

Subst Use. Author manuscript; available in PMC 2013 January 01.

Published in final edited form as:

J Subst Use. 2012; 17(3): 269–276. doi:10.3109/14659891.2011.580414.

# Food Service Employee Alcohol Use, Hangovers and Norms During and After Work Hours

Roland S. Moore, Ph.D.<sup>1</sup> [Senior Research Scientist], Genevieve M. Ames, Ph.D.<sup>1,2</sup> [Senior Research Scientist], Michael R. Duke, Ph.D.<sup>1,2</sup> [Research Scientist], and Carol B. Cunradi, M.P.H., Ph.D.<sup>1</sup> [Senior Research Scientist]

<sup>1</sup>Pacific Institute for Research and Evaluation, Berkeley, CA, 94704 USA

<sup>2</sup>University of California School of Public Health, Berkeley, CA, 94720 USA

## **Abstract**

**Aims**—This paper presents analyses of norms and behavior concerning drinking before, during, and after work hours among U.S. bar-restaurant chain employees, with a focus on hangovers at work and their correlates.

**Methods**—A mixed method approach combined qualitative analysis of 64 face-to-face interviews held with randomly chosen service, managerial and kitchen staff and quantitative analyses (including multivariable linear regression and bivariate analyses) of data drawn from 1,286 completed telephone surveys (response rate 68%) with 18–29 year old employees.

**Results**—Relatively few survey respondents reported past-year drinking in the hour prior to work (5%) or during work hours (2.7%), but extensive drinking in non- work hours (85.5%), and 36.5% of respondents reported coming to work with a hangover at least once. Correlates of hangover at work were past year intoxication and holding positive norms for hangovers. These findings were elaborated by interview data describing heavy drinking after work at nearby bars, restaurants and employee homes.

**Conclusions**—The findings illustrated that employee drinking during work hours was not normative. However, study results portrayed widely-shared norms for heavy drinking outside of work, with hangovers and related harms appearing as the primary work time repercussions of after-work alcohol consumption.

#### **Keywords**

Occupational alcohol use; food service workers; young adults

## Introduction

A substantial body of literature documents the relationship between workplace alcohol use norms and employee impairment at work (e.g., Ames et al., 2000; Bacharach et al., 2002; Frone and Brown, 2010). Among occupations with relatively high social and physical availability of alcohol at work (Ames and Grube, 1999; Moore et al., 2007), food service workers are at elevated risk for misuse of alcohol and drugs during and after work hours

Correspondence: Roland S. Moore, PhD, Pacific Institute for Research and Evaluation, 1995 University Ave., Ste. 450, Berkeley, CA 94704-5315 USA. Tel: +1 510 8835770. Fax: +1 510 6440594. roland@prev.org.

Declaration of interest

The authors report no conflicts of interest. The authors alone are responsible for the content and writing of this paper; each author has contributed to the writing of the paper.

(e.g., Kjaerheim et al., 1995; SAMHSA, 2007). To shed light on the connection between employee alcohol use norms and practices within the context of a strong alcohol control policy environment (Moore et al., In press; Moore et al., 2009), a multi-method (ethnographic and survey) study on alcohol use among young adult food service workers investigated relationships between their work-related alcohol norms and alcohol use before, during and after work hours. As the primary way in which off-the-job drinking may directly impact work performance, hangovers emerged as a focus of this inquiry.

## **Background**

Research by Frone (2003), Macdonald et al. (1999) and others (e.g., Kjaerheim et al., 1996) suggests that those at risk for alcohol dependence may self-select into the bar or restaurant industry due to alcohol availability and cultural norms that promote drinking. Work-related alcohol norms include perceptions of others' approval of drinking or being hung over at work, and perceptions of the extent to which significant others engage in these behaviors (Delaney and Ames 1995). As an illustration of how the norms of the restaurant workplace environment may influence food service workers, Mandell and colleagues (1992) reported that the odds ratio for a diagnosis of alcohol dependence or abuse among unemployed servers was lower (OR=1.3) compared to that of employed servers (OR=4.5).

Other studies also point to food service as a setting with elevated risk for misuse of alcohol and drugs during and after work (Larsen, 1994; Leigh and Jiang, 1993; Mandell et al., 1992; Stinson et al., 1992; Zhiwei and Snizek, 2003). An analysis of National Household Survey on Drug Abuse data found that in contrast to 7.5% of workers in all industries, 15% of restaurant workers (food preparation, servers, bartenders) reported current heavy alcohol use, defined as drinking 5 or more drinks on an occasion on at least 5 out of the past 30 days (Zhang et al., 1999).

Among those studies that did specifically investigate substance use among workers in the restaurant or bar industry, most focused on risk factors for heavy alcohol use (Kjaerheim et al., 1995; Larsen, 1994; Nusbaumer and Reiling, 2002). Contributing to the concentration of heavy drinkers in the restaurant industry is the disproportionate number of young adults, who are more likely to drink heavily than older people. Nusbaumer and Reiling (2002) found that among 938 licensed alcohol beverage servers in the state of Indiana, the risk of heavy drinking was not associated with years spent in the industry or number of hours worked, but with drinking on the job, being male and being younger. These studies suggest that those who drink heavily or are at risk for alcohol dependence may self-select into the restaurant or bar industry due to the availability of alcohol and a work culture that promotes its use (Frone, 2003; Macdonald et al., 1999). In a study of 3,273 cooks and servers in Norway (Kjaerheim et al., 1995), the characteristics of the workplace environment promoted heavy drinking. These included availability of alcohol at work, coworkers who drink after work, and liberal alcohol policies within the company. These findings indicate that working in a restaurant and bar environment can promote and reinforce alcohol use through alcohol access (Parker and Harford, 1992; Whitehead and Simpkins, 1983) as well as workplace norms and culture (Ames and Delaney, 1992; Larsen, 1994).

The present study extends prior research demonstrating the high prevalence of problem drinking among young adult workers in a large national bar-restaurant chain (Moore et al., 2009). Of 1294 restaurant workers, 41% met gender-specific criteria for problem drinking (Moore et al., 2009) based on the AUDIT, a screener identifying those who have engaged in hazardous drinking resulting in increased risk of harm to self or others (Babor et al., 2001). The present article focuses upon the timing of these restaurant employees' drinking (before, during, or after work hours) in relation to workplace alcohol norms. Based on the amount of

after work drinking (Moore et al., In press) and at-work hangovers (Moore, 1998) study participants reported, we hypothesized that holding positive norms about heavy drinking generally and hangovers specifically at work would be associated with experiencing hangovers at work. A mixed methods approach offers analysis of ethnographic interviews and observations to describe the context of results from the survey analysis, thus providing more holistic explanations for the occupational and drinking-related behaviors in this workforce. In the Discussion section, we consider implications of our findings for prevention of workplace alcohol-related problems.

## **Methods**

## **Telephone Survey**

The restaurant-bar chain supplied a roster with contact information for 4,999 employees between the ages of 18 to 29. Trained telephone interviewers attempted to contact all 4,999 employees. Excluding employees who could not be reached because of non-working telephone numbers, 1,892 were found eligible to participate in the study. Of these eligible workers, 339 (17.9%) refused to participate, 259 (13.7%) asked to be called later, and 1,294 were interviewed after providing informed consent, resulting in a 68.4% response rate (Moore et al, 2009).

## **Survey Measures**

Work-Related and Overall Drinking—Drinking alcohol before work was measured by asking the respondents how often they had consumed two or more drinks within an hour of going to work during the past year. Drinking at work was assessed by asking respondents to report frequency and usual quantity of alcohol consumed during work hours. A series of quantity and frequency questions addressed drinking outside of work, and included measures of the frequency of intoxication; response categories ranged from 'every day' to 'not at all.'

**Work-Related Alcohol Norms**—Respondents were asked a series of questions regarding the extent to which their supervisor and coworkers would approve of alcohol use prior to, during, and immediately after work hours. They were also asked to estimate how likely it was that their coworkers and supervisors engaged in drinking during these times.

**Hangovers at Work and Norms**—Respondents were asked the number of times in the past year they came to work with a hangover. They were also asked how likely it would be that their best friend at work and other coworkers came to work with a hangover over the past 12 months. They were also asked how likely or unlikely would it be that disciplinary action would be taken against an employee who had come to work with a hangover in the previous 12 months. Response categories were (1) *very likely* through (4) *very unlikely*.

**Job Categories and Shifts**—Those directly serving customers (e.g. bartenders) were categorized as servers; those working as dishwashers, expediters, line cooks and prep cooks were categorized as kitchen staff; and those assisting servers as hosts/hostesses and bussers were categorized as hosts. Shifts were classified as day, evening, split or no usual shift.

**Smoking**—Respondents reporting using cigarettes in the past 30 days were classified as current smokers.

#### Sociodemographic factors

Gender: Respondent gender was coded as male or female.

Age: Study participants were asked how old they were at the time of the survey.

<u>Race/ethnicity:</u> Self-reported race/ethnicity was recorded for each respondent. A race/ethnicity variable was coded dichotomously as non-white or white.

**Education:** Respondents were asked to report their highest level of completed education, and if they were currently enrolled in school.

## **Analytic Strategy**

A multivariate linear regression model was developed to assess the contribution of work-related hangover norms, controlling for socio-demographic and occupational factors, to being hung over at work. All analyses were conducted using SPSS v.16.0. Specifically, descriptive statistics (means, standard deviations, proportions) were computed for continuous and categorical variables. Control variables included gender, age, level of education, race/ethnicity, occupational category and shift. Smoking was included in the model as a potential confounder. This analysis was conducted among current drinkers only (85% of the sample) since, of course, only drinkers could potentially experience hangovers at work.

**Qualitative Interviews**—Sixty-four face-to-face semi-structured interviews were held with service and kitchen staff in locations across the country. Interview instruments were developed to cover employee perceptions of norms and policies concerning alcohol use at work and enforcement of rules, as well as their experience with alcohol before, during, and after work. Respondents between the ages of 18 and 29 were chosen randomly from employee lists provided by seventeen restaurants in the Midwestern, Southern, and Northeastern U.S. divisions of a nationwide restaurant-bar chain. Urban, suburban, and rural restaurant locations were included in each region. These respondents included 32 men and 32 women, of whom 19 were bartenders, 12 servers, 13 kitchen workers, 8 hosts/hostesses, and 7 managers. In all restaurants, observations were made of layout, work process in kitchen, bar area and food serving area and premises behind the restaurants, where staff took their breaks.

The semi-structured qualitative interviews were carried out by three of the authors, anthropologists who are experienced in on-site qualitative workplace research. Some of the interviews were conducted in Spanish. Incentive fees of \$25 were offered for participation in both the survey and qualitative interviews. All interviews were recorded and transcribed (and translated, when necessary) verbatim.

Using the qualitative text management software package ATLAS.ti (Muhr, 2006), the interview transcripts were coded by the research team for recurring themes or topics, including employees' views on how they believed supervisors would respond to them if they drank during work hours or came to work with a hangover. A theme may be defined as a specific category or subcategory of information that appears throughout the interview data in similar or varying contexts and with interconnectedness to other themes (Ryan and Bernard, 2003). The team's anthropologists developed the thematic coding manual after reading the first six interviews independently and then comparing and reaching consensus. Thereafter, they revised the manual by including sub-themes and new themes that emerged in the course of analyzing the interviews.

## **RESULTS**

## Survey sample characteristics: Race/ethnicity/gender/age/education

Most respondents (85%) self-reported as white, followed by African American (6%) and Hispanic (5%). Female respondents predominated (59%). The age distribution was 18–20=36%, 21–24=42%, and 25–29=22%. Most respondents (54%) had completed high school. In addition, 32% had attended college but had not completed a 4-year college degree, and approximately 7% had completed a 4-year college degree. Most respondents (60%) reported being currently enrolled in school. *Current smoking status*: 43% of respondents reporting using cigarettes in the past 30 days. *Occupational characteristics:* Servers and bartenders constituted 64% of the sample; 22% were classified as kitchen staff; and 14% were categorized as hosts/bussers. About 17% of the sample reported usually working the day shift, 54% usually worked the night shift, 11% worked a split shift, and 18% reported working no usual shift.

Regarding work-related alcohol norms, the majority of survey respondents (81%) answered that it was unlikely or very unlikely that their closest coworkers drank alcohol during work hours in the previous year. The majority responded that their supervisors, and to a lesser extent, their coworkers, would disapprove of the respondent drinking during work hours (96% and 65.5%, respectively).

There is a wide distribution between self-reported past-year drinking in the hour prior to work (5%), during work hours (2.7%), and after-or non-work hours (85.5%). Nearly 80% of drinkers reported drinking to intoxication at least once in the previous year, and 45% of drinkers stated that they were intoxicated once a month or more frequently. Hangovers represented the major intersection of alcohol consumption and work: 36.5% of employees reported coming to work with a hangover at least once.

The results of the linear regression model displayed in Table 1 showed that among current drinkers (85% of the sample), past-year frequency of intoxication (beta=0.414, p<0.001) was by far the largest contributor to the explained variation in coming to work with a hangover.

Moreover, positive norms for workplace hangovers (i.e., believing that it was likely that close friends at work and other coworkers came to work with a hangover; beta=0.109, p<0.001), shared understandings that coming to work with a hangover would not likely result in disciplinary consequences (beta=0.090, p=0.002), and being a current smoker (beta=0.062, p=0.029) were all significantly associated with coming to work with a hangover. However, other variables, including gender, age, ethnicity, occupational classification and shift, were not significantly associated with experiencing hangovers at work.

Qualitative findings emerging from the analysis of the interview transcripts were similar, consistently evoking negative norms for drinking at work, but positive norms for heavy drinking after work, particularly for tipped employees. Several illustrative quotes follow:

A Texas bartender said, "Cash in hand every day and it's easy for you to go and buzz a little bit. Once you get that money, if you're a drinker, you like to indulge, you know you're gonna go have a drink. Nine times out of ten you will."

Similarly, a manager in Texas described how winding down after a busy night shift usually included a visit to another bar: "Last call's at 1:45, you want to wind down quick, usually you get three shots and a beer, down all of them, and then start sippin' on another beer, and

then by close, you were just trying to get caught up with everyone who's already been out. You learn how to go to a bar and get wasted real quick."

Consequently, hangovers at work could be characterized as normative. For example, a Midwestern waitress stated: "It's common that at least a couple of times a week, somebody comes in and they're hung over from the night before; there's a group of us that will go out. Everybody comes in to work hung over; we all do it, especially on weekends, like Saturday morning, you expect like half the people hung over."

Regarding hangovers in the kitchen staff, a Midwestern manager said, "The back of the house, they get paid every other week. And, it's usually on a Friday and it's very consistent to see that hangover effect on Saturday mornings."

## DISCUSSION

Both quantitative and qualitative analyses point to work-related alcohol norms that did not support drinking prior to or during work hours (in accord with secular trends in U.S. workplaces more generally), but were highly supportive of after work drinking and hangovers at work. Hangovers emerged as the primary way in which overall drinking affected on-the-job performance. Frequency of intoxication, positive norms concerning hangovers at work, the perception that there would be minimal discipline for coming to work hung over, and smoking were all associated with working with a hangover. It was noteworthy that there were no gender differences associated with on-the-job hangovers, echoing other occupational studies where women's alcohol-related norms and behavior did not markedly differ from those of their male coworkers (e.g., Ames et al., 2007; Ames et al., 2000).

The restaurant chain's policies governing employee alcohol use in the workplace are extensive and complex (Moore et al., In press). These policies specify that employees of legal drinking age who have changed out of their clothes bearing the corporate logo may not consume alcohol on the premises until two hours after their shift, and also limit the number of drinks and locations within the restaurant where they may drink alcohol if the other conditions are met. The policies do not specifically address hangovers, however.

The findings of the present study indicate that these policies and procedures in this barrestaurant chain do not reduce employees' non-work drinking in measurable ways, but are
fairly effective in discouraging their drinking before or during work shifts. These policies
are not unique, as U.S. workplaces have experienced over thirty years of secular trends of
diminished toleration for drinking on the job, as illustrated by the abolishment of tax
deductions for multiple-martini lunches (Mosher, 1983). For prevention purposes, owners
and managers of restaurants should be aware of the identified correlates of coming to work
hung over, and should warn employees that there are safety and performance reasons to
avoid hangovers at work (Moore, 1998).

## Acknowledgments

This research was supported by NIAAA Grant #R01-AA015423 (Genevieve Ames, PI; Roland Moore, Co-PI). We are thankful for assistance provided by the restaurant-bar chain management and staff, who have requested not to be named in our reports. We also wish to thank Michael Frone for his help in developing the survey instrument.

#### **References Cited**

Ames G, Cunradi C, Moore R, Stern P. Military culture and drinking behavior among Navy careerists. Journal of Studies on Alcohol and Drugs. 2007; 68(3):336–344. [PubMed: 17446972]

Ames G, Grube J. Alcohol availability and workplace drinking: Mixed method analyses. Journal of Studies on Alcohol. 1999; 60(3):383–393. [PubMed: 10371267]

- Ames GM, Delaney WP. Minimization of workplace alcohol problems: The supervisor's role. Alcoholism: Clinical and Experimental Research. 1992; 16(2):180–189.
- Ames GM, Grube JW, Moore RS. Social control and workplace drinking norms: A comparison of two organizational cultures. Journal of Studies on Alcohol. 2000; 61(2):203–219. [PubMed: 10757130]
- Babor, TF.; Higgins-Biddle, JC.; Saunders, JB.; Monteiro, MG. AUDIT: The Alcohol Use Disorders Identification Test: Guidelines for Use in Primary Care. 2. Geneva: World Health Organization Department of Mental Health and Substance Dependence; 2001.
- Bacharach SB, Bamberger PA, Sonnenstuhl WJ. Driven to drink: Work-related risk factors and employee problem drinking. Academy of Management Journal. 2002; 45:637–658.
- Frone M. Predictors of overall and on-the-job substance use among young workers. Journal of Occupational Health Psychology. 2003; 8(1):39–54. [PubMed: 12553528]
- Frone MR, Brown AL. Workplace substance-use norms as predictors of employee substance use and impairment: A survey of U.S. workers. Journal of Studies on Alcohol and Drugs. 2010; 71:526–534. [PubMed: 20553660]
- Kjaerheim K, Mykletun R, Aasland O, Haldorsen T, Andersen A. Heavy drinking in the restaurant business: the role of social modelling and structural factors of the work-place. Addiction. 1995; 90(11):1487–1495. [PubMed: 8528034]
- Larsen S. Alcohol use in the service industry. Addiction. 1994; 89(6):733-741. [PubMed: 8069174]
- Leigh JP, Jiang WY. Liver cirrhosis deaths within occupations and industries in the California occupational mortality study. Addiction. 1993; 88(6):767. [PubMed: 8329968]
- Macdonald S, Wells S, Wild TC. Occupational risk factors associated with alcohol and drug problems. American Journal of Drug and Alcohol Abuse. 1999; 25(2):351–369. [PubMed: 10395165]
- Mandell W, Eaton WW, Anthony JC, Garrison R. Alcoholism and occupation: A review and analysis of 104 occupations. Alcoholism: Clinical and Experimental Research. 1992; 16(4):734–746.
- Moore R, Cunradi C, Ames G. Physical and social availability of alcohol for young enlisted Naval personnel in and around home port. Substance Abuse: Treatment, Prevention, and Policy. 2007; 2(1):17.
- Moore RS. The hangover: An ambiguous concept in workplace alcohol policy. Contemporary Drug Problems. 1998; 25(1):49–63.
- Moore RS, Ames GM, Cunradi CB, Duke M. Alcohol policy comprehension, compliance and consequences among young adult restaurant workers. Journal of Workplace Behavioral Health. In press.
- Moore RS, Cunradi CB, Duke M, Ames GM. Dimensions of problem drinking among young adult restaurant workers. American Journal of Drug and Alcohol Abuse. 2009; 35(5):329–333. [PubMed: 20180660]
- Mosher JF. Tax-deductible alcohol: An issue of public health policy and prevention strategy. Journal of Health Politics, Policy and Law. 1983; 7(4):855–888.
- Muhr, T. ATLAS.ti Qualitative Software Package Version 5.0. Berlin: Scientific Software; 2006.
- Nusbaumer MR, Reiling DM. Environmental influences on alcohol consumption practices of alcoholic beverage servers. American Journal of Drug and Alcohol Abuse. 2002; 28(4):733–742. [PubMed: 12492267]
- Parker D, Harford T. The epidemiology of alcohol consumption and dependence across occupations in the United States. Alcohol Health Res World. 1992; 16(2):97–105.
- Ryan GW, Bernard HR. Techniques to identify themes. Field Methods. 2003; 15:85–109.
- SAMHSA. Worker Substance Use by Industry: Research findings from the SAMHSA 2002, 2003, and 2004 National Surveys on Drug Use and Health (NSDUHs). The NSDUH Report. 2007 Aug 27.
- Stinson FS, DeBakey SF, Steffens RA. Prevalence of DSM-III-R alcohol abuse and/or dependence among selected occupations: United States, 1988.(Diagnostic and Statistical Manual of Mental Disorders, Third Edition, Revised). Alcohol Health & Research World. 1992; 16(2):165–173.

Whitehead, P.; Simpkins, J. Occupational factors in alcoholism. In: Kisin, R.; Begleiter, H., editors. The Pathogenesis of Alcoholism: Psychosocial Factors. New York: Plenum Press; 1983. p. 405-553.

- Zhang, Z.; Huang, LX.; Brittingham, AM. Worker Drug Use and Workplace Policies and Programs: Results from the 1994 and 1997 NHSDA. Rockville, MD: US Department of HHS, SAMHSA; 1999.
- Zhiwei Z, Snizek WE. Occupation, job characteristics, and the use of alcohol and other drugs. Social Behavior and Personality: An International Journal. 2003; 31(4):395.

**Table 1**Linear regression: Correlates of being hung over at work.

	Beta	t	p-value
Constant		-2.598	0.010
Male	0.040	1.334	0.182
Current smoker	0.062	2.189	0.029
Age	0.034	1.108	0.268
Currently enrolled in school	0.003	0.102	0.918
High school education	0.015	0.542	0.588
Non-white race/ethnicity	-0.010	-0.365	0.715
Host	-0.010	-0.309	0.757
Server	-0.038	-1.077	0.282
Positive norms for workplace hangover	0.109	3.731	< 0.001
Past 12-month frequency of intoxication	0.414	14.735	< 0.001
Perceived low workplace consequences for hangover	0.090	3.162	0.002
Day shift	-0.007	-0.544	0.791
Split shift	-0.015	-0.216	0.586
No usual shift	-0.028	-1.006	0.315
$R^2 = 0.25$			