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The influence of individualism and drinking identity on alcohol problems

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Abstract

This study evaluated the interactive association between individualism and drinking identity predicting alcohol use and problems. Seven hundred and ten undergraduates (Mean age =22.84, SD = 5.31, 83.1% female) completed study materials. We expected that drinking identity and individualism would positively correlate with drinking variables. We further expected that individualism would moderate the association between drinking identity and drinking such that the relationship between drinking identity and alcohol outcomes would be positively associated, particularly among those high in individualism. Our findings supported our hypotheses. These findings better explain the relationship between drinking identity, individualism, and alcohol use. Furthermore, this research encourages the consideration of individual factors and personality characteristics in order to develop culturally tailored materials to maximize intervention efficacy across cultures.

Keywords

drinking identity; individualism; collectivism; alcohol

Introduction

College drinking

Decreasing alcohol misuse is a primary health goal for the nation (U.S. Department of Health and Human Services, 2009). Although the majority of undergraduate students are younger than the legal drinking age of 21, heavy drinking is often reported between the ages of 18-21 (Chen & Kandel, 1995). Published research shows that college students report heavier drinking relative to their non-college peers (Johnston, O'Malley, Bachman, & Schulenberg, 2012). According to "Monitoring the Future," roughly 80% of college students consume alcohol and are at increased risk for alcohol problems relative to non-college peers (Johnston et al., 2006). Furthermore, approximately 44% of undergraduates consume more than five consecutive drinks on one occasion within the past two weeks and thus meet heavy drinking criteria according to the Substance Abuse and Mental Health Services

Administration (2009; Wechsler, Lee, Kuo, & Lee, 2000; Wechsler, Lee, Kuo, Seibring, Nelson, & Lee, 2002; Wechsler, Lee, Nelson, & Kuo, 2000). College drinkers are more likely to experience negative effects due to alcohol including problems with authorities, hangovers, injuries, poor general health, psychosocial problems, eating disorders, depression, risky sexual behavior, and sexual assault (Dunn, Larimer, & Neighbors, 2002; Geisner, Larimer, & Neighbors, 2004; Hingson, 2010; Kaysen, Neighbors, Martell, Fossos, & Larimer, 2006; Wechsler, Kuo, Lee, & Dowdall, 2000). Furthermore, although about 20% of undergraduates meet criteria for alcohol abuse or dependence, less than 5% seek counseling or treatment for alcohol problems (NIAAA, 2007). Therefore, additional research is needed to better understand individual characteristics that may lead to or buffer against problematic drinking among at-risk college students.

Drinking identity

Drinking identity is one such individual characteristic that may facilitate better understanding of factors that predict drinking among college students. Drinking identity can be described as the extent to which a person views alcohol use as a defining characteristic of their identity and has been shown to lead to alcohol use (Conner et al., 1999). The theory of planned behavior (TPB; Ajzen, 1991) is a widely-supported theory associated with behavioral precursors to drinking (Collins & Carey, 2007; Conner, Warren, Close, & Sparks, 1999; Huchting, Lac, & LaBrie, 2008) and proposes that attitudes, subjective norms, and perceived behavioral control jointly influence intentions, which in turn affect behavior (Ajzen, 1991). Published research indicates that the predictive validity of intent and behavior improves with the addition of the self-identity concept, that is, the perception of self that a person holds (e.g., Charng, Piliavin, & Callero, 1988; Fekadu & Kraft, 2001; Pierro et al., 2003; Smith et al., 2007). Thus, including identity with respect to alcohol may strengthen predictions of drinking behavior. Individuals tend to strive to maintain consistent self-views (Lalwani & Shavitt, 2009; Steele, 1988). Engaging in behaviors that are consistent with one's identity may facilitate maintenance of consistency. As such, alcohol identity may be a useful factor to consider in the prediction of drinking behavior.

Drinking identity has been associated with alcohol use among undergraduate students (Casey & Dollinger, 2007; Dollinger, 1996; Dollinger, Rhodes, & Corcoran, 1993). The drinking identity literature includes evaluations of implicit and explicit measures for identity. Implicit measures such as the Implicit Association Test (IAT; Greenwald, McGhee, & Schwartz, 1998) show that implicit drinking identity more reliably predicts drinking relative to other alcohol-related implicit attitudes (Foster, Neighbors, & Young, under review; Gray, Laplante, Bannon, Ambady, & Shaffer, 2011; Lindgren, Foster, Westgate, & Neighbors, 2013). Similarly, explicit (self-reported) alcohol identity, has also demonstrated links with increased drinking (e.g., Foster, Yeung, & Prokhorov, under review; Neighbors et al., 2010; Reed et al., 2007). Importantly, increases in alcohol consumption are in turn linked with increased risk for alcohol-related problems (e.g., Lindgren et al., 2012). There is much overlap between implicit and explicit measures for drinking identity, and both are significantly associated with increases in alcohol consumption. The drinking literature consistently demonstrates that alcohol identity is positively associated with consumption (e.g., Foster, Yeung, & Neighbors, under review; Foster, Yeung, & Prokhorov, under

review; Lindgren, Foster, Westgate, & Neighbors, in press; Neighbors et al., 2010; Reed et al., 2007), which is in turn linked to increased problems (e.g., Lindgren et al., 2012). Examining moderators of this relationship will further elucidate factors important in engaging in problematic drinking behavior.

Individualism versus collectivism

Ethnic differences in alcohol use may stem from differences in attitudes, beliefs, and values about drinking which may reflect a person's socialization context (Sabogal, Otero-Sabogal, Perez-Stable, Marrin, & Marin, 1989). Differences in substance use rates may be influenced by specific cultural dimensions such as individualism versus collectivism. Individualistic cultures traditionally value beliefs, attitudes, and behaviors that develop and benefit the self (Booker, Gallaher, Unger, Ritt-Olson, & Anderson-Johnson, 2004). That is, individualism can be described as the tendency for individuals to think of themselves as unique or apart from larger groups and view collective interests as secondary to personal pursuits (Hofstede, 1980). In contrast, collectivistic cultures tend to value beliefs, attitudes, and behaviors that support and reflect elders, the family, the community, and the collective unit (Booker et al., 2004). In other words, collectivism is the tendency for individuals to consider themselves as part of a larger entity and to view personal pursuits as secondary to the pursuit of collective gains (Triandis, 1995; Wagner, 2002). Given these differences between individualistic and collectivistic cultures, one would assume that individuals that identify with collectivistic societies would be more prone to protect and emulate the identity of the culture, whereas individuals that identify with individualistic cultures would be less likely to conform to the identity of the culture and more likely to be sensitive to individual characteristics. Evidence from the substance use literature has demonstrated a positive association between individualistic culture and substance use indicating that individuals from more collectivistic-oriented backgrounds tend to report lower tobacco use rates relative to those from more individualistic backgrounds (Vega, Chen, & Williams, 2007). The possible moderating relationship between where a person falls on the spectrum between individualistic and collectivistic, drinking identity, and alcohol use warrants careful consideration, particularly as it relates to development of alcohol reduction programs for undergraduate students. Further, research indicates that for individualistic cultures, personal goals have precedence over group goals and increased cultural complexity (more cultural lifestyles and choices; Chick, 1997). This carries significance because a more complex culture (an individualistic culture) is more likely to be 'loose' such that there is more tolerance for deviation from norms (Triandis, 2001). Thus, we would expect that individualism will moderate the association between drinking identity and alcohol use such that drinking identity will be positively associated with alcohol variables, particularly among those higher in individualism. Evaluations of this moderating relationship will facilitate elucidation of individual factors and personality characteristics that influence alcohol consumption and risk for experiencing undesired consequences.

Current study

This study was designed to evaluate the interactive association between individualism and drinking identity predicting alcohol use and problems. Based on published research demonstrating positive correlations between drinking identity and drinking (e.g., Casey &

Dollinger, 2007) and positive correlations between individualism and drinking (e.g., Vega, Chen, & Williams, 2007), we expected that drinking identity and individualism would positively correlate with drinking. Furthermore, we expected that individualism would moderate the association between drinking identity and drinking such that the relationship between drinking identity and alcohol outcomes would be positively associated, particularly among those high in individualism.

Method

Participants and procedure

The current research included 710 undergraduate students (M age = 22.87, SD = 5.37, 82.50% female) from a large southern university (total student body N = 39,820 in 2011) who completed computer-based study materials as a part of a larger intervention. Data for the present study were from the baseline assessment of this larger trial. Participants were recruited via announcements made in classrooms by study personnel and informational flyers distributed during classroom recruitment and placed at various locations on campus. Participants received extra credit as compensation for participation in this research. The sample was ethnically diverse: 40.8% Caucasian, 18.8% Black/African American, 19.9% Asian, 0.5% Native Hawaiian/Pacific Islander, 5.3% Multi-Ethnic, 0.7% Native American/American Indian, and 14% endorsed “Other” on the demographic questionnaire. Additionally, 30% of participants reported as Hispanic/Latino.

Measures

Demographics—Participants reported information including age, gender, race/ethnicity, and year in school.

Alcohol use—Alcohol consumption was assessed using the *Quantity/Frequency Scale* (QF; Baer, 1993; Marlatt et al., 1995), which is a five-item scale that asks participants to report the number of alcoholic beverages and the number of hours spent drinking on a peak drinking event within the past 30 days. The QF also assesses the number of days out of the month alcohol was consumed (0 = I do not drink at all, 1 = about once per month, 2 = two to three times a month, 3 = once or twice per week, 4 = three to four times per week, 5 = almost every day, or 6 = I drink once daily or more). Alcohol consumption was also measured using the *Daily Drinking Questionnaire* (Collins et al., 1985; Kivlahan et al., 1990), which assesses the number of standard drinks consumed on each day of the week (Monday-Sunday) within the last 90 days (three months). Scores represent the average number of drinks consumed over the course of each week during the past month. Weekly drinking is a reliable index of problem drinking among undergraduates relative to other indices of alcohol consumption (Borsari, Neal, Collins, & Carey, 2001).

Alcohol-related problems—The *Rutgers Alcohol Problem Index* (White & Labouvie, 1989) is a 25-item scale that measures negative consequences related to alcohol use in the last 30 days. Responses range from never (0) to 10 times or more (4). Items were rated based on how many times each problem occurred while drinking (e.g., “went to work or school high or drunk”). Total summed scores ranged from 0 to 100 (White & Labouvie, 1989).

Drinking Identity—Drinking identity was measured using a five-item scale adapted from the Smoker Self-Concept Scale (Shadel & Mermelstein, 1996). The scale assesses the degree to which participants believe alcohol use is integrated with their own self-concept using a scale ranging from 1 = *Strongly disagree* to 7 = *Strongly agree* (Shadel & Mermelstein, 1996).

Individualism—The individualism subscale (16 items) of the Individualism-Collectivism scale (Singelis, Triandis, Bhawuk, & Gefland, 1995) was used to assess individualism. Items were answered on a 7-point Likert type scale ranging from 1 (*Strongly Disagree*) to 7 (*Strongly Agree*). Examples of items include “When I succeed, it is usually because of my abilities” and “I prefer to be direct and forthright when discussing with people.”

Results

Descriptives

Means, standard deviations, and correlations for all of the variables are presented in Table 1. Drinking identity was significantly and positively correlated with drinking and problems (peak drinks $r = 0.40, p < .001$; drinking frequency $r = 0.36, p < .001$; drinks per week $r = 0.40, p < .001$; alcohol-related problems $r = 0.47, p < .001$), indicating that a higher level of drinking identity was related to more drinking and alcohol-related problems. Thus, our findings with respect to drinking identity are consistent with previous literature and support our expectations related to correlations between DI, drinking, and problems. Individualism was negatively correlated with alcohol-related problems ($r = -0.09, p < .01$), positively correlated with peak drinks ($r = 0.08, p < .05$), but not significantly correlated with drinking frequency ($r = 0.03, p > .05$) and drinks per week ($r = 0.05, p > .05$). This indicates that a higher level of individualism was related to less alcohol-related problems and more peak drinks.

Primary analyses

To test our hypothesis that the relationship between drinking identity and drinking outcomes would be moderated by individualism, multiple hierarchical regressions were conducted (Table 2). In Block 1, we evaluated outcomes as a function of drinking identity and individualism. In Block 2, we added the two-way product term between drinking identity and individualism to evaluate the interaction effect. Consistent with expectations, we found a positive association between drinking identity and problems ($\beta = 0.48, p < .001$), peak drinks ($\beta = 0.42, p < .001$), drinking frequency ($\beta = 0.38, p < .001$), and drinks per week ($\beta = 0.42, p < .001$). Further, we found a positive significant association between individualism and peak drinks ($\beta = 0.12, p < .001$), drinking frequency ($\beta = 0.07, p < .05$), and drinks per week ($\beta = 0.09, p < .01$), but a non-significant association between individualism and alcohol-related problems ($\beta = -0.06, p > .05$). At Block 2, a significant two-way interaction emerged between drinking identity and individualism when predicting alcohol-related problems ($\beta = -0.08, p < .05$). It reveals that drinking identity was associated with increased alcohol problems, and this relationship is stronger among individuals with lower individualism compared to individuals with higher individualism. Results from simple slope analysis indicated that the positive association between drinking identity and alcohol-related

problems were significant both at a lower level (-1 SD) of individualism ($\beta = 0.53, p < .001$) and a higher level (+1 SD) of individualism ($\beta = 0.40, p < .001$) (Figure 1). No significant interactions emerged when predicting alcohol consumption variables (peak drinks, drinking frequency, and drinks per week). Thus, our expectations regarding an interaction between drinking identity and individualism in predicting drinking variables were partially supported; an interaction emerged when predicting problems but not consumption.

Discussion

This study was designed to explore the moderating relationship between where a person falls on the spectrum between individualistic and collectivistic cultural orientation, drinking identity, and alcohol use. More specifically, this study evaluated relationships between drinking identity, individualism, alcohol-related problems, and alcohol consumption. Findings further emphasize the importance of considering the influences of personality and societal characteristics on alcohol-related problems and consumption. Consistent with expectations, findings from the present study indicate that the extent to which undergraduate students report that alcohol is part of their identity predicts weekly alcohol intake. Additionally, results demonstrate that this association is moderated by individualism. More specifically, students who identified drinking as part of their self-image also reported more alcohol-related problems, and the relationship may be stronger among students who reported less individualism than more individualism. This relationship did not hold true, however, for alcohol consumption, indicating that individualism may be protective against alcohol consumption for those who identify as drinkers.

As noted previously, drinking identity has been associated with increased alcohol consumption (Casey & Dollinger, 2007; Dollinger, 1996; Dollinger, Rhodes, & Corcoran, 1993). Our results are consistent with previous literature, showing an association between drinking identity and alcohol consumption and alcohol-related problems (see Table 1), which confirmed our first hypothesis.

We also predicted in our second hypothesis that individualism would be positively associated with both alcohol consumption and alcohol-related problems. This hypothesis was only partially confirmed, as we found a strong negative association between individualism and alcohol-related problems and no significant correlation with two of the alcohol consumption measures, drinking frequency and drinks per week. The only alcohol-related measure with which individualism was significantly positively correlated was drinks per week, indicating that those who value individualism are actually less prone to alcohol-related problems but more likely to drink more on their heaviest drinking occasion. In fact, individualism was negatively correlated with alcohol-related problems. We speculate that these mixed findings might be due to the association between individualism and susceptibility to social pressures. Hofstede (1980) found that people with high levels of individualism yield less to social pressures or the “common good,” and instead pursue self-relevant goals. In this way, people may drink more in a heavy drinking session because they are less cognizant of negative social attitudes toward excessive alcohol consumption. This resistance to social pressure may then become protective, however, as people who are high in individualism would be less likely to be pressured to drink for purely social reasons. Prior

research has demonstrated a link between social pressures to drink and alcohol-related problems in college samples (Beck, Caldeira, Vincent, & Arria, 2013); this may indicate, in part, why individualists in this sample were less prone to alcohol-related problems.

Our third hypothesis, and the primary focus of our study, was that the interaction between drinking identity and individualism significantly predict both alcohol consumption and alcohol-related problems. Specifically, we expected that drinking identity would be more strongly related to alcohol consumption and alcohol-related problems among individuals that reported individualism. Again, our hypothesis was only partially supported. We found that the positive association between drinking identity and alcohol-related problems was stronger among individuals with lower individualism, contrary to our prediction. Additionally, no significant interaction emerged when predicting any of the alcohol consumption variables (peak drinks, drinking frequency, and drinks per week). An examination of the literature reveals potential explanations for these somewhat unexpected findings. Researchers have found that people high in individualization had stronger achievement values (Nelson & Shavitt, 2002) and prefer rewards that are personally suited to them and equitable with the effort required of them (Tower, Kelly, & Richards, 1997). These characteristics may allow those high in individualism to more clearly perceive the potential detriments of alcohol behaviors, and therefore individualism may be protective against alcohol-related problems among individuals who strongly identify as drinkers. Furthermore, the influence of individualism seems to be intrinsically tied with the values and representations of the self, forming not only an integral part of a person's identity, but also an intrinsic motivation to perceive that identity as valuable and preserve it (Ka itçiba i, 1997). Thus, drinking identity and individualism could potentially interact such that individualists who identify themselves as drinkers perceive the detriments associated with alcohol-related problems as threats to their identity, which might encourage them to better manage their drinking behaviors (Ellemers, Spears, & Doosje, 1999). In this case, individualism would not necessarily lead to stronger/higher drinking identity and vice versa, which would explain why there is no significant interaction between these characteristics and drinking behaviors, but the interaction of both characteristics and the resulting resistance to damaging their sense of self and achievement would predict drinking-related problems.

Moreover, the pervasive influence of individualism may work at more than an individual level. Researchers have developed a model that demonstrates several personality dimensions, including collectivism-individualism, are constructed similarly among a culture and its individuals (Schwartz, 2004). Thus, the perception of alcohol use on a national level could not only affect the drinking behaviors and subsequent alcohol-related problems, but the identity of the United States as a vertical individualistic culture (Sivadas, Bruvold, & Nelson, 2008) could foster individualistic tendencies in people which would then exacerbate their response to alcohol-related problems. In this case the relative lack of prolific drinking in the United States, compared with other developed countries (WHO, 2011), could explain why drinking identity and lower individualism did not predict drinking behaviors but did predict drinking problems.

There are several potential implications of the findings of the current study in alcohol interventions and treatments. The drinking identity and individualism results suggest two

personality constructs that may play a specific role in drinking behaviors and problems and therefore should be considered when developing appropriate treatments for alcohol use. It is important to note that although the individualism construct reflects aspects of the participant's personality, this construct is influenced and shaped by societal and cultural expectations and norms. Given that people in the United States tend to value individualism, treatment goals could be personalized to increase individualistic behaviors and therefore offer some protection against alcohol-related problems for people who are low in individualism. In other cultures, treatment could be modified to suit a collectivist or individualist nature. In addition, a broader societal intervention could be developed that would address the drinking identity of the entire nation, which would then be reflected in the individual personality structures.

Limitations and future directions

Even though college students are an at-risk population for problem drinking (Chen & Kandel, 1995; Johnston et al., 2006) and are therefore a population in need of specific research, the sole recruitment of college students for the current study is a limitation, and the results obtained may not be generalizable to other populations. In addition, the study was not limited to only participants who engage in drinking behaviors, which is a limitation in a study that is focused on drinking outcomes. However, the exclusion of abstainers and light drinkers from analyses did not provide sufficient power to detect potential effects. Moreover, this study did not examine first generation versus second generation individuals, and thus, additional research is needed to understand whether the moderating relationship of individualism emerges more strongly among first generation individuals relative to second generation.

Further limitations include criticisms of the individualism-collectivism scale for its lack of specificity and a precise definition (Brewer & Chen, 2007; Earley & Gibson, 1998; Ka itçiba i, 1997; Oyserman, Coon, & Kimmelmeier, 2002). As the measures are refined, the nature of the interaction between DI, individualism, and drinking behaviors and problems can be examined more fully. Future work might also sample proportionate numbers of individuals in each ethnic/racial category. Moreover, the cultural impact of individualism and collectivism could be present on multiple levels inside the nation; thus, there may be a national influence as well as a state influence and a community influence and so on (Vargas & Kimmelmeier, 2012). Therefore, it may be beneficial to include all levels of influence in future interventions. Furthermore, it has been demonstrated that socioeconomic factors may have an effect on levels of individualism (Freeman, 1997; Marshall, 1997) and therefore should also be taken into account in future research. Finally, the cross-sectional nature of the data limits interpretation as correlational only; experimental or longitudinal designs should be considered in the future to elucidate causal implications.

Conclusion

This study contributed to the alcoholism literature by evaluating the interactive association between individualism and drinking identity (DI) predicting drinking behaviors and drinking problems. We found that, partially consistent with our hypothesis, drinking identity significantly predicted alcohol-related problems and that individualism moderated the

association between drinking identity and alcohol-related problems but, unexpectedly, not alcohol consumption. It appears that those who identify themselves as drinkers, but report low levels of individualism are more prone to negative alcohol-related consequences than those who place more value on individuality but are no more likely to engage in drinking behaviors. We speculate that the partial inconsistencies of the results with our hypotheses are due to cultural influences and the effects of individualism as an identity on overall behaviors. This study expands the extant literature by explaining the relationship between drinking identity, individualism, and drinking, and encourages the conscious consideration of individual and cultural factors in conjunction with drinking interventions.

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Figure 1.

High drinking identity was associated with increased alcohol-related problems, and this relationship was stronger among individuals with low individualism compared to individuals with high individualism.

Table 1
Means, Standard Deviations, and Correlations among Variables

	1.	2.	3.	4.	5.	6.
1. Drinking identity	--					
2. Individualism	-0.09**	--				
3. Alcohol problems	0.47***	-0.10**	--			
4. Peak drinks	0.40***	0.08*	0.41***	--		
5. Drinking frequency	0.36***	0.03	0.35***	0.72***	--	
6. Drinks per week	0.40***	0.05	0.40***	0.71***	0.67***	--
Mean	0.49	33.07	29.18	3.20	2.93	3.73
Standard Deviation	1.03	4.88	8.56	3.58	2.66	5.94
Minimum	0	8	25	0	0	0
Maximum	6	40	125	21	11	58

Note. N = 710.

 $p < .001$,

**
 $p < .01$,

*
 $p < .05$.

Table 2
Hierarchical regression analysis predicting alcohol consumption and problems from drinking identity (DI) and Individualism (IND)

Criterion	Predictor	B	SE B	B
Alcohol-Related Problems	Step 1	Individualism (IND)	-0.10	0.06
				-0.06
	Step 2	Drinking Identity (DI)	3.98	0.28
				0.48***
	Step 2	DI * IND	-0.11	0.46
				-0.08*
Peak Drinks	Step 1	IND	0.09	0.03
				0.12***
	Step 2	DI	1.47	0.12
				0.42***
	Step 2	DI * IND	0.02	0.02
				0.04
Drinking Frequency	Step 1	IND	0.04	0.02
				0.07*
	Step 2	DI	0.98	0.09
				0.38***
	Step 2	DI * IND	0.01	0.02
				0.03
Drinks per Week	Step 1	IND	0.11	0.04
				0.09**
	Step 2	DI	2.40	0.20
				0.42***
	Step 2	DI * IND	0.04	0.03
				0.05

Note. N = 710.

 $p < .001$.

**
 $p < .01$.

*
 $p < .05$.