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## Dimensions of Problem Drinking among Young Adult Restaurant Workers

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### Abstract

**Background**—Nationwide surveys identify food service workers as heavy alcohol users.

**Objectives**—This article analyzes dimensions and correlates of problem drinking among young adult food service workers.

**Methods**—A telephone survey of national restaurant chain employees yielded 1294 completed surveys.

**Results**—Hazardous alcohol consumption patterns were seen in 80% of men and 64% of women. Multivariate analysis showed that different dimensions of problem drinking measured by the AUDIT were associated with workers' demographic characteristics, smoking behavior and job category.

**Conclusions & Scientific Significance**—These findings offer evidence of extremely high rates of alcohol misuse among young adult restaurant workers.

### Keywords

alcohol-related problems; occupational drinking; young adults; food service workers

### Introduction

Food service workers are notably heavy users of alcohol (1). Nationwide surveys indicate that their rates of heavy drinking are among the highest of any occupation (15.2% vs. an average of 8.8%) (2,3). Research (4–6) suggests that those at risk for alcohol dependence may self-select into the restaurant industry. Relevant risk factors may include work stress (7,8), low-income jobs (9,10), younger age (11), high turnover positions (12), living alone (13), and irregular hours (14). However, drinking patterns and consequences of restaurant workers remain poorly understood.

In this paper, we present results from a survey of drinking prevalence and consequences among young adults employed by a national restaurant-bar chain, part of the \$516 billion dollar commercial restaurant industry (15). Specifically, we focus on demographic and occupational correlates of hazardous alcohol consumption, as well as negative consequences of drinking in these young adults' lives.

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## Methods

### Sample and Data Collection

A large restaurant-bar chain provided a roster of 4,999 employees aged 18 to 29. Offering a \$25 incentive, interviewers attempted to contact by telephone all 4,999 employees. Excluding individuals who could not be reached because of non-working telephone numbers, 1,892 were found eligible to participate in the study. Of these, 339 refused to participate (17.9%), 259 (13.7%) were deemed eligible but asked to be called later, and 1,294 were interviewed after providing informed consent, resulting in a 68.4% response rate.

### Measures

**Drinking Frequency**—Survey respondents were asked how often they consumed alcohol within the past year, and the typical number of drinks per occasion. They were also asked if in the last month they drank immediately prior to or during their shift.

**Risk of Problem Drinking**—Problem drinking was assessed with the Alcohol Use Disorders Identification Test (AUDIT) (16). Males were classified as problem drinkers if their AUDIT score was 8+; female were positively classified if their score was 5+ (17).

**Drinking Problems**—Questions concerning alcohol-related problems experienced during the preceding year included items from the AUDIT (17) and occupational studies (18), such as needing a drink first thing in the morning, or being arrested for alcohol-related issues.

### Sociodemographic Factors

**Gender:** Participant gender was coded as male or female.

**Age:** Participant age was categorized as 18–20, 21–24, or 25–29 years of age.

**Race/ethnicity:** Most respondents (85%) reported their race/ethnicity as white, followed by African American (6%) and Latino/Hispanic (5%).

**Education:** A slim majority (54%) reported completing high school or a GED certificate without further studies. In addition, 32% had some college experience, and approximately 7% had completed a four-year college degree. Most respondents (60%) reported being currently enrolled as a student, primarily (51%) in four- or two-year colleges.

**Smoking**—Respondents who reported smoking any cigarettes in the past 30 days were classified as current smokers.

### Occupational Factors

**Job Categories:** The self-reported job duties of respondents were classified as follows: those serving customers such as bartenders were categorized as servers; those without direct customer contact including cooks were categorized as kitchen staff; and those assisting servers (e.g., busboys) were categorized as hosts.

**Socializing with Coworkers:** Respondents were asked how frequently they spent time socially after work with coworkers.

### Analytic Strategy

Initially, descriptive statistics were used to determine the prevalence of drinking patterns and alcohol-related problems. Following guidelines provided by the AUDIT manual (19), the

prevalence was calculated for three problem drinking categories (hazardous alcohol use, dependence symptoms, and harmful alcohol use).

Prevalence of problem drinking by sample characteristics was assessed with chi-square tests of independence. A multivariate logistic regression model was developed to assess the contribution of sociodemographic and occupational factors to hazardous drinking. Smoking was included in the model as a covariate since it is highly correlated with drinking behavior. The Bonferoni procedure was used to adjust for multiple comparisons (20). Since these interactions did not meet the criteria for statistical significance, the analysis was rerun as a main effects model.

## Results

### Drinking Frequency

Workers typically drank one to two days per week within the past year, but drinking quantity tended to be heavy, with nearly half of all males consuming 5+ drinks and 32.5% of women imbibing 4+ drinks per occasion at least once per month (21). However, 14.3% abstained from alcohol for the previous year. Few respondents reported past-month drinking immediately before work and even fewer during work hours. Thus what is reported here largely represents after-work or non-workday drinking.

### Negative Drinking Consequences

Numerous respondents reported problems associated with drinking during the preceding year, including feeling guilty after drinking (20.3%), being unable to remember what happened after drinking (31.6%), or driving under the influence of alcohol or drugs (28.2%). Table 1 shows that in the three domains measured by the AUDIT, 70.9% of the respondents engaged in consumption at a hazardous level, 21.4% showed indicators of alcohol dependence, and 39.6% had already experienced alcohol-related harm.

### Prevalence of Problem Drinking

Problem drinking (17) was reported by 41% of the sample. There were no significant gender differences in problem drinking. Rates differed significantly by age categories, with nearly 50% of those aged 21–24 years old reporting problem drinking. Approximately 1/3 of underage respondents (18 to 20 years old) reported problem drinking. Nonwhite respondents had significantly lower problem rates than white respondents (29% vs. 43%), as did those whose highest level of completed education was high school compared to those with some post-high school education (37% vs. 46%). No differences were seen based on whether or not they were currently enrolled in school. Regarding occupational categories, rates of problem drinking were higher among servers (43%) and kitchen staff (42%) compared to hosts (29%). Finally, respondents who reported current smoking had significantly higher rates of problem drinking compared to non-smokers (56% vs. 30%).

### Multivariate Analysis

Multivariate analysis results (Table 2) indicated that the likelihood of problem drinking did not differ based on gender. Nonwhite workers were significantly less likely to be problem drinkers than white workers. Workers in the 21–24 year old age category were more likely to report problem drinking compared to workers in the 25–29 year old age category. Those whose highest level of education was high school were less likely to be problem drinkers compared to those with additional education. There were no significant differences in likelihood of problem drinking by occupational category. Frequency of after-work socializing with co-

workers, however, was significantly associated with risk of problem drinking. Lastly, current smokers were about three times as likely to report problem drinking as non-smokers.

## Discussion

Findings of variables associated with problem drinking in this survey analysis include higher rates among young adult restaurant workers who are: (a) male; (b) white; (c) aged 21–24; (d) educated post-high-school; (e) frequently socializing with co-workers after work; and (f) current smokers.

There are comparable findings in the literature for each of the variables found to be linked to problem drinking in this sample. First, lower problem drinking by nonwhites relative to whites was consistent with previous occupational research (18), (22).

Second, many surveyed workers were in the 21–24 age group, the cohort more likely than others in the general population to drink heavily (23). The over-representation of this population among restaurant workers likely contributes to their high rates of heavy drinking. Findings from longitudinal surveys (24) indicate that young adults in college are more likely to drink heavily than their non-college attending agemates.

Socializing with co-workers was found to be a risk factor for heavier or problem drinking. Heavy drinking was associated with socializing after work in other studies (25,26). Paralleling studies of group norms influencing drinking patterns among younger people (27), after-work socializing in this particular occupational group appears to put members at heavier risk. The association between smoking and problem drinking echoes the literature on the co-occurrence of alcohol and tobacco use (28,29).

## Study limitations

The current study has certain limitations. First, the data are cross-sectional, thus we are unable to establish causal relationships. However, the high employee turnover in the restaurant industry (sometimes over 100% annually) offers logistical challenges to individual longitudinal studies in this sector. The AUDIT is a screening tool, rather than a diagnostic instrument. Nonetheless, it remains a widely used measure of alcohol problems (17,30–33).

Despite these limitations, these findings complement existing literature on heavy substance use by young adult hospitality industry workers (34). More important, these findings may inform prevention efforts targeting negative consequences of alcohol use among this population. Considering the millions of young adults who work in U.S. food service, the proportions of problem drinkers encountered in this study would yield staggering numbers of Americans experiencing serious negative consequences of heavy alcohol consumption.

In terms of risk factors, a restaurant work environment may reinforce alcohol use through alcohol access (35), as well as workplace norms and culture (36). Workplace-based environmental influences and processes facilitate food service workers' engaging in high levels of alcohol consumption, particularly after work. With these findings in mind, implications for prevention of alcohol-related problems among young adults include focusing prevention efforts on restaurant workers, particularly those who smoke, are male, are white, and are between the ages of 21 and 24. Interventions seeking to change workplace norms regarding excessive drinking may be particularly beneficial in reducing alcohol-associated problems among the high-risk groups identified in this population.

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**Table 1**

Sample Characteristics – Restaurant Workers (N=1294)

	N	Number (%) Hazardous Consumption	Number (%) Alcohol Dependence	Number (%) Alcohol Related Harm
Gender:				
Male	533	427 (80.1)	138 (25.9)	270 (50.6)
Female	761	487 (64.0)	139 (18.3)	242 (31.8)
Age:				
18–20	473	270 (57.1)	75 (15.9)	161 (34.0)
21–24	538	437 (81.2)	139 (25.8)	248 (46.1)
25–29	283	207 (73.1)	63 (22.3)	103 (36.4)
Race/ethnicity:				
Non-White	181	103 (56.9)	24 (13.3)	55 (30.4)
White	1107	809 (73.1)	252 (22.8)	456 (41.2)
Highest Level of Completed Education:				
Up to High School	763	504 (66.1)	145 (19.0)	287 (37.6)
Post High School	531	410 (77.2)	132 (24.9)	225 (42.4)
Currently Enrolled in School:				
Yes	778	536 (68.9)	163 (21.0)	305 (39.2)
No	516	378 (73.3)	114 (22.1)	207 (40.1)
Occupational Category:				
Server/bartender	812	581 (71.6)	186 (22.9)	319 (39.3)
Kitchen	275	213 (77.4)	68 (24.7)	130 (47.3)
Host	175	92 (52.6)	19 (10.9)	52 (29.7)
Current Smoker:				
Yes	552	478 (86.6)	161 (29.2)	288 (52.2)
No	741	435 (58.7)	116 (15.6)	224 (30.2)

**Table 2**  
Logistic Regression Results for Correlates of Problem Drinking – Restaurant Workers

	Hazardous Consumption		Alcohol Dependence		Alcohol Related Harm	
	OR	95% CI	OR	95% CI	OR	95% CI
<b>Gender:</b>						
<b>Male</b>	<b>2.10</b>	<b>1.51, 2.90***</b>	<b>1.46</b>	<b>1.07, 2.00*</b>	<b>2.13</b>	<b>1.62, 2.79***</b>
Female (ref. group)	1.00	---	1.00	---	1.00	---
<b>Age:</b>						
18–20	0.74	0.48, 1.12	0.83	0.54, 1.28	1.27	0.87, 1.86
<b>21–24</b>	<b>1.79</b>	<b>1.20, 2.67**</b>	1.19	0.82, 1.73	<b>1.62</b>	<b>1.16, 2.26**</b>
25–29 (ref. group)	1.00	---	1.00	---	1.00	---
<b>Race/ethnicity</b>						
<b>Non-White</b>	<b>0.48</b>	<b>0.33, 0.70***</b>	<b>0.56</b>	<b>0.35, 0.89*</b>	<b>0.66</b>	<b>0.46, 0.95*</b>
White (ref. group)	1.00	---	1.00	---	1.00	---
<b>Highest Level of Completed Education:</b>						
<b>Up to High School</b>	<b>0.63</b>	<b>0.47, 0.86**</b>	<b>0.74</b>	<b>0.55, 0.99*</b>	0.76	0.60, 1.004
Post High School (ref. group)	1.00	---	1.00	---	1.00	---
Currently Enrolled in School:						
Yes	1.27	0.92, 1.76	1.19	0.87, 1.62	1.17	0.89, 1.54
No (ref. group)	1.00	---	1.00	---	1.00	---
<b>Occupational Category:</b>						
<b>Server/bartender</b>	<b>1.54</b>	<b>1.05, 2.24*</b>	<b>1.96</b>	<b>1.16, 3.30*</b>	1.26	0.86, 1.85
Kitchen	1.35	0.81, 2.27	1.72	0.94, 3.15	1.21	0.75, 1.93
Host (ref. group)	1.00	---	1.00	---	1.00	---
<b>Current Smoker:</b>						
<b>Yes</b>	<b>3.93</b>	<b>2.86, 5.39***</b>	<b>2.07</b>	<b>1.54, 2.77***</b>	<b>2.37</b>	<b>1.83, 3.05***</b>
No (ref. group)	1.00	---	1.00	---	1.00	---
<b>Socialize After Work with Coworkers</b>	<b>1.38</b>	<b>1.22, 1.56***</b>	1.12	0.99, 1.26	<b>1.23</b>	<b>1.11, 1.36***</b>

\* P < 0.05;



1000 > p  
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'1000 > p  
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