



Digital Commons@

Loyola Marymount University
LMU Loyola Law School

Heads Up!

Psychological Science

11-2009

Perceived Behavioral Alcohol Norms Predict Drinking for College Students While Studying Abroad

Eric R. Pedersen
Loyola Marymount University

Joseph W. LaBrie
Loyola Marymount University, jlabrie@lmu.edu

Justin F. Hummer
Loyola Marymount University, jhummer@usc.edu

Follow this and additional works at: <https://digitalcommons.lmu.edu/headsup>



Part of the [Psychology Commons](#)

Repository Citation

Pedersen, Eric R.; LaBrie, Joseph W.; and Hummer, Justin F., "Perceived Behavioral Alcohol Norms Predict Drinking for College Students While Studying Abroad" (2009). *Heads Up!*. 75.
<https://digitalcommons.lmu.edu/headsup/75>

This Article - post-print is brought to you for free and open access by the Psychological Science at Digital Commons @ Loyola Marymount University and Loyola Law School. It has been accepted for inclusion in Heads Up! by an authorized administrator of Digital Commons@Loyola Marymount University and Loyola Law School. For more information, please contact digitalcommons@lmu.edu.

Submitted as a brief report to *Journal of Studies on Alcohol and Drugs* (October 2008)

Revised and resubmitted (January 2009)

Revised and resubmitted (July 2009)

Running Head: STUDY ABROAD ALCOHOL PERCEPTIONS

Perceived behavioral alcohol norms predict drinking for college students while studying abroad

*Eric. R. Pedersen, M.A., Department of Psychology, University of Washington, Center for the Study of Health & Risk Behaviors, 1100 NE 45th St, Suite 300, Box 354944, Seattle, WA 98195; (206) 685-7539; epeder@u.washington.edu.

Joseph W. LaBrie, Ph.D., Department of Psychology, Loyola Marymount University, 1 LMU Drive, Suite 4700, Los Angeles, CA 90045; (310) 338-5238; jlabrie@lmu.edu.

Justin F. Hummer, B.A. , Department of Psychology, Loyola Marymount University, 1 LMU Drive, Suite 4700, Los Angeles, CA 90045; (310) 338-7770; jhummer@lmu.edu.

* Corresponding author

This research was supported by Grant Q184H070017 from the U.S. Department of Education and Grant R01 AA 012547-06A2 from the National Institute of Alcohol Abuse and Alcoholism (NIAAA).

Abstract

Introduction: College students who study abroad may represent a subgroup at risk for increased drinking while living in foreign countries. The present study explores this idea as well as the extent to which students' pre-abroad perceptions of study abroad student drinking is related to actual drinking while abroad. *Method:* Ninety-one students planning to study abroad completed an online survey of demographics, pre-abroad drinking behavior, perceptions of study abroad student drinking behavior while abroad, and intentions to drink while abroad. Halfway into their study abroad experience participants completed a follow-up survey assessing drinking while abroad. *Results:* Pre-abroad intentions of drinking and pre-abroad perceptions of study abroad drinking associated with actual drinking while abroad. However, perceptions predicted actual drinking while abroad over and above intended drinking. In addition, while participants overall did not significantly increase drinking while studying abroad, participants with higher pre-abroad perceived norms significantly increased their own drinking behavior while abroad. *Discussion.* As in other samples of college students, perceived norms appear to be an important correlate of study abroad student drinking behavior. Findings not only suggest that perceptions of study abroad student-specific drinking predicted actual drinking while abroad, but perceptions also predicted increases in drinking from pre-abroad levels. Findings provide preliminary support for the idea that presenting prospective study abroad students with accurate norms of study abroad student drinking behavior may help prevent increased or heavy drinking during this period.

Heavy drinking among college students remains a national concern that can lead to a multitude of alcohol-related consequences for individuals and the surrounding campus community (Hingson et al., 2005; Wechsler et al., 2002). One specific subgroup that may be at a heightened risk for increased alcohol use is students studying abroad in foreign countries. Little research has been conducted with this subgroup, although study abroad students make up a substantial proportion of college students. According to the Open Doors Report (2008), approximately 250,000 students from US colleges and universities studied abroad during the 2006-2007 academic year. The number of study abroad students has more than doubled over the past decade and is likely to increase threefold by 2016-2017 (Commission on the Abraham Lincoln Study Abroad Fellowship Program, 2005).

Studying abroad may be a high-risk context that increases students' susceptibility to a number of unique environmental and peer influences on drinking decisions. Although no empirical evidence exists, experts report that alcohol use and abuse during study abroad trips is a serious concern (Epstein and Rhodes, 2000; Epstein, 2005). Lower drinking age limits in foreign countries may offer students under the age of 21 considerably easy access to alcohol. Beyond increased access, studying abroad represents a developmental transition for students where there is limited family involvement and increased independence; similar to other transitory periods associated with increased drinking (e.g., Schulenberg et al., 2001; Sher and Rutledge, 2007). Novel social situations with direct pressure to drink with newly established peers might emerge. Alcohol may serve as a bonding agent between study abroad students immersed in a foreign culture. Furthermore, students may study abroad with the specific intention to drink at higher levels than they normally do because of the limited structure/perceived freedom of the abroad experience.

While these new environmental conditions offer opportunities to consume alcohol, actual decisions to drink may be predicated by one of the most consistent predictors of alcohol use in college – indirect social influence from peers (Borsari and Carey, 2001; 2003). Perceived norms, or how one perceives people in a social group think and behave, have been cited as among the strongest

predictors of individual drinking rates within this population (e.g., Borsari and Carey, 2003; Neighbors et al., 2007). The normative influence on drinking may be even greater among tight-knit subgroups. Borrowing from Social Impact Theory (Latane, 1981), students may be more likely to be influenced by the perceived behaviors of groups of students who are closer in proximity and familiarity to themselves. Several studies have shown that perceptions of behavior within specific subgroups of students (e.g., gender-specific norms, group-specific norms) are likely to have greater influence over one's own behavior than more distal groups (e.g., the college population as a whole) (e.g., Borsari and Carey, 2003; Lewis and Neighbors, 2004; 2007). Given the close proximity and small group nature of students that travel abroad as well as the added environmental novelty and risk, it is important to examine the role of indirect peer influence among this population.

The present study was among the first to empirically evaluate the changes in drinking from pre-abroad levels and explore the relationship between pre-abroad intended drinking levels, perceived drinking norms, and actual behavior. We hypothesized that students' pre-abroad perceptions of study abroad student drinking would associate with their own drinking while abroad. In addition, due to potential environmental triggers for drinking, we anticipated that students would increase their drinking during study abroad from pre-abroad levels and that changes in behavior would vary as a function of one's perceived norms.

Method

Participants

Spring semester study abroad students ($N = 115$) from a mid-sized west coast university were recruited to participate in this study during a required pre-departure meeting held by the Office of Global Affairs. Ninety-one students (79% recruitment rate) completed the online baseline survey. Sixty-one completed a follow-up survey sent via email 10 weeks/halfway into their abroad experience, yielding a 67% retention rate. There were no significant differences between follow-up completers and non-completers on pre-abroad drinking, intentions, or perceptions ($p > .05$ all tests).

Participants had a mean age of 20.13 ($SD = 0.81$) years and consisted of 60 females (66%). Ethnicity varied, with 64% categorized as Caucasian, 12% Hispanic/Latino, 8% mixed ethnicity, 6% Asian/Pacific Islander, and 10% other ethnicities. The majority of the sample had current junior class status (91%) and 81% studied abroad in European countries (e.g., England, Germany, Italy, Spain), with 7% in Asian countries (e.g., Korea, Japan), 4% in Australia, 6% at sea (i.e., living on a ship and stopping in several countries), and 2% in other regions (Central America and India). In comparison to study abroad students throughout the country (Open Doors, 2008), the sample was representative of gender, but over-representative of ethnic minorities and junior students.

Design and Procedure

Participants received an email containing a link to the baseline survey two weeks prior to departing for their trip abroad. The survey contained an electronic local IRB-approved consent form. Ten weeks into the abroad experience, all participants who completed the baseline survey were emailed a link to a follow-up survey and given three weeks to complete it.

Baseline survey. The baseline survey contained demographic questions assessing age, gender, ethnicity, class year, and country of study abroad program. Participants were also asked two open-ended questions regarding their intended drinking behavior while abroad (“typical number of drinks consumed per occasion” and “typical number of drinking days per week.”) These two questions were multiplied together to form a *pre-abroad intended drinks per week* composite variable. Participants were asked about their perceptions regarding the drinking behavior of a typical student from their university studying abroad in a foreign country. Five perceived descriptive norms items assessed typical frequency of drinking, typical amount consumed when drinking (i.e., average drinks), typical drinks consumed per week, maximum drinks consumed during one occasion, and number of times a student engaged in heavy episodic drinking (five or more drinks in a row for men; four or more drinks in a row for women) during a typical two-week period. Response options for these variables varied from 1 (lowest risk; e.g., 0 drinks per occasion, 0 drinks per week) to 9 (highest risk; e.g., 13

or more drinks per occasion, 22 or more drinks per week). Responses for the five questions were averaged to create a robust descriptive norms composite variable ($\alpha = .76$; *pre-abroad perceived norm*; $M = 5.08$, $SD = 1.05$). Finally, actual alcohol use was assessed with the Daily Drinking Questionnaire (DDQ; Collins et al., 1985; Kivlahan et al., 1990). Participants indicated how many drinks they typically consumed on each day of a typical week during the fall semester. A *pre-abroad drinks per week* variable was computed by summing the typical amount consumed during each day of the week. Participants reported drinking a mean of 8.86 ($SD = 8.81$) drinks per week prior to abroad trips.

Follow-up survey. At follow-up, the DDQ was repeated to assess typical *drinks per week while abroad* consumed during the prior 10 weeks of the study abroad experience. Participants reported a mean of 10.67 ($SD = 9.40$) drinks per week while abroad.

Results

Descriptive norms predict drinking while abroad. The pre-abroad perceived norm was associated with pre-abroad intended drinks per week ($r = .46$, $p < .001$) and with drinks per week while abroad ($r = .57$, $p < .001$). Pre-abroad intended drinks per week was also moderately correlated with actual drinks per week while abroad ($r = .66$, $p < .001$), suggesting that intended drinking was an important variable to include in the model predicting drinking while abroad. A hierarchical linear regression determined the impact that the pre-abroad perceived norm had on the number of drinks consumed per week while abroad. Pre-abroad intended drinks per week was entered at Step 1 and the pre-abroad perceived norm was entered at Step 2. The final model accounted for a substantial 51% of the variance in drinks per week while abroad. At Step 1, intended drinks significantly predicted drinks per week while abroad, $R^2 = .44$, $F(1, 52) = 40.99$, $p < .001$, $b = .070$ ($SE = .11$), $t(53) = 6.40$, $p < .001$. Further, Step 2 revealed that the pre-abroad perceived norm uniquely predicted drinking while abroad, $b = 2.51$ ($SE = 0.92$), $t(53) = 2.73$, $p < .01$, over and above intended drinking, change in $R^2 = .07$, $F(1, 51) = 7.44$, $p < .01$.

Changes in drinking vary as a function of the pre-abroad perceived norm. Using a repeated measures ANCOVA, we evaluated whether drinking significantly increased while studying abroad and whether changes in drinking varied as a function of the pre-abroad perceived norm. Time (time 1 = pre-abroad drinking and time 2 = drinking while abroad) was the repeated measure and the pre-abroad perceived norm was the independent variable. Results revealed that, overall, drinking did not significantly increase from Time 1 to Time 2, $F(1, 47) = 2.64, p = .11$. However, as hypothesized, there was a time X perceived norms interaction, $F(1, 47) = 4.14, p < .05$, partial eta-squared = .08. Figure 1 presents predicted cell means based on parameter estimates where high and low descriptive norms were specified as one standard deviation above and below the mean, respectively (Aiken and West, 1991). Those students with a higher pre-abroad perceived norm experienced greater increases in drinking behavior while abroad than did those with a lower pre-abroad perceived norm. When pre-abroad intended drinks per week was entered as an additional covariate, there was no significant time X intended drinks interaction, further confirming the unique impact of pre-abroad perceived norms on drinking while abroad.

Discussion

The present study examined the drinking behavior of study abroad college students by looking at changes from pre-abroad drinking to drinking while abroad. In addition, we evaluated the impact that pre-abroad perceived drinking norms had on drinking while abroad. Pre-abroad perceptions of study abroad student behavior uniquely predicted drinking while abroad, even after controlling for how much students intended to drink prior to leaving for their trip. Although overall drinking did not significantly increase while abroad, those students with higher pre-abroad perceived norms of study abroad student drinking increased their own drinking behavior, revealing the salient impact of perceived norms on drinking while studying abroad. Targeting general student misperceptions is an important component of many established interventions (Larimer and Cronce 2007; Walters and Neighbors, 2005). If students perceive that other study abroad students drink

heavier than they actually do, presenting students with accurate data of actual study abroad drinking may allow them to form more informed pre-abroad perceptions and thus help prevent increased drinking. Future research examining the utility of presenting students with study abroad student-specific drinking norms is needed.

This study is limited by its sample size, which hinders the generalizability and impact of the research results. Although 55% of the participants increased their drinking to some extent while abroad (with all participants increasing by an average of about two drinks per week), no significant difference was found for increases in drinking while abroad. Nevertheless, a small effect size for increased drinking was revealed ($d = .23$). For some students, increases could have led to alcohol-related problems or hazards resulting from drinking in a foreign country. However, further research is needed to determine the specific negative effects resulting from increased drinking while abroad. The small sample size also does not allow for analyses of moderators that could influence drinking levels (such as gender, drinking motives, or region of study). Complications with retention were also evident. Although students may have had access to computers through their classes, internet access may have been limited or accessible by a monetary fee. Therefore, it is suggested that tangible incentives such as phone cards or Internet access cards may be helpful to reduce attrition in further work with these students. Finally, the pre-abroad perceived norm was designed to assess study abroad student-specific drinking; however, it is unclear how this perception varied from general perceptions of typical college students, which have consistently been linked to heavier drinking.

Despite limitations, this study provides a preliminary look at drinking among study abroad students and suggests that future research evaluating studying abroad as a potential high risk event is warranted, as well as research investigating how perceived norms of study abroad student-specific behavior differentially impact drinking among students studying abroad. Targeting perceptions during pre-abroad programs may have an influential effect on student study abroad drinking rates.

References

- Aiken, L.S., and West, S.G. Multiple regression: Testing and interpreting interactions. Thousand Oaks, CA: Sage Publications, 1991.
- Berkowitz, A.D. The social norms approach: Theory, research, and annotated bibliography. Available at: <http://www.edc.org/hec/socialnorms/theory.html>, 2004.
- Borsari, B. and Carey, K.B. Descriptive and injunctive norms in college drinking: A meta-analytic integration. *J. Stud. Alcohol.* 64: 331-341, 2003.
- Borsari B., and Carey, K.B. Peer influences on college drinking: A review of the research. *J. Subst. Abuse.* 13: 391-424, 2001.
- Collins, R.L., Parks, G.A., and Marlatt, G.A. Social determinants of alcohol consumption: The effects of social interaction and model status on the self-administration of alcohol. *J. Consult. Clin. Psychol.* 53: 189-200, 1985.
- Commission on the Abraham Lincoln Study Abroad Fellowship Program. Global Competence and National Needs: One Million Americans Studying Abroad. 2005. Report available at http://www.nafsa.org/public_policy.sec/public_policy_document/study_abroad_1/lincoln_commission_report
- Epstein, J. Last call for U.S. students studying abroad? Continuing concerns about alcohol use and abuse during study abroad. *SAFETI On-Line Newsletter.* 3: 2005. (Available at http://globaled.us/safeti/v3n1_epstein.html).
- Epstein, J., and Rhodes, G. A discussion about alcohol and student exchange. *SAFETI On-Line Newsletter.* 1: 2000. (Available at http://globaled.us/safeti/v1n2_rhodes_epstein.html).
- Hingson, R., Heeren, T., Winter, M.R., and Wechsler, H. Magnitude of alcohol-related mortality and morbidity among U.S. college students ages 18-24: Changes from 1998 to 2001. *Annu. Rev. Pub. Health.* 26: 259-279, 2005.

- Kivlahan, D.R., Marlatt, G.A., Fromme, K., Coppel, D.B., and Williams, E. Secondary prevention with college drinkers: Evaluation of an alcohol skills training program. *J. Consult. Clin. Psychol.* 58: 805-810, 1990.
- Larimer, M.E., and Cronce, J.M. Identification, prevention, and treatment revisited: Individual-focused college drinking prevention strategies: 1999-2006. *Addict. Behav.* 32: 2439-2468, 2007.
- Latane, B. The psychology of social impact. *Am. Psychol.* 36: 343-356, 1981.
- Lewis, M.A., and Neighbors, C. Optimizing personalized normative feedback: The use of gender-specific referents. *J. Stud. Alcohol Drugs.* 68: 228-237, 2007.
- Lewis, M.A. and Neighbors, C. Gender-specific misperceptions of college student drinking norms. *Psychol. Addict. Behav.* 18: 340-349, 2004.
- Neighbors, C., Lee, C.M., Lewis, M.A., Fossos, N., and Larimer, M.E. Are social norms the best predictor of outcomes among heavy drinking college students? *J. Stud. Alcohol Drugs.* 68: 556-565, 2007.
- Open Doors (2008). Institute of international education: Report of international education. Retrieved from the web 15 December 2008 at <http://opendoors.iienetwork.org>.
- Perkins, H.W. *The Emergence and Evolution of the Social Norms Approach to Substance Abuse Prevention*. San Francisco, CA: Jossey-Bass, 2003.
- Schulenberg, J.E., and Maggs, J.L. A developmental perspective on alcohol use and heavy drinking during adolescence and the transition to young adulthood. *J. Stud. Alcohol. Supplement* 14: 54-70, 2002.
- Sher, K.J., and Rutledge, P.C. Heavy drinking across the transition to college: Predicting first-semester heavy drinking from precollege variables. *Addict. Behav.* 32: 819-835, 2007.
- Walters, S.T., and Neighbors, C. Feedback interventions for college alcohol misuse: What, why and for whom? *Addict. Behav.* 30: 1168-1182, 2005.

Wechsler, H., Lee, J.E., Kuo, M., Seibring, M., Nelson, T.F., and Lee, H.P. Trends in college binge drinking during a period of increased prevention efforts: Findings from four Harvard School of Public Health study surveys, 1993-2001. *J. Am. Coll. Health.* 50: 203-217, 2002.

Figure 1

Changes in pre-abroad drinking to drinking while abroad as a function of pre-abroad perceived norms

Figure 1

