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Addictive Behaviors



Short Communication

College students' perceptions of class year-specific drinking norms

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ABSTRACT

The current study documents and examines college students' perceptions of the drinking behavior of peers from varying class years (i.e., freshman, sophomore, junior, and senior). A sample of 522 college students estimated the drinking behavior of peers within their own specific class year, as well as across the three other class years. Participants in each class year overestimated the drinking of students in their own class year as well as the drinking of students in the three other class years. These within class year-specific perceived norms associated with drinking for freshmen, sophomores, and juniors. Poisson regression analyses revealed freshmen and juniors were more impacted by their class year-specific perceived norms than students in other class years, while students in other class years were more impacted by sophomore-specific perceived norms than sophomores. These findings suggest that perceptions of class year-specific drinking norms can be impactful on individual drinking rates within one's own class year; however, perceived drinking norms of other class years may also associate with actual drinking for students. Future research is needed to establish the longitudinal development of class year-specific perceived norms and to explore the impact of providing students with actual drinking norms of students in their own class years and of students in other class years during interventions and prevention programs.

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The social norms approach has become an important template for understanding college student drinking. This approach speculates that students perceive the drinking behavior of peers to be higher than actual and these perceptions in turn influence one's own consumption levels (Borsari & Carey, 2003; Neighbors, Lee, Lewis, Fossos, & Larimer, 2007; Perkins, 2003). Targeting misperceptions is an important component of intervention and prevention approaches (Larimer & Cronce, 2007; Walters & Neighbors, 2005) and researchers have attempted to confirm the most salient referents for students to make these interventions most effective. While a student may have larger discrepancies between perceived and actual behavior of a more distal reference group (e.g., "a typical college student in general"), misperceptions of behavior for proximal reference groups (e.g., "a typical female college student at your university") are likely to have greater influence over one's own behavior (e.g., Borsari & Carey, 2003; Korcuska & Thombs, 2003; Latane, 1981; Lewis & Neighbors, 2004). Existent research suggests that perceptions of proximal referents such as gender-, athlete- and Greek-specific behavior influence student drinking behavior (Dams-O'Connor, Martin, & Martens, 2007; Larimer, Turner, Mallett, & Geisner, 2004; Lewis & Neighbors, 2004, 2007).

While broad perceptions of student behavior can influence actual behavior, the risk for influence may be even greater with specific and proximal referents.

Despite the importance of examining the relationship between perceptions and behavior among proximal referent groups, there is limited research examining the perceptions of alcohol use within and across class years (i.e., freshmen, sophomores, juniors, and seniors at a university). Students within class years may be likely to live and take classes with each other and familiarity with peers may lead to social interactions involving alcohol. Thus, class year-specific peers have potential to exert more influence on behavior than students in other class years. To date, one study has documented class year-specific perceptions, but only for freshmen students (Lewis, Neighbors, Oster-Aaland, Kirkeby, & Larimer, 2007). The current study was designed to examine class year-specific perceptions of drinking among a sample of freshmen, sophomores, juniors, and seniors. First, we were interested in the hypothesis that students would hold misperceptions of the drinking behavior of other students within their specific class year, as well as overestimations of drinking for other class year students. Secondly, we were interested to determine the extent that these perceptions associated with drinking; hypothesizing that class year-specific perceptions within one's class year would associate with individual drinking. Moreover, we hypothesized that within class perceived norms would associate to a greater degree with an individual's drinking than perceptions of students in other class years.

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1. Method

1.1. Participants

The sample consisted of 522 college students from one medium-sized U.S. university. Psychology subject pool participants ($N = 224$) signed up to complete an online study of drinking behavior and perceptions for course credit. Participants were given the option to recruit one or two college-aged peers for additional credit. This method (respondent driven sampling; Heckathorn, 1997) has been used in other research to yield a representative sample of the university population in regards to demographics and drinking behavior (Pedersen & LaBrie, 2008). Participants recruited an additional 298 participants from the institution. The sample consisted of 60% females ($n = 316$) with a mean age of 19.37 ($SD = 1.31$). Ethnicity varied with 51% Caucasian, 18% Hispanic/Latino(a), 12% Asian/Pacific Islander, 11% "Multiracial," 5% African American/Black, 2% "Other," and 1% declined to state. Approximately 44% were freshmen, with 20% sophomores, 21% juniors, and 15% seniors.

1.2. Design and procedure

The local Internal Review Board at the university approved the study and all participants consented to participate. All participants were assigned a random identification number to assure that data was not linked to personal information. The online survey began with demographic information followed by two single-item self report questions regarding the typical number of drinking days per week and the typical amount (measured in standard drinks containing ½ oz of ethyl alcohol) they generally consumed while drinking. These two variables were multiplied together to form a drinks per week composite variable. Perceived norms were assessed through similar means. Two series of four questions related to the perceived belief of the drinking days and average drinks of a typical freshman, sophomore, junior, and

senior at the university were presented to participants (e.g., "How many days per week do you think a typical freshman at your university drinks alcohol?" and "On average, how many drinks do you think a typical freshman at your university drinks during a typical drinking occasion?"). Responses to the perceived days per week and perceived average drinks questions for each class year were multiplied together to form a class year-specific perceived drinks per week composite for each of the four class years assessed.

2. Results

2.1. Drinking behavior

We began by conducting an ANOVA evaluating drinks consumed per week as a function of class year and found no significant differences for drinking between class years. Fig. 1 contains means and standard errors of actual drinking behavior for each of the four class years.

2.2. Class year-specific perceptions

We next evaluated whether students overestimated the drinking of their classmates (e.g., whether freshmen overestimated the drinking of other freshmen). We were also interested in determining whether students overestimated the drinking of other students more generally (e.g., whether freshmen overestimated the drinking of sophomores, juniors, and seniors). For both questions, analyses consisted of Bonferroni adjusted paired samples *t*-tests. Sixteen paired samples *t*-tests were conducted (i.e., four comparisons for each class). Thus alpha was adjusted to .003. Effect sizes (*d*) for paired samples *t*-tests were calculated according to Cohen (1988). All means and standard errors for perceptions are presented alongside actual drinking in Fig. 1. Results indicated strong support for the presence of within class overestimation of drinking and between class overestimation of drinking. Moreover, freshmen overestimated freshmen

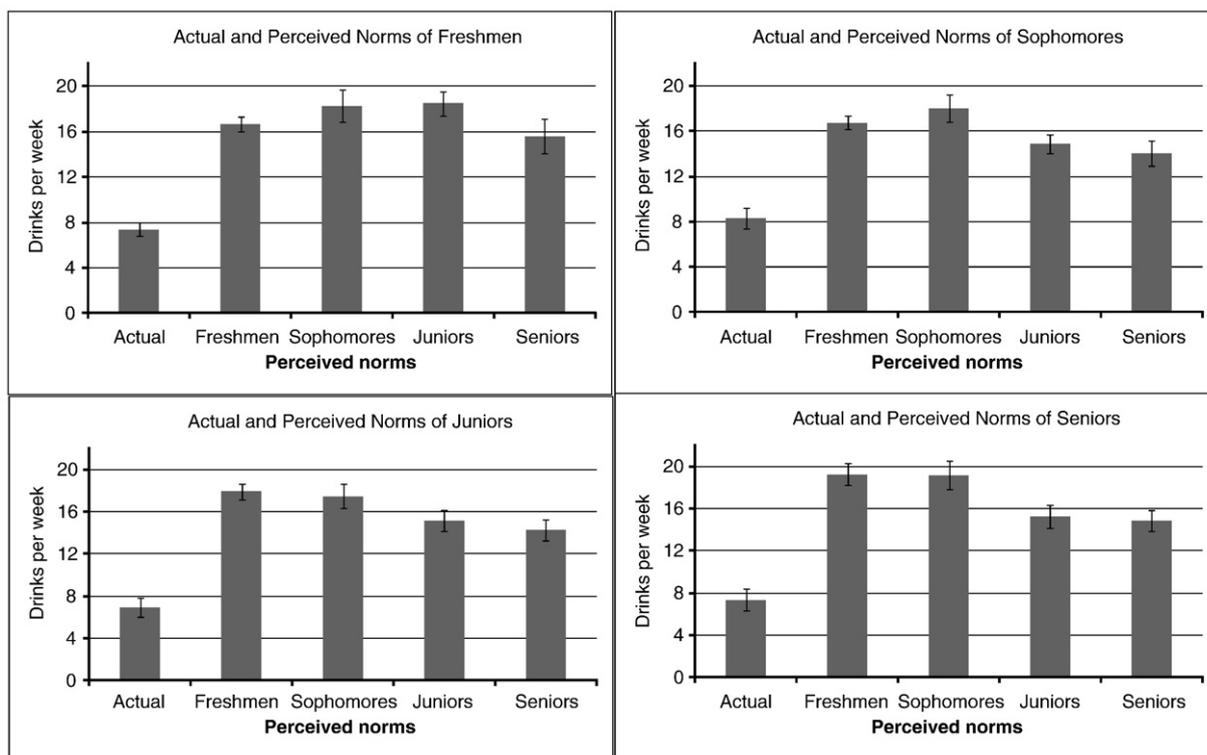


Fig. 1. Actual drinking behavior within each of the four class years, with drinking perceptions of each specific class year for freshmen, sophomores, juniors, and seniors.

drinking, $t(231) = 11.72, p < .001, d = .78$; sophomores overestimated sophomores' drinking, $t(103) = 7.57, p < .001, d = .76$; juniors overestimated juniors' drinking, $t(102) = 8.85, p < .001, d = .87$; and seniors overestimated seniors' drinking, $t(75) = 6.23, p < .001, d = .73$. Results further indicated that participants within each class year overestimated the drinking of other classes (e.g., freshmen overestimated the drinking of sophomores, juniors, and seniors). All effect sizes were in the medium to large range ($ds = .63$ to $.95$).

A one-way ANOVA revealed that perceived norms did not differ as a function of class year (e.g., estimates of freshmen drinking did not differ among participants in the four class years). The only exception was for the sophomore-specific perceived norm, $F(3,494) = 3.32, p < .05$, with sophomores perceiving the sophomore drinking norm to be higher than seniors did ($p < .05$).

2.3. Relationship of class year-specific perceived norms and drinking behavior

Within each class year, class year-specific perceived norms associated with drinking for all participants except for seniors. Freshmen-specific perceived norms correlated with drinks per week for freshmen ($r = .27, p < .001$), juniors ($r = .22, p < .05$), and seniors ($r = .30, p < .05$). Sophomore-specific perceived norms correlated with drinks per week for sophomores ($r = .32, p < .01$), freshmen ($r = .34, p < .001$), juniors ($r = .47, p < .001$), and seniors ($r = .32, p < .01$). Junior-specific perceived norms correlated with drinks per week for juniors ($r = .50, p < .001$), freshmen, ($r = .32, p < .001$), sophomores ($r = .28, p < .01$), and seniors ($r = .31, p < .01$). Senior-specific norms did not significantly associate with drinks per week for seniors ($r = .19$), but did for freshmen ($r = .26, p < .001$) and juniors ($r = .42, p < .001$).

Regression analyses were completed based on a Poisson distribution as the drinks per week data within the sample was positively skewed (skew = 1.71; 33% of participants reported no drinking). The method used is considered preferable over data transformations in regression analyses (Atkins & Gallop, 2007). Using the Poisson regression model in four separate analyses, we predicted drinks per week from each class-specific perceived norm, a dummy code for that perceived norms' specific class year versus the three other classes, and the interaction of the class-specific perceived norm and the dummy code. For example, we predicted drinks per week from the freshmen-specific perceived norm, the dummy variable for freshmen (coded 0) and the other class years (coded 1), and the freshmen-specific perceived norm \times freshmen dummy code interaction. The continuous independent variable (class year-specific perceived norm in each model) was mean centered to assist with interpretability of the interaction (Aiken & West, 1991).

The full Poisson model was significant for all four class years: freshmen, $X^2(df = 3) = 304.37, p < .001$; sophomores, $X^2(df = 3) = 559.57, p < .001$; juniors, $X^2(df = 3) = 537.36, p < .001$; and seniors, $X^2(df = 3) = 283.66, p < .001$. While class-specific perceived norms predicted drinking in each of the four models, the interaction effect was significant for freshmen, $X^2(df = 1) = 27.58, p < .001$; sophomores, $X^2(df = 1) = 11.30, p < .01$; and juniors only, $X^2(df = 1) = 23.95, p < .001$. Fig. 2 demonstrates that freshmen with high freshmen-specific perceived norms drank at a higher level than other class years with high freshmen-specific perceived norms. A similar effect was observed for juniors. An opposite effect was found for sophomores; with other class years with high sophomore-specific perceived norms drinking at the highest levels. Finally, a pattern similar to freshmen and juniors was observed for seniors, although this relationship was

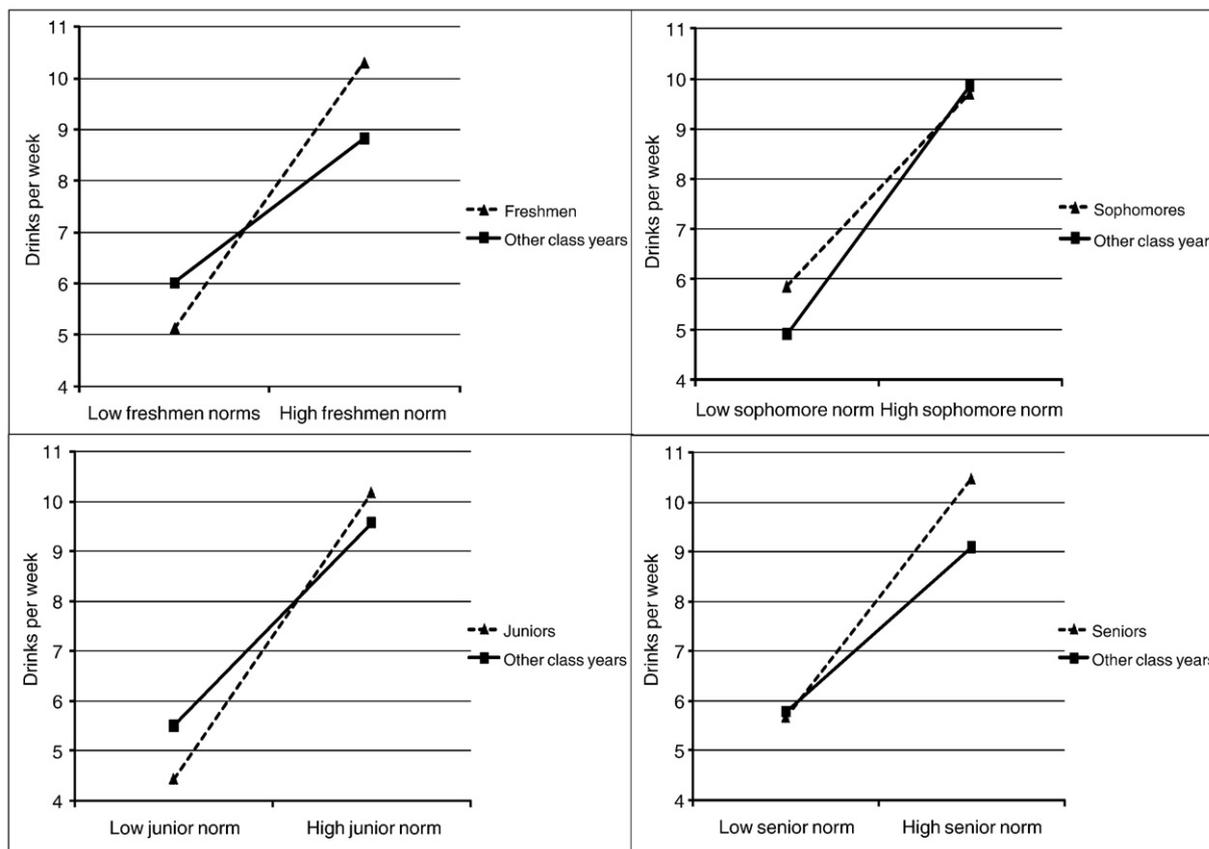


Fig. 2. Drinks per week predicted by class year-specific perceived norms by class year-specific participants versus other class year participants.

non-significant. As can be observed in the figure, all students with high class year-specific perceived norms drank at higher levels than those with lower perceived norms.

3. Discussion

This study extends previous research that overestimation of drinking by one's peers is ubiquitous and impactful among college students (e.g., Neighbors et al., 2007; Perkins, 2003) by finding that one's own class year-specific perceived norms may be particularly influential on individual drinking; especially for freshmen and juniors. However, and perhaps more importantly; these results suggest that students in specific class years may also be influenced to drink alcohol by their perceptions of peers in class years other than their own. The cross-sectional design limits the inference of causality in the present study; however, the notion that different class years have varying perceptions of other class years' drinking and these class year non-specific perceptions have the potential to influence drinking rates is an important consideration for campuses developing normative feedback interventions with students. Presenting overall norms on campus may be helpful in the reduction effort, but perhaps presenting actual drinking norms of both class year-specific drinking and class year non-specific drinking may be a method exuding more influence on campus drinking rates. Research studies testing this idea would be beneficial for the field.

A limitation of this study that hinders the interpretation of the findings is multicollinearity; as perceived norms across class years were correlated. Additionally, small *Ns* within class years reduced power needed to find unique effects. As this is the first known documentation and examination of class year-specific perceived norms, future longitudinal research with large sample sizes could examine the impact of class year-specific norms presentation with students to determine how drinking changes over time based on knowledge of either general campus norms or class year-specific norms. A further limitation is the use of the sample to estimate actual drinking. Although the research design allowed for the collection of students beyond psychology courses, subject pool participants may have recruited friends who had similar drinking patterns to themselves. However, the sample consisted of nearly 10% of the overall student population at the school and was matched with the gender and ethnic make-up of the institution.

Due to the diversity among students, researchers have generally suggested that one-size fits all approaches may be less effective than interventions targeting particular groups of students (Larimer & Cronce, 2007; NIAAA, 2002). While this is supported by social norms interventions with freshmen students (Lewis et al., 2007), perhaps the presentation of class year-specific norms is not an essential component of college student social norms interventions. Thus, if resources are available to do so, it may not hurt to provide students with actual norms for their own class year peers and for students in other class years. Especially during the first year, where drinking rates are established (Turrisi, Padilla, & Wiersma, 2000; Wechsler, Davenport, Dowdall, Moeykens, & Castillo, 1994), allowing students to see that drinking is fairly consistent across class years may be important to clarify. Regardless of their own class year, students may be impacted by the drinking of other class year students but further research is needed to continue exploring the impact of class year-specific perceived norms on behavior.

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The funding institution had no role in the study design, collection, analysis or interpretation of the data, writing the manuscript, or the decision to submit the paper for publication.

Contributors

Eric Pedersen, Clayton Neighbors, and Joseph LaBrie have all contributed significantly to the manuscript and consent to their names being attached to the manuscript.

Conflict of Interest

All authors declare that they have no conflicts of interest.

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