

# Cultural Beliefs Mediate Racial Differences In College Drinking and Alcohol-related Problems

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## Background

- Large national surveys of college populations have found the highest rates of heavy drinking among White students, followed by Latinos, and the lowest rates of heavy drinking among African Americans (O'Malley & Johnston, 2002; Wechsler *et al.*, 2002).
- White students report more problematic consequences of alcohol than Latino and African American students (Curtis *et al.*, 1990).
- Researchers have largely ignored the mechanisms or underlying factors that could account for racial/ethnic differences (Perkins, 2002; Prendergast, 1994). We examined the role of three types of beliefs in accounting for these differences: religious beliefs, normative beliefs, and perceived benefits of alcohol.
- Religiosity has a protective effect against drug use, and alcohol use and abuse (Benjet *et al.*, 2007; Bazargan *et al.*, 2004). Latinos and African Americans typically have stronger religious beliefs and greater religious involvement than Whites (Fitchett *et al.*, 2007).
- Students commonly overestimate how much their peers drink alcohol (Perkins *et al.*, 2005). This misperception of alcohol use as common and acceptable may influence behavior (Perkins & Wechsler, 1996). When estimating peers' behavior, students rely on their own behavior and the more they personally drink, the more they overestimate their peers' drinking. Because the propensity to drink varies between students of different ethnic groups, we expected normative beliefs of members of these groups to vary accordingly (Rice, 2006).
- Perceived benefits of alcohol vary among racial groups: African Americans consistently report lower expectancies concerning the positive effects of alcohol consumption than White students (Broman, 2007; McCarthy *et al.*, 2001; Reese & Friend, 1994).

## Model of Racial Differences

- On two independent samples, we tested a model in which religious beliefs, beliefs about drinking norms, and perceived benefits of alcohol mediated racial differences in drinking and related problems among college students.
- We predicted that religious beliefs, normative beliefs, and perceived benefits of alcohol would vary according to race and that they would influence drinking behaviors and related problems.

### Hypotheses

- White students drink more frequently and heavily, and they report more problems than non-Whites;
- Whites are less religious, they report higher percentages of friends drinking heavily (normative beliefs), and they view more benefits to alcohol than non-Whites;
- Racial differences in religious beliefs, normative beliefs, and perceived benefits will mediate racial asymmetries in consumption frequency and quantity, which in turn will account for such differences in alcohol-related problems.
- Normative beliefs and perceived benefits of alcohol will have a direct effect on alcohol-related problems regardless of drinking quantity and frequency, illustrating the normative and evaluative nature of these problems (Devos-Comby & Lange, 2008).

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## Method

Table 1. Characteristics of the Two Survey Samples.

Samples	Whites	Non-Whites	Total	% Women	Mean Age
1. Fall 2007	249 (75%)	81 (25%)	330	233 (71%)	21.55 18 to 30
2. Spring 2008	384 (68%)	180 (32%)	564	355 (63%)	21.87 18 to 30

### Measures

- Religious Beliefs** (3 items): "How important are your religious and spiritual beliefs in your daily life?", "How frequently do you attend religious services or meetings?", and "My religion helps me resist drinking alcohol in excess or at all", Min: 1.00 to Max: 4.00 (Sample 1:  $\alpha$ : .76; M = 1.91; SD = .75; Sample 2:  $\alpha$ : .78; M = 1.94; SD = .80).
- Normative Beliefs** (3 items): % of friends (male, female) estimated to drink 5 (4 for female) or more drinks per occasion (Sample 1:  $\alpha$ : .95; M = 51.14%; SD = 32.66; Sample 2:  $\alpha$ : .96; M = 50.38; SD = .32.81).
- Alcohol Benefits** (11 items): Desired drinking outcomes (Park & Grant, 2005), 1=not at all, to 5=very much (Sample 1:  $\alpha$ : .90; M = 2.28; SD = .86; Sample 2:  $\alpha$ : .91; M = 2.08; SD = .79).
- Consumption Frequency** (1 item): Number of occasions had alcohol during the past 12 months, 1 = No more than every other month, 7 = More than twice a week (Sample 1: M = 4.35; SD = 2.02; Sample 2: M = 6.21; SD = 2.11).
- Consumption Quantity** (2 items): Average of past month & past 2-week peak consumption (Sample 1: r = .78; M = 5.27; SD = 4.14; Sample 2: r = .81; M = 5.77; SD = 4.57).
- Alcohol-related problems** (24 items): Brief Young Adult Alcohol Consequences Questionnaire (B-YAACQ; Kahler *et al.*, 2005). Past year experience of consequences varying in severity (Sample 1: rated yes / no. Sum ranged from 0 to 23, M = 6.71; SD = 5.31; Sample 2: rated on scale from 0=Never to 4=very frequently, M = .77; SD = .57).

## Results

Table 1. Means (SD) for Racial Differences on Variables Entered in the Model.

	Sample 1		Sample 2	
	Whites	Non-Whites	Whites	Non-Whites
<b>Religion</b>	1.81 (.73)	2.20*** (.74)	1.85 (.82)	2.13*** (.82)
<b>Norm</b>	54.56 (33.10)	41.92** (32.59)	52.93 (33.18)	43.98** (31.07)
<b>Benefits</b>	2.33 (.83)	2.12 (.95)	2.13 (.77)	1.97* (.82)
<b>Frequency</b>	6.60 (1.97)	5.60*** (1.98)	6.58 (2.03)	5.42*** (2.07)
<b>Quantity</b>	5.62 (3.83)	4.17** (4.83)	4.86 (4.10)	6.17** (4.70)
<b>Problems</b> (different scaling)	7.10 (5.27)	5.51* (5.27)	.81 (.56)	.68* (.58)

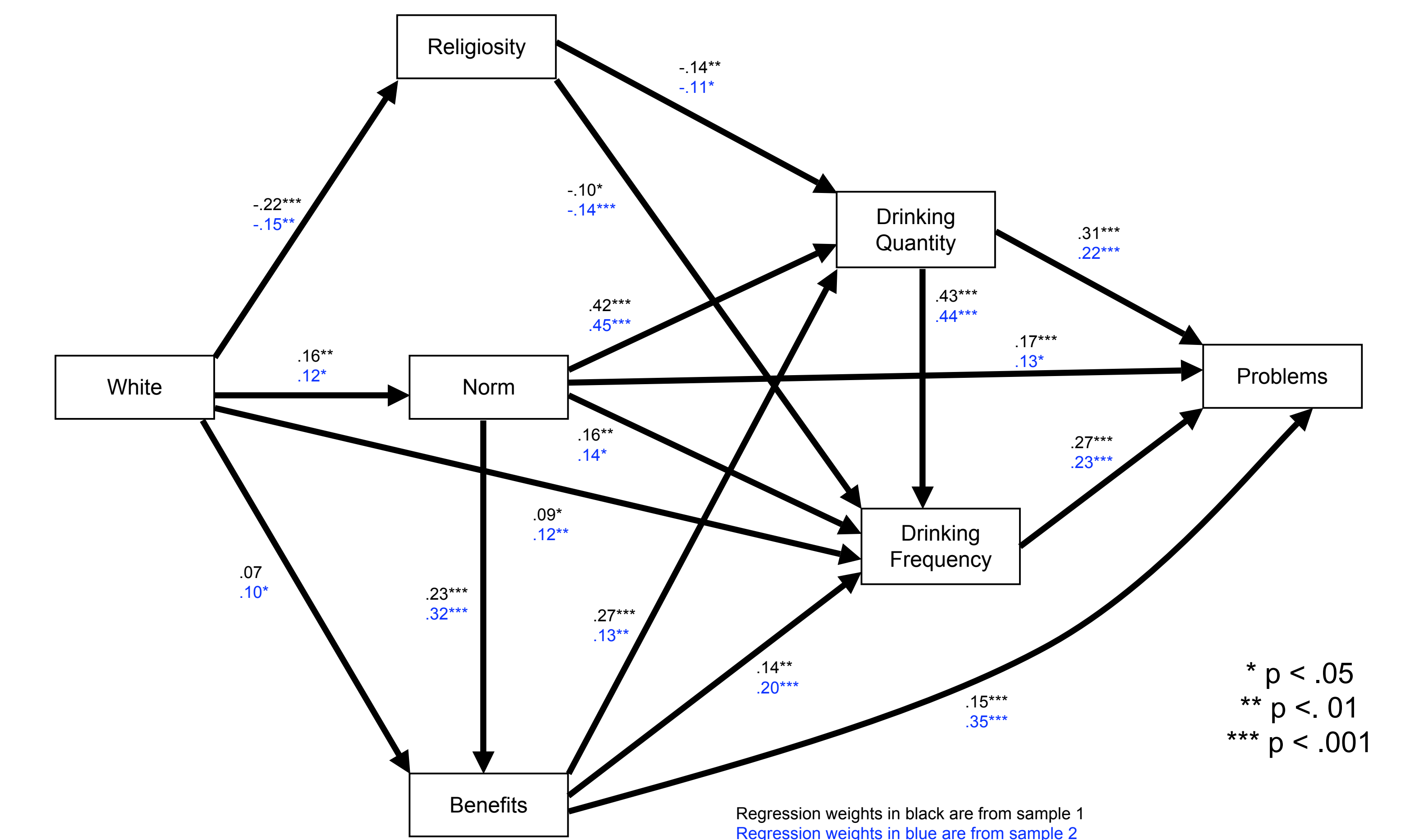
Table 2. Inter-correlations Between Variables Entered in the Model.

	Religion	Norm	Benefits	Frequency	Quantity	Problems
<b>Religion</b>						
<b>Norm</b>	-.13*					
<b>Benefits</b>	-.07	.24***				
<b>Frequency</b>	-.24***	.43***	.35***			
<b>Quantity</b>	-.21***	.50***	.38***	.60***		
<b>Problems</b>	-.14**	.48***	.40***	.58***	.61***	

Sample 1

Sample 2

Figure 1. Structural Equation Model of Racial Differences in Drinking and Related Problems.



Sample 1:  $\chi^2$  (5, N = 330) = 4.05, ns; CFI = 1.00, RMSEA = .000  
 Sample 2, Women only:  $\chi^2$  (5, N = 355) = 6.13, ns; CFI = 1.00, RMSEA = .03

- In both samples, White students were less religious than non-Whites, and they believed more friends engaged in heavy drinking than did non-Whites. Whites also drank more heavily and more frequently, and reported more problems than non-Whites. The difference in perceived benefits of alcohol was significant for sample 2 but failed to reach significance for sample 1 (Table 1).
- The model tested in Figure 1 fits the data of the first sample very well. The model fits the data of sample 2 less well (Sample 2:  $\chi^2$  (5, N = 564) = 20.00,  $p$  < .002; CFI = .98, RMSEA = .08). Because in this sample gender was associated to several variables of the model, we tested the model on women only (the majority group) and the fit was greater (Figure 1, values in blue). All paths were significant with weights approximating those of sample 1.
- The effect of race on drinking quantity was fully mediated by religious beliefs, normative beliefs, and perceived benefits of alcohol. Racial asymmetries in drinking frequency were partially mediated by religious beliefs, normative beliefs, and perceived alcohol benefits.
- Racial differences in alcohol-related problems were fully mediated by religious beliefs and in turn drinking variables, and by normative beliefs and in turn perceived benefits of alcohol, and by drinking variables.
- Normative beliefs and perceived benefits had a direct effect on alcohol-related problems regardless of drinking quantity and frequency, a result consistent with a previous study (Devos-Comby & Lange, 2008).

## Conclusion

- Consistent with the literature on college drinking, White race was associated with increased risk for alcohol use and related problems. Racial differences were also observed on religious beliefs and normative beliefs.
- Racial differences in these beliefs fully accounted for the difference in drinking quantity but only partially for the difference in drinking frequency. One reason could be that White students are more likely to participate in social events promoting alcohol consumption (Kahler *et al.*, 2003), which could account for more frequent drinking among White students.
- The most parsimonious way to fully account for racial differences in alcohol-related problems required not only drinking quantity and frequency, but also normative beliefs and perceived benefits of alcohol.
- Alcohol-related consequences are "socially situated": They emerge in a social context where, for many students, drinking heavily is the norm. These consequences reify the college drinking culture: They are clear manifestations that one belongs in that culture.
- Prevention strategies that aim at altering beliefs in drinking as common and acceptable (norms) and as beneficial (positive expectations) may be effective in reducing heavy and frequent drinking as well as alcohol-related problems, particularly among White students.