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THE RELATIONSHIP BETWEEN REASONS FOR DRINKING ALCOHOL AND ALCOHOL CONSUMPTION: AN INTERACTIONAL APPROACH

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Abstract

Two motives for alcohol consumption have been emphasized in the etiological and the reasons-for-drinking literature: (a) people drink alcohol to cope with stress, and (b) people drink alcohol because of social influences. There is support for both of these hypotheses, but the results are usually modest and most authors agree that more complex theories of alcohol consumption are needed. This study examined the interactional effects of reasons for drinking alcohol and situational factors on alcohol consumption. Standardized telephone interviews were conducted with 781 randomly selected Michigan drinkers. Hierarchical multiple regression analyses indicated that gender, friends' alcohol consumption, coping, and social motives for drinking were significant predictors of study participants' alcohol consumption. As predicted, there was a significant interaction between drinking to cope with stress and perceived stress, and there was also a significant interaction between drinking for social reasons and friends' alcohol consumption. Similarities and differences in the results for women, men, Blacks, and Whites are described.

Individuals' expressed reasons for drinking alcohol

Since the 1950's, researchers have examined people's self-reported reasons for drinking alcohol (Cahalan, Cisin, & Crossley, 1969; Cooper, Russell, & George, 1988; Farber, Khavari, & Douglass, 1980; Johnson, Schwitters, Wilson, Nagoshi, & McClearn, 1985; Novacek, Raskin, & Hogan, 1991; Straus & Bacon, 1953). People do not have complete understanding of the nexus of physiological, psychological, social, and environmental factors that influence their behavior (Nisbett & Wilson, 1977). Nonetheless, self-reports of motives for drinking alcohol provide insight into people's psychological state and have empirically been related to consumption levels (Cahalan et al., 1969; Cooper et al., 1988; Farber et al., 1980). Most authors have focused on general samples of the adult population or college students, rather than alcoholics or identified problem drinkers. The majority of these studies have focused on the factor structure of individuals' motives for drinking, as well as determining if some types of motives are more strongly related than others to heavy alcohol consumption.

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A number of different motives for drinking alcohol have been examined, including drinking to enhance sociability, to increase power, to escape problems, to get drunk, for enjoyment, or for ritualistic reasons. Despite this diversity, most research has focused on two broad categories of motivation. The first category revolves around drinking for negative reinforcement, or what Mulford and Miller (1960) called "personal-effect motives." This motive has been labeled drinking to cope, and is usually defined as the tendency to use alcohol to escape, avoid, or regulate unpleasant emotions. The second category revolves around drinking for positive reinforcement, or what Mulford and Miller (1960) called "social-effect motives." This drinking motive has been labeled "drinking to be sociable" and encompasses drinking to be convivial, to celebrate social occasions, and to have a good time with others. Cahalan et al. (1969) found that social reasons were more commonly given for drinking alcohol, but that heavy drinkers chose more coping reasons than did infrequent drinkers. Many researchers have found that drinking alcohol to cope with problems is more likely to lead to abusive drinking than is social drinking (Cahalan et al., 1969; Cooper et al., 1988; Farber et al., 1980; Johnson et al., 1985). There is also evidence, however, that social motives for consuming alcohol can lead to heavy drinking (Brennan, Walfish, & AuBuchon, 1986; Ratliff & Burkhart, 1984). For example, Brennan et al. (1986), in their review of the longitudinal literature on college student drinkers, found that heavy drinkers who drank for social reasons were more prone to later problem drinking than heavy drinkers who drank to cope with personal problems. Thus, there is evidence that both social and coping motives for consuming alcohol can lead to heavy drinking.[1]

An interactional model of alcohol consumption

The etiological literature on alcohol consumption demonstrates that both psychological factors associated with stress reduction and social factors associated with cameraderie and modeling are linked to alcohol consumption (Abbey, Scott, Oliansky, Quinn, & Andreski, 1990; Collins, Parks, & Marlatt, 1985; Pearlin & Radabaugh, 1976; Sher & Walitzer, 1986). The magnitude of these relationships, however, is usually moderate, and the pattern of results is mixed (Cappell & Greeley, 1987; Young, Oei, & Knight, 1990).

From a person-environment fit or interactional perspective (French, Rodgers, & Cobb, 1974; Sadava, 1987), it seems reasonable to hypothesize that alcohol consumption will be best predicted by the simultaneous consideration of people's motives for drinking and the extent to which their current situation corresponds to their motivation. If someone drinks alcohol primarily to reduce stress, then this individual is most likely to drink under times of stress; it is at these times that there is fit between the individual's personal motives and life situation. If someone else drinks alcohol primarily in order to socialize, then this individual is most

[1]There is also a large literature on people's self-reported alcohol expectancies. For example, Brown (1985) found that college students' problematic drinking was linked to tension-reduction expectancies, while frequent drinking was linked to social and physical-pleasure expectancies. Christiansen, Smith, Roehling, and Goldman (1989) found that alcohol expectancies in early adolescence predicted problem drinking 1 year later. There is also variation in whether participants have been asked about their expectancies for people, in general, or for themselves, personally. Despite the conceptual overlap between expectancies and reasons for drinking, these literatures are largely separate, and few authors measure both in a single study. Smith, Abbey, and Scott (1993), found that coping motives and expectancies (for people in general) correlated .32, while social motives and expectancies correlated . 34, suggesting that these concepts share about 10% of their variance. Mann, Chassin, and Sher (1987) found that both motives and expectancies predicted high school students' alcohol consumption. Only motives for drinking were examined in the data described in this paper because of the authors' focus on the overlap between personal circumstances and personal motives.

likely to drink during periods of social activity; it is at these times that there is fit between the individual's personal motives and life circumstances. In a normal population of drinkers, quantity and frequency of alcohol consumption vary depending on an individual's situation. Consequently, there is a need to examine both reasons for drinking alcohol, and the extent to which current circumstances fit these reasons, in order to explain current levels of alcohol consumption.

This interactional approach was examined in a general population survey of adult drinkers. It was hypothesized that there would be an interaction between reasons for drinking and environmental circumstances. More specifically, it was hypothesized that, for individuals who reported drinking alcohol to cope with stress, alcohol consumption would be higher if levels of stress were high rather than low. In a similar manner, it was hypothesized that for individuals who reported drinking alcohol for social reasons, alcohol consumption would be higher if social network members' drinking levels were high rather than low.

Alcohol consumption has frequently been linked to sociodemographic factors including gender, ethnicity, and age (Cahalan et al., 1969; Clark & Midanik, 1982; Hilton, 1987). Gender, and to a lesser extent, ethnicity, have also been considered as mediating variables in the stress-reduction, social-influence, and reasons-for-drinking literatures (Abbey & Smith, 1992; Caudill, Wilson, & Abrams, 1987; Cooper, Waterhouse, & Sobell, 1979; Johnson et al., 1985). Consequently, the effects of gender, ethnicity, and age on the relationships described above were explored. As found in past research, women, Blacks, and older adults were expected to consume less alcohol than were men, Whites, and younger adults. Past research has produced conflicting results about the relationships between these demographic factors and individuals' motives for drinking. For example, some studies have found men reporting more coping motives than women (Wechsler & McFadden, 1979). Other studies have found women reporting more coping motives than men (Hill & Burgen, 1979), while other authors have reported no gender differences (Edwards, Hensman, & Peto, 1973). Consequently, these analyses were viewed as exploratory. It was our expectation that mean levels would differ between the various subgroups, but that the relationships found between stress, social influence, motives for drinking, and alcohol consumption would be similar for the different demographic subgroups.

METHOD

Study participants

Thirty-five-minute telephone interviews were conducted with 781 Michigan residents who had consumed alcohol in the past 30 days. In order to examine ethnic differences in predictors of alcohol consumption, the sample was restricted to White and Black individuals, and Blacks were oversampled. Thirty-nine percent of study participants were Black; 61% were White. Fifty-five percent of study participants were female; 45% were male. Study participants ranged in age from 21 (the minimum legal drinking age in Michigan) to 86 years, with a median age of 37 years. Thirty-three percent of study participants resided in a city, 14% lived in a suburb, 18% lived in a town, and 35% lived in a rural area. Eighty-seven percent of study participants had at least a high school education.

Forty-nine percent of participants were currently married. The median household income for study participants fell in the range of $15,000 to $24,999.

Procedures

The Waksberg (1978) two-stage random digit dialing procedure was used to generate the sample. Telephone numbers were randomly generated for households in eight Michigan counties which were selected to represent urban, suburban, and rural areas of the state. A household listing was solicited from whoever answered the telephone. Potential participants were told that this was a study of "many topics of interest including questions about grocery and alcohol purchase habits."[2] Using a computerized random numbers table, and adult age 21 or older was randomly selected from the household listing to be interviewed (the algorithm used by this program sampled Black households at a higher rate than White households). Of the 2,385 initially eligible households (i.e., containing at least one adult age 21 or older, from preselected county), 50% were screened out because the selected adult had not consumed alcohol in the previous month. This is comparable to the drinking rates found in national representative studies (National Institute on Drug Abuse [NIDA], 1988). Of the 1,195 eligible individuals, 351 refused to participate, and 63 were never interviewed. Thus, 65% of eligible adults completed the survey. This is considered a good response rate given the sensitive topic and length of the interview (Kidder & Judd, 1986).

Measures

Study participants' alcohol consumption—Study participants were asked to report on how many days out of the past 30 they had consumed an alcoholic beverage including beer, wine, wine coolers, and liquor. Then, they were asked how many drinks they usually consumed per drinking occasion (Cahalan et al., 1969; Clark & Midanik, 1982). In some of the data analyses reported in this paper, frequency and quantity were multiplied to produce an indicator of total monthly alcohol consumption. Studies using similar (but not identical) measures of alcohol consumption found high reliability in self-reports (Russell, Welte, & Barnes, 1991; Williams, Aitken, & Malin, 1985). In this study, the four types of alcoholic beverages (beer, wine, wine coolers, and liquor) were mentioned in each question, and study participants were asked to take a minute to think before giving their answers.

As an indicator of heavy alcohol consumption, study participants were asked to rate how often in the past month they had consumed five or more alcoholic drinks on one day (Cahalan et al., 1969; Hilton, 1987). This question was answered using a 5-point Likert-type scale with response options ranging from "never" to "nearly every time or every time" they drank.

Study participants were also asked how often they consumed drinks containing alcohol when socializing with their friends. This question was answered on a 5-point Likert-type scale with response options ranging from "never" to "always."

[2]A major focus of this study concerned the role of physical availability in alcohol purchase and consumption decisions. Consequently, participants were required to be of the legal drinking age so that their purchase habits (by legal means) could be assessed (Abbey, Scott, & Smith, 1993).

Reasons for drinking alcohol—Drinking to cope with stress was assessed with three items which asked study participants the extent to which they drank alcohol in order to cope with problems, cheer themselves up when they felt sad, and to forget about things that were bothering them. The Cronbach alpha for this scale was .78.

Drinking for social reasons was assessed with four items which asked study participants the extent to which they drank alcohol in order to be sociable, to enhance the enjoyment of social situations, because the people they knew drank, and to celebrate social occasions. This scale had a Cronbach alpha of .67.

Many of the items in both of the reasons for drinking scales were selected from previous research. The “cheer” and “forget” items from the coping scale and the “sociable,” “people they knew,” and “celebrate” items from the sociability scale were similar to items used by Cahalan et al. (1969) and Farber et al. (1980). All “reasons” items were answered using 4-point Likert-type scales with response options ranging from “not at all important” to “very important” as reasons for drinking alcohol. The drink-to-cope and drink-to-be-sociable scales were correlated .35.

Stress—Perceived stress was measured using a modified version of Pearlin and Schooler’s (1978) measure of role overload. This is a chronic stressor which is applicable to people from a wide range of circumstances. Research suggests that chronic and daily stressors may have a larger impact on health and well-being than do major life events (DeLongis, Folkman, & Lazarus, 1988). Four items assessed the extent to which study participants currently felt that they did not have enough time, had too much work to do, worked too many hours, and that others expected too much of them. (Work was defined as all types of work which people do, not just paid employment.) Responses were made on 5-point Likert scales with response options ranging from “strongly disagree” to “strongly agree.” The Cronbach alpha was .80.

Friends’ alcohol consumption—Study participants were asked how frequently their friends drank alcohol when they were socializing together. Responses were made on 5-point Likert-type scales with response options ranging from “never” to “always.”

In order to reduce the demand characteristics associated with answering the above questions, measures of these different topics were separated in the questionnaire. For example, the questions about reasons for drinking appeared in the middle of the questionnaire, while the questions about stress appeared near the end of the questionnaire. Questions about study participants’ alcohol consumption occurred several pages before questions about friends’ alcohol consumption and study participants’ alcohol consumption when with their friends.

RESULTS

Descriptive findings

Study participants had consumed alcoholic beverages between one and 30 days during the previous month (*M* = 7.24 days, median = 4.00 days). On the days that they drank alcohol, study participants consumed between 1 and 40 drinks (*M* = 2.67 drinks, median = 2.00

drinks). For data-analytic purposes, number of drinks was Winsorized (collapsed) such that the highest category was 10 or more drinks. This reduced the skew to 1.96. Total monthly alcohol consumption was Winsorized such that the highest category was 90 drinks or more. This reduced the skew to 1.91. Research suggests that multiple regression is robust regarding the assumption of normality, so that skews of this size should not affect the quality of the results (Bohrnstedt & Borgatta, 1981). On average, study participants consumed five or more alcoholic beverages "once in a while."

Table 1 displays the gender differences which were found in alcohol consumption and reasons for drinking alcohol. As found in past research (Cahalan et al., 1969; Clark & Midanik, 1982; NIDA, 1988), men consumed significantly more alcohol than did women, as indicated by all five alcohol consumption indicators. Men also reported that both coping and social motives for drinking were more important to them than did women.

Table 2 displays the ethnic differences which were found in alcohol consumption and reasons for drinking alcohol. As found in past research (Cahalan et al., 1969; Clark & Midanik, 1982), Black study participants consumed significantly less alcohol than did White study participants as indicated by four out of the five alcohol consumption indicators. Blacks rated drinking to cope with stress as a more important reason for their drinking than did Whites. Whites rated drinking to be sociable as a more important reason for their drinking than did Blacks.[3]

Multiple regression analyses

In order to examine the study's hypotheses, a series of hierarchical multiple regression analyses were conducted. Three different indicators of alcohol consumption were used as dependent variables: total monthly alcohol consumption, frequency of heavy drinking, and frequency of drinking with friends. (Total monthly alcohol consumption was correlated .56 with heavy drinking and .51 with frequency of drinking with friends, *p*s < .001. Heavy alcohol consumption and frequency of drinking with friends were correlated .28, *p*s < .01.) Different results have sometimes been found with different operationalizations of alcohol consumption (Abbey et al., 1990; Brown, 1985).

Preliminary analyses—In order to determine if it was important to control for demographic variables, preliminary hierarchical multiple regression analyses were conducted. Gender, ethnicity, and age were entered as the first block of independent variables. Being male was positively related to each indicator of alcohol consumption. Age was negatively related to total monthly alcohol consumption but modestly, positively related to frequency of drinking with friends. Being White was associated with increased drinking on all three alcohol consumption indicators. Demographic variables alone accounted for 11% of the variance in total monthly alcohol consumption; 10% of the variance in frequency

[3]In order to control for the possible effects of age on gender and ethnicity, a series of ANCOVAs were conducted which paralleled the analyses summarized in Tables 1 and 2, except that age was added as a covariate. In all cases except one, the same gender and ethnic effects were significant in the covariate analysis as were significant in the ANOVAs. For frequency of consumption in the past 30 days, the effect of ethnicity was only at the $p < .10$ level in the covariate analysis.

of heavy consumption; and 4% of the variance in frequency of drinking with friends (F_s = 33.50, 29.14, 10.61, respectively; all *p*s < .001).

In the second preliminary step, the interactions between each of these three sociodemographic factors and each motive for drinking alcohol (six interaction terms) were entered as a block of predictor variables. This determined if motives for drinking interacted with demographic factors in a consistent way. For heavy alcohol consumption, the interaction between age and coping motives was a significant predictor variable. Inspection of the means indicated that while, at all ages, individuals high in coping motives drank more heavily than individuals low in coping motives, this difference diminished with increasing age. The interaction between ethnicity and coping motives was a significant predictor variable for all three alcohol indicators. Inspection of the means indicated that while both Blacks and Whites who were high in coping motives drank more than did individuals low in coping motives, this difference was much larger for Whites than for Blacks. No other interaction terms had significant effects on alcohol consumption.

Main analyses—The main analyses involved hierarchical multiple regression analyses with three blocks of variables. The first block included the main effects of gender, ethnicity, age, coping motives, social motives, perceived stress, and friends' alcohol consumption when socializing with the respondent. The second block of variables included the interactions of coping motives with age and ethnicity. The third block of variables included the interactions of coping and social motives with stress and friends' alcohol consumption. These interaction terms were centered, as recommended by Jaccard, Turrisi, and Wan (1990) to reduce multicollinearity among cross-product terms and their constituent variables. By entering the interactions between motives for drinking and situational factors last, after the demographic variables (main effects and interactions) and psychosocial variables (main effects) were already entered, it can be determined if these interactions increase the amount of variance explained beyond that explained by the other variables.[4]

Table 3 summarizes these analyses (F_s = 21.30, 13.73, 23.35, for total monthly consumption, frequency of heavy consumption, and frequency of consumption with friends, respectively; all *p*s < .001). Being male, friends' frequency of alcohol consumption, coping motives, and social motives were positively related to each indicator of alcohol consumption. As one might expect, friends' alcohol consumption and social motives were most strongly linked to study participants' alcohol consumption with friends. Drinking alcohol to cope with stress was strongly related to all three consumption indicators, particularly heavy drinking. As described in the previous section on demographic factors, age and ethnicity related to alcohol consumption in interaction with motives for drinking. The first two sets of variables explained between 17.4% (frequency of heavy consumption) and 25.6% (frequency of drinking with friends) of the variance in alcohol consumption.

[4]A preliminary set of subgroup hierarchical multiple regression analyses were conducted. When women, men, Blacks, and Whites were analyzed separately, the same set of psychosocial predictor variables emerged for each subgroup. Consequently, all respondents are included in the analyses reported here.

As hypothesized, the interaction between stress and coping motives, and the interaction between friends' alcohol consumption and social motives were significant predictors of all three consumption indicators. On average, 2% of additional variance was explained when these interaction terms were included. These interactions are illustrated in Table 4. When coping motives were high as compared to low, individuals experiencing moderate or high levels of stress engaged in more heavy alcohol consumption. When social motives were high as compared to low, individuals whose friends were high-frequency drinkers engaged in the most heavy drinking. The interactions between stress and social motives, and between friends' drinking and coping motives were not expected to be significant because, in these cases, personal motives and situational factors do not correspond — with one exception; these interaction terms were not significant predictors of alcohol consumption (individuals whose coping motives were high and whose friends were high frequency drinkers had the highest total monthly alcohol consumption).

DISCUSSION

Consistent with past research, gender, age, friends' alcohol consumption, and coping and social motives for drinking had significant main effects on social drinkers' alcohol consumption. As hypothesized, the interaction between personal motives for drinking alcohol and circumstances relevant to those motives significantly predicted alcohol consumption. People who reported drinking alcohol as a means of coping with stress consumed more alcohol when experiencing stress. People who reported drinking alcohol to be sociable drank more alcohol when their friends frequently consumed alcohol at the social gatherings they attended together. These findings demonstrate the importance of simultaneously considering personal motives for drinking alcohol and the extent to which individuals' life circumstances correspond to these motives for drinking. Although the amount of variance explained by the interaction effects was not large, these results suggest that a focus on interactive effects can enhance the explanatory power of alcohol research and suggest an avenue for prevention and treatment efforts.

Both ethnicity and age interacted with motives for drinking. Young adults showed the strongest relationship between drinking to cope with stress and heavy alcohol consumption. Whites' and Blacks' alcohol consumptions were positively related to drinking to cope with stress; however, this relationship was more pronounced for Whites than for Blacks. The analyses of variance also indicated that ethnicity and gender were related to motives for drinking. Although these differences were not large, they demonstrate the need for sociodemographic variables to be systematically examined in future reasons-for-drinking research.

Additional research using different methodologies and populations is needed to validate this study's results. The results presented here are based on cross-sectional data. This study's hypotheses would be most directly tested in a prospective study in which changes in stress, social influences, and motives for drinking alcohol could be used to predict changes in alcohol consumption at a later point in time.

Replication of this study is also needed with members of other ethnic groups and infrequent drinkers. Studies which obtain data from a variety of sources, rather than relying solely on self-reports, would enhance the generalizability of this study's results. It would also be valuable to replicate this study with additional indicators of stress, social influence, and reasons for drinking. For example, the stress measure used in this study assessed chronic role overload. Ideally, other types of chronic and acute stress would be included. Other reasons for drinking have been posited, and their relationship to environmental circumstances and alcohol consumption could also be examined.

A more precise test of the interactional hypothesis would be situation-specific. In this study, people were asked about alcohol consumption in the past month, general reasons for drinking, and current stress. Ideally, alcohol consumption, reasons for drinking, and environmental circumstances would all refer to the same specific event (cf. Corcoran & Parker, 1991). A diary or in-depth interview study would allow for the use of more sensitive measures than were possible in the large-scale survey described here. Qualitative research which examines the complex interplay of individual, social, and situational factors would be of particular value. This study's results suggest that a strong belief in either coping or social reasons for drinking alcohol puts individuals at risk for abusing alcohol, especially when the appropriate environmental circumstances arise.

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Table 1

Gender differences in mean levels of alcohol consumption and reasons for drinking alcohol

	Means (Standard deviations)		
	Men (*n* = 348)	**Women (*n* = 433)**	***F*-value**
Frequency of consumption in past 30 days	9.07 (9.10)	5.19 (5.83)	55.12**
Usual quantity consumed	2.78 (2.24)	2.04 (1.44)	39.36**
Total monthly consumption	23.79 (27.47)	11.60 (16.40)	65.32**
Frequency of heavy drinking[a]	1.88 (1.16)	1.39 (.86)	43.89**
Frequency of consumption with friends[b]	3.02 (.89)	2.77 (.80)	16.54**
Drink to cope with stress	1.55 (.77)	1.45 (.70)	3.73*
Drink for social reasons	2.14 (.66)	2.00 (.61)	8.93**

[a] Responses ranged from never (1) to nearly every time or every time (5).

[b] Responses ranged from never (1) to always (5).

* $p < .05$.

** $p < .01$.

Table 2

Ethnic differences in mean levels of alcohol consumption and reasons for drinking alcohol

	Means (Standard deviations)		
	Whites (*n* = 475)	**Blacks (*n* = 304)**	***F*-value**
Frequency of consumption in past 30 days	7.31 (8.18)	6.23 (7.09)	3.84*
Usual quantity consumed	2.47 (1.92)	2.18 (1.82)	5.73*
Total monthly consumption	18.46 (23.29)	14.47 (21.23)	6.22**
Frequency of heavy drinking[a]	1.62 (1.06)	1.58 (.99)	n.s.
Frequency of consumption with friends[b]	2.96 (.88)	2.75 (.78)	11.87**
Drink to cope with stress	1.44 (.68)	1.58 (.79)	7.47**
Drink for social reasons	2.10 (.64)	2.00 (.64)	3.72*

[a] Responses ranged from never (1) to nearly every time or every time (5).

[b] Responses ranged from never (1) to always (5).

* $p < .05$.

** $p < .01$.

Table 3

Hierarchical multiple regression analyses

	Total monthly consumption	Frequency of heavy consumption	Frequency of drinking when socializing with friends
Predictors in Step 1:			
Gender	.27**	.20**	.11*
Ethnicity	.01	−.01	−.02
Age	−.11*	−.04	.11*
Stress	−.02	−.01	.01
Friends'			
Consumption	.17*	.07*	.41**
Coping motives	.30**	.42**	.29**
Social motives	.08*	.09*	.14*
Adj. R^2	22.2	16.9	25.3
Predictors in Step 2:			
Age × cope	.05	−.20**	−.09
Ethnicity × cope	−.13*	−.12*	−.18*
Adj. R^2	22.6	17.4	25.6
Predictors in Step 3:			
Cope × stress	.07*	.07*	.10*
Social × friends	.11*	.08*	.11*
Cope × friends	.10*	−01	−.01
Social × stress	−.02	−.05	−.02
Adj. R^2	25.5	18.1	27.4

Note. Cell entries are standardized beta coefficients. For gender, positive betas are associated with being male. For ethnicity, positive betas are associated with being white.

* $p < .05$.

** $p < .01$.

Table 4

Mean levels of frequency of heavy drinking by motives for alcohol consumption and situational factors

	Coping motives	
	Low	**High**
Perceived stress		
Low	1.36[a] (138)	1.61[a] (92)
Moderate	1.46[a] (153)	2.06[b] (100)
High	1.33[a] (133)	1.97[b] (136)

	Social motives	
	Low	**High**
Friends' alcohol consumption		
Low	1.32[a] (104)	1.47[a] (32)
Moderate	1.42[a] (193)	1.68[b] (133)
High	1.45[a] (126)	2.07[c] (166)

Note. Cell sample sizes are presented in parentheses. Median and tripartite splits were used to form the subgroups. Means with different superscripts have significantly different values based on the Newman-Keuls procedure (Winer, 1971), ($p < .05$).