use of cigarettes to enhance alcohol or drug effects	71.9
Any cigarette smoking, past 30 days	73.0
Daily smokers, past 30 days	52.8
Any alcohol use, past 30 days ^a	
Beer	60.7
Malt liquor	28.1
Flavored malt liquor or wine coolers	31.5
Hard liquor	79.8
Wine	21.3
Frequency of heavy episodic drinking, past 30 days	1.31 (1.52)
Number of whole drinks on a typical drinking occasion	2.26 (1.44)
Frequency of blunt smoking, past 30 days	2.08 (2.24)
Number of blunts on a typical day	.87 (1.29)
Frequency of marijuana use, past 30 days	.85 (1.52)

^a A single past-30-day alcohol use factor score (mean=0, SD=1) was derived from the five past-30-day frequency measures.

Table 2

Results of linear regression analyses to examine relationships between frequency of using cigarettes to enhance alcohol effect and various alcohol behaviors, unstandardized beta (95% confidence interval)

Alcohol behaviors	Alcohol use, past 30 days	Number of drinks on a typical drinking occasion	Heavy episodic drinking, past 30 days
Gender	-.17 (-.69, .36)	.20 (-.65, 1.05)	1.16 (.38, 1.93)*
Frequency of using cigarettes to enhance alcohol effect	.19 (-.01, .38)	.39 (.07, .70)*	.17 (-.13, .46)
R ²	.07	.11	.13

*
p≤.05

**
p≤.001

Table 3

Results of linear regression analyses to examine relationships between frequency of using cigarettes to enhance drug effect and marijuana use behaviors, unstandardized beta (95% confidence interval)

Marijuana use behaviors	Marijuana use, past 30 days	Blunt use, past 30 days	Number of blunts on a typical day
Gender	-.51 (-1.39, .38)	-.62 (-1.75, .52)	-.13 (-.85, .59)
Frequency of using cigarettes to enhance drug effect	.19 (-.10, .49)	.64 (.26, 1.02) **	.34 (.10, .58) *
R ²	.07	.22	.16

*
p≤.05

**
p≤.001