

Harassing Under the Influence: The Prevalence of Male Heavy Drinking, the Embeddedness of Permissive Workplace Drinking Norms, and the Gender Harassment of Female Coworkers

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Drawing from the literature linking alcohol consumption and aggressive behavior, the authors examine the degree to which the risk of gender harassment toward female workers may be associated with the drinking behaviors and perceived workplace drinking norms of their male coworkers. Using multilevel analyses to examine data from 1,301 workers (including 262 women employed in 58 work units in the manufacturing, service and construction sectors), our findings indicate that, even when controlling for a variety of other demographic and unit-level factors, there is a significant association between the proportion of males in a work unit identified as being heavy or “at-risk” drinkers and the probability of gender harassment toward unit females. Our findings further indicate that this association is amplified as a function of the embeddedness of permissive workplace drinking norms among males’ referent others.

Keywords: sexual harassment, gender and diversity, multilevel analysis, alcoholism, drinking cultures

Sexual harassment is a form of sex discrimination involving “unwelcome sexual advances, requests for sexual favors and other verbal or physical conduct of a sexual nature” that affects workers’ conditions of employment or creates an “intimidating, hostile, or offensive working environment” (Equal Employment Opportunity Commission [EEOC], 1980). Glomb et al. (1997) report estimated prevalence rates of all forms of sexual harassment for employed women at

between 40% (United States Merit Systems Protection Board [USMSPB], 1987) and 68% (Schneider, Swan, & Fitzgerald, 1997); other studies suggest that between 19 and 90% of women (depending on the sample used) have experienced sexual harassment (Timmerman & Bajema, 2000; Welsh, 1999). Although fewer than 10% of victims file formal complaints (Jackson & Newman, 2004), survey data indicate an increase in sexual harassment complaints during the late 1990s, from an average of 0.69 complaints per 100 employees in 1995 to an average of over 1.5 complaints per 100 employees in 1998 (Society for Human Resource Management [SHRM], 1998), with male coworkers as perpetrators in the vast majority of cases (Fitzgerald et al., 1988; SHRM, 1998). According to the latest data compiled by the US Equal Employment Opportunity Commission (EEOC, 2006), 12,679 complaints were filed with the EEOC in 2005, with over 85% of these complaints filed by females. Thus, although males may also be victims of sexual harassment, the current study seeks to extend our understanding of such behaviors perpetrated by males and targeted against women.

As common and pervasive as sexual harassment of women in the workplace may be, relatively little is known about its antecedents, with most of the re-

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search to date focusing on two main factors, namely victim characteristics (e.g., age, education; Gutek, 1985; USMSPB, 1981), and the characteristics of the victim's organization and/or work unit (Coles, 1986; Fitzgerald & Shullman, 1993). Unexplored, however, is the possibility that females' risk of experiencing sexual harassment at work may be influenced by the prevalence among unit males of other behaviors (e.g., heavy drinking) often predisposing individuals to be more aggressive toward their coworkers, as well as the embeddedness of norms legitimizing such predisposing behaviors specifically during work hours. Previous studies of physical and verbal aggression in the workplace (e.g., Greenberg & Barling, 1999; McFarlin, Fals-Stewart, Major, & Justice, 2001) suggest that heavy employee alcohol consumption in general (as opposed to specifically work-based consumption) may serve as such a predisposing behavior in that such a pattern of consumption has been found to be linked to employee aggression against coworkers. Studies also suggest that other more moderate but work-based patterns of alcohol consumption may also predispose individuals to be more aggressive in their relations with coworkers (Ames, Grube, & Moore, 1997; Mangione et al., 1999), and that such patterns of work-based consumption may be more prevalent in work units where there is a widespread sense that such work-based drinking behavior is condoned by and acceptable to referent coworkers (Ames, Grube, & Moore, 2000). To the extent that workplace aggression may be more likely among those whose alcohol consumption (whether moderate or heavy) occurs during or around work hours (Ames et al., 1997; Mangione et al., 1999), the embeddedness of norms legitimizing such predisposing behaviors specifically during work hours (e.g., during lunch breaks) may thus serve as both a direct predictor of harassment, as well as a unit-level contextual factor conditioning the link between a general pattern of heavy drinking among unit males and the probability of sexual harassment of unit females.

While employee drinking behavior was identified by Gutek (1985) in the early years of sexual harassment research as a possible risk factor, to date no empirical study has directly investigated coworker drinking behavior as an antecedent of any form of sexual harassment. Indeed, with the exception of a study by Esler and Bell (1998), which found that 38% of the employees of one American municipality expected their high-consumption peers to engage in sexually aggressive behaviors, the possible link between employee drinking and sexual harassment as a particular form of workplace aggression has been

essentially neglected. Consequently, the current study examines the association between the prevalence of heavy drinking among the men in a work unit and the embeddedness of permissive work-related drinking norms among their referent coworkers, on the one hand, and, on the other, the likelihood that the female members of this work unit will experience the most prevalent form of sexual harassment, namely gender harassment.

Why a Focus on Gender Harassment

In a seminal study, Fitzgerald et al. (1988) identified three forms of sexual harassment: sexual coercion, unwanted sexual attention, and gender harassment. In the current study, we focus on this third form of sexual harassment, namely gender harassment. Unlike sexual coercion (involving threats or bribes, subtle or explicit, that condition some job-related benefit on sexual cooperation) and unwanted sexual attention (which involves verbal or physical behaviors ranging from intrusive letter/phone calls to touching, grabbing, and gross sexual imposition), gender harassment is conduct, whether sexualized or not and whether directed at women in general or one woman in particular, that conveys hostile and degrading attitudes about women (Parker & Griffin, 2002). As noted by Sbraga and O'Donohue (2000), "gender harassment falls under the legal concept of hostile environment and is understood by this rubric when legal cases are being investigated and tried" (p. 262). Examples of gender harassment include generally sexist behavior, crude comments, or jokes of a sexual nature and other behaviors (e.g., gestures, the displaying of sexual materials) that disparage the gender of the target or convey hostility toward women (Schneider et al., 1997).

We focus our study on gender harassment for several reasons. First, studies consistently indicate that it is the most common form of sexual harassment (Parker & Griffin, 2002). Second, studies have also consistently found this form of harassment to be damaging to the victims, their coworkers, and the organizations employing them. For example, Parker and Griffin (2002) found gender harassment to cause women to experience overperformance demands, which in turn were associated with psychological distress. Other studies have linked gender harassment and other forms of sexual harassment to anxiety, depression, sleep disturbances, stress, and a variety of physical sequela (Fitzgerald, 1993; Gutek & Koss, 1993). In teams, gender harassment has been linked to higher relationship and task conflict levels, lower

team cohesion, and inferior financial performance (Raver & Gelfand, 2005). At the organizational level, negative consequences include lowered morale, absenteeism (USMSPB, 1987), damaged interpersonal work relationships (Culbertson, Rosenfeld, Booth-Kewley, & Magnusson, 1992; Newman, 2004), and increased job turnover (USMSPB, 1987). Third, because gender harassing behaviors often undermine job performance, and because the resulting distress can interfere with a woman's ability to perform her job, gender harassment that is deemed highly disturbing to the victim meets the legal standard for employment discrimination (Parker & Griffin, 2002; Sbraga & O'Donohue, 2000). Finally, as we discuss in greater detail below, given the aggression-based nature of gender harassment, there is a stronger theoretical basis for positing a link between male drinking behavior and the incidence of gender harassment of women at work.

Males' Heavy/At-Risk Drinking and Gender Harassment

Although gender harassment does not involve physical hostility or violence on the part of the perpetrator, it is nevertheless antagonistic in nature and, when occurring in the workplace, may be viewed as a form of workplace aggression (McFarlin et al., 2001; Parker & Griffin, 2002). Indeed, as noted by Lim and Cortina (2005), empirical research suggests that aggression-related dominance and power, rather than sexual intention, seem to be the "driving force" behind workplace sexual harassment in general. Moreover, their findings suggest that work-based gender harassment, "conveying hostility devoid of any explicit sexual motive," serves as a central, "bridging" construct linking the domains of work-based aggression and sexual harassment (p. 484).

Recent studies have identified alcohol use and misuse as a significant factor contributing to aggression in general (Bondy, 1996; Makela & Mustonen, 2000) and workplace aggression in particular (Bennett & Lehman, 1996; McFarlin et al., 2001). Violence and aggression have been among the most widely studied of alcohol-related problems (Bondy, 1996), with numerous studies indicating that the perpetrators of violent crimes tend to have been under the influence of alcohol during the act and that a large proportion of them have a history of alcohol abuse (Rossow, 1996). Time series analyses of aggregate level data have also demonstrated a link between alcohol consumption and violence in general (Lenke, 1990; Skog

& Bjork, 1987). Other studies focusing specifically on sexual aggression and harassment have found similar results. For example, in their study of male workplace aggression, Greenberg and Barling (1999) note that, "there is a wealth of data linking alcohol use and partner aggression in intimate relationships" (p. 899). Indeed, studies of male college student offenders and female college student victims (Arias, Samios, & O'Leary, 1987; Makepeace, 1987) and of male American military personnel (Pan, Neidig, & O'Leary, 1994) have consistently found a link between male alcohol use and violence directed against females. Most recently, using a sample of male and female college students, Menard, Hall, Phung, Gherbrial, and Martin (2003) found positive alcohol expectations (i.e., subjective beliefs about the psychological and physical effects of alcohol consumption) to significantly predict the use of both sexually harassing and coercive behaviors.

A number of recent studies indicate that the association between drinking and aggression may manifest itself in the workplace as well. Lehman and Simpson (1992) found substance use by employees at or away from work to be associated with the prevalence of antagonistic work behaviors, such as spreading rumors about coworkers. Blum, Roman, and Martin (1993) found a link between general drinking patterns and employee relationship problems at work. Bennett and Lehman (1996), using data collected from nearly 2,500 municipal workers in the southwestern United States, found a direct association between respondents' perceptions of coworkers' alcohol consumption and the frequency with which respondents witnessed violence at work. More recently, using self-report measures of both alcohol consumption and aggression, McFarlin et al. (2001) found that the higher the number of days of drinking (and, in particular, heavy drinking) during the year prior to assessment, the higher the frequency of self-reported verbal and physical perpetration of workplace aggression.

Underlying much of the research examining the alcohol-aggression link is the assumption that the pharmacological effects of alcohol are such that, while impaired individuals may find it easier to approach the opposite sex (Makela & Mustonen, 2000), they may also find it more difficult to perceive and interpret social cues, thus reducing the likelihood that they will respond to these stimuli in a socially acceptable manner and increasing the likelihood of disparaging, offensive, and aggressive behaviors (Bondy, 1996). Laboratory studies of the alcohol-aggression relationship involving placebo-controlled

experimental designs have demonstrated that alcohol has an adverse effect on individuals' ability to perceive and interpret the meaning of external stimuli (Chermack & Taylor, 1995; Hull & Bond, 1986; Taylor & Chermack, 1993). Furthermore, as a number of researchers have noted, the resulting pharmacological effects on cognition may generate all kinds of atypical behaviors, including aggression and hostility, particularly under conditions of frustration, perceived provocation, or threat (Gustafson, 1986; Steele & Josephs, 1990; Steele & Southwick, 1985). According to the disinhibition hypothesis, these behaviors may occur because alcohol weakens brain mechanisms (e.g., the ability to accurately assess the risk of acting on an immediate aggressive impulse) that normally restrain impulsive behaviors, including inappropriate aggression (Cook & Moore, 1993; Gustafson, 1994).

Studies also suggest that these pharmacological effects, while perhaps highest within an hour of the actual drinking episode (when blood alcohol concentration or BAC is highest), may linger long after the actual drinking episode ends, particularly among those manifesting a pattern of heavy or at-risk drinking (i.e., defined as the consumption of five servings of alcohol on a given day for men and four for women; National Institute on Alcohol Abuse and Alcoholism [NIAAA], 2005; Wilkinson, Sedman, Sakmar, Kay, & Wagner, 1977). For example, Ames and colleagues (1997) found a positive relationship between the frequency of being "hungover" at work and the frequency of having problems with coworkers, while others have found heavy drinking off the job to be positively associated with frequency of arguments with coworkers (Mangione et al., 1999) and other adverse social and interpersonal relationship outcomes on the job (Blum et al., 1993). This being the case, the link between drinking and gender harassment need not be contingent upon consumption actually occurring on the job. Rather, such a link may also manifest itself when individuals engage in heavy drinking off the job, but either prior to the start of the working day or during meal or other work-related break times.

Given such lingering effects and taking into account the general reluctance of workers to potentially incriminate themselves by reporting the frequency with which they engage in behaviors that directly violate basic shop rules (Mangione et al., 1999; Newcomb, 1994), in the current study, we focus specifically on males' overall pattern of heavy alcohol consumption (i.e., regardless of whether or not such behavior occurred on the job) as a proxy for

heavy/at-risk consumption during or proximate to the work day, and, as such, a potential determinant of the likelihood of female gender harassment. Underlying our focus on males' overall or general pattern of heavy drinking is the tendency of general alcohol use to be highly correlated with use specifically in or around achievement settings, such as the school (Finn & Frone, 2003) or workplace (Frone, 2003), leading us to assume that at-risk drinkers are more likely than moderate drinkers to consume alcohol just prior to or during their working day and, therefore, be under the influence of alcohol at work. Based on this assumption and drawing from the research reviewed above, we posit that the risk of gender harassment for women may increase with the proportion of their male unit coworkers engaging in heavy drinking. Due to the pharmacological effects of such alcohol consumption, such males may be more predisposed to respond to certain workplace stimuli (e.g., contentious or frustrating workplace situations) by engaging in crude, verbal, physical, and symbolic behaviors that convey hostile and offensive attitudes about women (McFarlin et al., 2001). To the extent that a greater proportion of a work unit's males tend to exhibit such a pattern of alcohol consumption and may, therefore, be more predisposed to engaging in gender harassment, the risk to the females employed in this unit may be assumed to be only that much greater. Consequently, our first hypothesis posits that:

Hypothesis 1: The likelihood that a female worker will report having experienced gender harassment during the previous 12-month period will be positively associated with the proportion of males in her unit exhibiting a heavy/at-risk pattern of alcohol consumption.

The Role of the Normative Workplace Context

Still, because BAC levels are highest in the hour following the actual drinking occasion (Wilkinson et al., 1977), the risk and severity of employee impairment at work is likely to be greater to the extent that alcohol consumption is more contemporaneous with work hours. Indeed, given that significant cognitive impairment can occur with a BAC as low as 0.05 (Finnigan & Hammersley, 1992; Hindmarch et al., 1992) and that such levels may be reached and maintained for an hour or two even after only moderate consumption (i.e., one or two drinks), the risk of gender harassment may be greater for women em-

ployed in work units characterized by conditions favorable to the consumption of alcohol by their male coworkers during work hours. Such conditions may exist in work units dominated by men having one or more referent coworkers deeming it acceptable or legitimate to engage in drinking during work hours (e.g., during meal breaks). Defining referent coworkers as those work-based peers with whom the individual has friendship ties, feels a sense of interpersonal closeness, and to whom s/he tends to turn for support and advice (Ibarra & Andrews, 1993), we ground this proposition on normative, informational (Deutsch & Gerrard, 1955), and referent informational (Turner, 1982) influence theories, all of which suggest that an individual's behavior is likely to be affected by the perceived norms of his or her referent others.

As suggested by normative influence theory, individuals may be motivated to adopt behaviors consistent with referents' norms as a means by which to gain the social approval of such referent others and to build or maintain relationships with them. Consistent with an informational influence mechanism, the norms of referent others may provide valuable and accurate information about the social reality of such behavior, thus shaping the individual's own perceptions regarding the likely costs and benefits of such behavior and, in turn, influencing the individual's likelihood of engaging in such behavior. Finally, consistent with the social identification (Tajfel & Turner, 1979) and self-categorization theories (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987) underlying referent informational influence, the link between referent coworker norms and an individual's own behavior may stem from the individual's interest in adopting the referents' norms as his or her own and then acting upon these adopted norms, as a means by which to maintain or enhance his or her own self-image.

Taken as a whole, these theories suggest that among work unit members, the more widespread the perception that their referent others deem it legitimate to drink during work hours (i.e., the more embedded permissive workplace drinking norms among unit members' referent others), the more likely are unit members to engage in drinking during work hours. This linkage has received substantial empirical support, with perceptions of the workplace drinking norms of referent others or workplace drinking culture having been found to be highly predictive of respondents' own workplace drinking patterns (Ames & Grube, 1999; Ames et al., 2000; Bacharach, Bamberger, & Sonnenstuhl, 2002). For example,

Lehman, Farabee, and Bennett (1998) found exposure to coworkers who deem it acceptable to use alcohol and drugs at work to be positively related to employees' own use of alcohol and drugs at work. Most recently, Frone (2003) reported normative support within one's work environment for the use of alcohol (i.e., "social availability") to be positively related to on-the-job alcohol use.

Taking into account the pharmacological effects of alcohol on aggressive behavior noted above, this implicit link between the embeddedness of permissive drinking norms among male unit members' referent others and the prevalence of alcohol consumption by unit males during work hours suggests that females employed in such permissive work units may be more susceptible to gender harassment. That is, assuming that such norms may legitimize and even encourage male alcohol consumption contemporaneous with work hours, females employed in units in which such norms are more embedded among their male colleagues' referent others may be more likely to find themselves working alongside men who, as a result of impairment, may be more likely to perpetrate gender harassment.

Accordingly, we propose:

Hypothesis 2: The likelihood that a female worker will report having experienced gender harassment during the previous 12-month period will be positively associated with the embeddedness of permissive drinking norms among unit males' referent others.

Moreover, assuming that both the quantity and timing of alcohol consumption are likely to influence female coworkers' risk of being gender harassed by their male colleagues, it stands to reason that unit females may be most at risk in those units characterized by both a higher proportion of males manifesting a heavy/at-risk pattern of alcohol consumption and by more permissive drinking norms. While having referent others who deem it legitimate to consume alcohol during work hours may encourage moderate drinkers to consume one or two servings of alcohol during, for example, a lunch break, it may encourage heavy/at-risk drinkers to consume substantially more. To the extent that heavy drinking during work hours is likely to result in higher BAC levels at work (and hence more severe on-the-job impairment) than heavy drinking several hours before coming to work or more moderate drinking during work hours, women employed in units in which a higher proportion of men manifest a heavy/at-risk pattern of alco-

hol consumption and have referent others deeming it legitimate to consume alcohol during work hours, are likely to be at greater risk than women employed in units with only one of these characteristics. Furthermore, from a cultural expectancies perspective (Bushman, 1997), to the extent that unit males manifesting a heavy/at risk drinking pattern feel that at least one member of their core work-based social network deems it acceptable to drink during the work day, impaired males may feel less constrained about (i.e., more entitled to) expressing themselves in a harassing manner (i.e., "Yes, my behavior would probably suggest that I am under the influence of alcohol, but that's just what we do around here."). Consequently, we propose the following hypothesis:

Hypothesis 3: The positive association between the proportion of males in a work unit exhibiting a heavy/at-risk pattern of alcohol consumption and the likelihood that a female worker in that work unit will report having experienced gender harassment during the previous 12-month period will be moderated by the degree of embeddedness of permissive drinking norms among unit males' referent others. More specifically, this relationship will be amplified as the proportion of unit males reporting to have one or more referent others deeming it legitimate or acceptable to drink during work hours increases.

Method

Sample

To test these hypotheses, we analyzed data collected from men and women employed in nearly 100 work units in multiple organizations in New York State. Using employees' unions as a point of access, data were collected on a wide range of workplace issues through anonymous, self-report questionnaires distributed to randomly sampled members of a dozen unions, who provided informed consent for their participation in the research. Of the 6,720 questionnaires distributed, 3,319 were returned, for an overall response rate of 49.39%. As noted elsewhere (Bacharach, Bamberger, & Feigin-Vashdi, 2005), in each of the unions, we checked for a possible non-response bias, finding that, across a wide range of demographic criteria, our final samples were representative of the membership of their respective unions and their members' employing organizations. Furthermore, since all employees were union members, by definition, our sample was also representa-

tive of the workforce employed by each of the enterprises covered by the unions' respective collective bargaining agreements (in the current case, one enterprise per union).

Approximately 20% of survey items varied from union to union, allowing us to explore a wider variety of workplace issues. As a result, the data analyzed in the current study are drawn from members of the subsample of five unions for which we collected data about gender harassment ($N = 2,072$, including 552 women). Among them were 853 unskilled (e.g., assembly line), semiskilled (e.g., machinists) and skilled workers (represented by two unions) employed in the manufacturing/industrial processing sector; 835 warehouse, sales, and para-medical workers represented by two additional unions and employed in the service sector; and 384 members of a fifth union representing workers in the building trades. Across the five unions, the mean number of participants (male and female) per work unit (i.e., defined as the department in the industrial processing and service sectors and as the building site in the building trades) was 26 (median = 18).

Following both Rulke and Galaskiewicz (2000) and Bunderson (2003), from among the 363 females that responded to the gender harassment item (66% of all women in the units studied), we excluded 101 females employed in units for which we were unable (due, e.g., to a male response rate of less than 50%, or sampling rate of less than 20% of the males in the unit) to ensure the reliability of the unit-level assessed independent variables, leaving only 262 women (i.e., 72% of all women responding to the sexual harassment item or 48% of all female respondents in the five unions) employed in 58 work units (22 in industry, 32 in services, and 4 in construction¹). Most ($N = 247$ or 94%) were employed in one of 37 units in which there was at least one other female respondent included in the sample. Of these 247 women, 106 were employed in one of seven units with 10 or more (maximum of 27) other female respondents.

The females in our analyses were largely unmarried or divorced (i.e., 56%), and 56% were members of an ethnic minority (i.e., African American, Asian, Hispanic). Mean organizational tenure was just over 20 years, with 50% of female respondents being over

¹ *T* test analyses indicated that these 101 excluded females did not significantly differ from the 262 females remaining in the sample with respect to age, education, or the incidence of gender harassment.

the age of 50, and 40% falling between the ages of 30 and 45. Mixed model analyses indicated no significant differences along all but one of a variety of demographic and personality characteristics (e.g., age, seniority, income, gender dissimilarity, neuroticism, extroversion) between those women remaining in the sample and those dropped on the basis of the exclusion criteria. Education (an 8-point ordinal scale with 1 = 1–8 years, 2 = 9–11 years, 3 = completed Grade 12, etc. . . .) was the only parameter for which the mixed model analysis indicated a significant difference between those excluded and those included. Mixed model analyses also indicated no significant differences along any of the variables of theoretical interest (e.g., proportion of males in female's unit self-reporting to be heavy drinkers) between those women remaining in the sample and those either not responding to the gender harassment item or those responding to the item but dropped on the basis of the exclusion criteria noted above. Nor were there any statistically significant differences in the variables of theoretical interest (e.g., gender harassment, lunchtime drinking normative context) across the five unions.

Of the 1,039 male respondents in the 58 units included in the sample, 468 were employed in one of the 22 work units whose members were represented by one of the manufacturing/industrial processing unions; 338 were in one of the 32 work units whose members were represented by one of the service unions; and 233 were in one of the four work units whose members were represented by the building trades union. Sixty-six and one-half percent were married; 39.6% were members of an ethnic minority; 10% were over the age of 50; and 51% were between the ages of 30 and 45.

Measures

In order to assess the proportion of males in the unit manifesting a pattern of heavy or at-risk drinking ("proportion of males at risk"), we asked male respondents how many drinks they usually consumed on those occasions when they drank an alcoholic beverage. Although the National Institute on Alcohol Abuse and Alcoholism (NIAAA) categorizes males that consumed five or more drinks in a given day at least once in the past year as being "heavy drinkers at risk for alcohol abuse or dependence" (NIAAA, 2005), in the current study, the proportion of males at risk was calculated in terms of the proportion of males in each female's work unit with a score of 4 (equivalent to 4 or 5 drinks) or greater on our ordinal

measure of the number of drinks usually consumed in a single drinking episode in the previous month. On the one hand, this cutoff is more liberal than the NIAAA cutoff in that it results in the potential inclusion of individuals consuming only four drinks. On the other hand, it is more restrictive than the cutoff used by the NIAAA in that it includes only those (a) consuming such amounts on a single occasion rather than a single day; (b) usually consuming such amounts rather than those who, while not usually consuming such amounts, might have done so once or twice in the past year; and (c) reporting such behavior in the past month rather than the past year. Multiplying this proportion by 100, we report this variable in percentage terms.

In order to assess the embeddedness of permissive work-related drinking norms among male unit members' referent others ("embeddedness of permissive drinking norms"), we focused on injunctive (as opposed to descriptive) norms. Measures based on strictly descriptive norms may underestimate the strength of permissive drinking cultures since some individuals, although not consuming alcohol during working hours themselves, may be viewed as deeming it perfectly legitimate for others to do so. In contrast, measures of injunctive norms capture the normative inferences drawn both from others' workplace drinking-related behaviors as well as from their perceived attitudes. Specifically, we calculated the proportion of males in each female's unit reporting to have at least one referent coworker (regardless of sex) perceived as deeming the consumption of one or more alcoholic beverages during one's lunch break to be legitimate, and then—in order to allowing reporting in percentage terms—multiplied this number by 100. Drawing from Ames et al. (2000), all men were asked to estimate the number of drinks each of three coworkers (identified by the respondent as those in his unit to whom he felt the closest) felt was acceptable to drink at lunch. We focused on the perceived norms regarding the legitimacy of lunchtime drinking, because, among all forms of drinking during work hours, it is the most prevalent (i.e., 6% rate of prevalence according to Frone, 2006), and because, unlike drinking on the job (a severe violation of work rules in most American workplaces, having a base rate of just above 1%; Frone, 2006), policies about drinking during lunch and other meal breaks are often less clearly specified and vary widely both among and within organizations (Bacharach et al., 2002). The level of embeddedness (percentage of males reporting at least one referent coworker perceived as

deeming lunch-time drinking to be legitimate) across work units ranged from 0% to 100% ($M = 36\%$).

Following Brown, Campbell, and Fife-Shaw (1995), we assessed our dependent variable, gender harassment, on the basis of a mixed direct query/behavioral experiences approach. In contrast to the behavioral experiences approach (e.g., Sexual Experience Questionnaire [S.E.Q.]; Fitzgerald et al.'s, 1988), which provides a list of specific experiences defined in the literature as sexual harassment for respondents to check off, the direct query approach asks simply whether the respondent experienced harassment, leaving the definition of harassment largely up to the respondent (Gutek, Murphy, & Douma, 2004). One advantage of the behavioral experiences approach over the direct query approach is that responses are less likely to be influenced by respondent characteristics and/or organizational conditions (Pryor & Fitzgerald, 2003). On the other hand, as Lengnick-Hall (1995) notes, the direct query approach may have an advantage over more objective, behavioral approaches in that such perceptual data may be more tightly tied to victim responses and organizational outcomes. Indeed, as Welsh (1999) notes, whether a particular form of behavior is deemed to be of a harassing character or not is likely to be highly subjective, "based on an individual's perceptions or the organizational context in which she works" (p. 173). For example, Williams (1997) suggests that, because in many workplaces (e.g., sports bars requiring waitresses to wear low-cut blouses) such degrading behaviors have become rather institutionalized and an almost normal element of work, victims often fail to recognize them as a form of harassment, complicating the assessment of gender harassment. Under such circumstances, as suggested by the results of a recent meta-analysis of sexual harassment studies (Ilies, Hauserman, Schowochau, & Stibal, 2003), the assessment of gender harassment strictly on the basis of self-reports of EEOC-defined behaviors may lead to the overestimation of gender harassment as well as the attenuation of the association between gender harassment and negative individual and organizational outcomes. Gutek et al. (2004) suggest that such overestimation may stem, in part, from the wording of many of the items used in the S.E.Q., which do not allow one to conclude that the particular S.E.Q. behavior reported is unwanted.

Taking these considerations into account, we integrated several of the gender harassment behaviors most typically included in behavioral experience measures into a single-item measure grounded upon

the direct query approach. Thus, rather than using the S.E.Q. approach and assessing gender harassment on the basis of the mean frequency with which specific characteristic gender harassment behaviors (e.g., crude sexual remarks or gestures, sexist comments) were experienced in a given period, we asked respondents to indicate whether, at any time during the past year, they had experienced "any unwelcome behaviors of a sexual nature on their job, such as coworkers making hostile or devaluing comments related to their gender, displaying sexual materials or making sexual gestures before them." Those indicating that they had experienced such behaviors received a score of 1, while those indicating that they had not received a score of 0. Using this mixed approach, 72% of the women in our sample reported having experienced at least one such gender harassment incident in the past year—a rate nearly identical to the 68 and 69% gender harassment incidence rates reported by O'Connell and Korabik (2000) and Schneider et al. (1997), each using a version of the S.E.Q.

Control Variables

In testing our hypotheses, we controlled for three sets of possible confounds. First, in light of the victim attributes and sociocultural perspectives on sexual harassment (Welsh, 1999), we sought to control for a number of personal attributes of the female respondents identified in the literature as correlates of harassment. Previous studies suggest that such individual-level factors, as proxies for status and power, may influence the extent to which potential harassers view some women as more available for sexual interaction than others (for reviews, see Sbraga & O'Donohue, 2000; Welsh, 1999). For example, a number of studies have found age and education to be inversely correlated with sexual harassment (Welsh, 1999). In addition, minority women have been found to experience significantly more sexual harassment at work than White women (Berdahl & Moore, 2006). Consequently, respondents were asked to indicate their education, ethnic background (coded as 1 if the individual indicated that she was a member of an ethnic/racial minority and 0 otherwise), and age. In addition, because personality has been found to be associated with subjects' harassment-related attributions (Lester et al., 1986; Wislar, Richman, Fendrich, & Flaherty, 2002), we also controlled for neuroticism using the 12-item neuroticism subscale of the NEO Five-Factor Inventory (Costa & McCrae, 1992; $\alpha = .82$). Since male coworkers may view a heavier-drinking female as "one of the boys" and thus less

sensitive to the kind of treatment viewed by others as gender harassment, we also controlled for the quantity of alcohol that female respondents reported typically consuming on those occasions when they did drink. Quantity of consumption was assessed on the basis of an ordinal scale with abstainers receiving a score of 0; those drinking 1, 2, or 3 drinks per drinking occasion receiving a score of 1, 2, and 3, respectively; those drinking 4 or 5 drinks per occasion receiving a score of 4; those drinking 6 to 10 drinks per occasion receiving a score of 5; and those drinking 11 or more drinks per occasion receiving a score of 6.

Second, because work group and occupational factors may account for some of the variance in females' risk of experiencing gender harassment, we also controlled for a number of unit-level factors. For example, several studies (Gruber, 1998; Gutek, Cohen, & Konrad, 1990) have found that women employed in environments numerically dominated by men are at greater risk of experiencing sexual harassment than those employed in more integrated units or units numerically dominated by females. Consequently, we sought to control for the proportionate representation of females in the work unit by assessing the mean gender dissimilarity for women in the unit. Specifically, using the approach suggested by Tsui and Gutek (1999), dissimilarity was estimated as the difference between an individual's gender and the gender of all the other individuals in the focal person's self-perceived work group. This was calculated as the square root of the summed squared differences between the focal person's (S_i) value on gender and the value on the same attribute for all others in the focal person's work group (S_j), divided by the total number of individuals in the unit (n). The scores could range from 0 to nearly (but never quite reaching) 1.0. For instance, a score of 0 would result if all members of a work group were women (i.e., there was no dissimilarity on the gender parameter), while a score of .99 would result for a large workgroup with only one woman. Dissimilarity values were multiplied by 100 in order to facilitate the interpretation of relative risk estimates.

In addition, because the predominance of male coworker sexist attitudes may also be linked to both male drinking behavior and the degree to which female coworkers may be exposed to gender harassment, we also controlled for the proportion of male members largely agreeing (i.e., selecting 6 = *mostly*, or 7 = *completely agreeing* on a 7-point scale) with the following statement: "I see my occupation as a man's occupation."

A number of studies also point to organizational tolerance for rule violation as playing a role in explaining the incidence of sexual harassment (Dekker & Barling, 1998; Hesson-McInnis & Fitzgerald, 1997; Hulin, Fitzgerald, & Drasgow, 1996; Pryor, LaVite, & Stoller, 1993). Consequently, in order to take into account the possibility that our two independent variables simply reflect or are symptomatic of a reckless, tolerant, or generally permissive work unit culture, our models incorporated three additional control variables. First, we assessed mean unit member perceptions regarding the willingness of their supervisor to take action against problematic workers ("supervisor willingness") on the basis of a three-item measure developed by Bacharach et al. (2002). Responding on the basis of a seven-point scale (1 = *not true at all*, 7 = *very true*), respondents were asked about the accuracy of such statements as "my supervisor prefers to put off dealing with problematic workers at least until there is a crisis." Individual level means for this variable were aggregated to the unit level ($\alpha = .70$; Coefficient of reliability [ICC₂] = .70). Second, viewing work-related self-discipline and dedication to one's job as the obverse of recklessness, we also controlled for the mean frequency of positive, active contributions by unit members. Using a three-item measure ($\alpha = .79$) based upon Van Scotter and Motowidlo (1996), respondents were asked how frequently (1 = *never*, 6 = *daily*), for example, they "perform duties with extra special care." Although individual-level mean frequency scores across the three items were aggregated to the unit level on the basis of the additive model proposed by Chan (1998), we nevertheless estimated its coefficient of reliability [ICC₂] as well, which was found to be .61. Mean r_{WG} scores for both supervisor willingness and positive contributions were greater than .70. As a final indicator of unit permissiveness or tolerance, we controlled for the proportion of unit members reporting to have covered up for an impaired coworker (operationalized as "drunk, stoned or hung-over") on the job at least one time during the past year.

Finally, as we next discuss, we analyzed the data using an approach that allowed us to take into account the possible random effects of the work group and organization.

Analytical Procedure

Because our hypotheses propose group-level effects on the probability of an individual-level outcome (i.e., gender harassment) and thereby incorpo-

rate variables assessed at both the individual and unit levels of analysis, all hypotheses were tested using a generalized linear mixed model. The advantage of mixed model approaches is that they assume random effects and are, thus, highly suitable for models including both individual and group-level variables and which, therefore, need to take into account that individuals within one group may be more similar to one another than to individuals in other groups (Bryk & Raudenbush, 1992). Given our interest in estimating the relative risk posed by each of the two drinking-related variables, we tested our hypotheses using Log Poisson (Poisson with link = log) estimation within the SAS GLIMMIX procedure, which provides consistent estimates of the relative prevalence. Proper standard errors were obtained by using sandwich variance estimates (Zou, 2004). Exponentiation of the coefficients allowed us to provide an estimate of the relative risk (as defined by the prevalence ratio) associated with each parameter of interest and its confidence interval. The prevalence ratio has been found to be a more accurate estimate of risk (relative to the more widely reported odds ratio) when the probability of the outcome event is not rare (Zou, 2004). Using this approach, we were able to take into consideration the nested structure of individuals within work units and units within organizations and incorporate individual (i.e., demographic) and unit-level independent variables (e.g., embeddedness of permissive norms), as well as the random effects of subjects belonging to the common work units and organizations. Consistent with Aiken and West (1991), in testing Hypothesis 3, we centered our predictor variables in order to reduce multicollinearity between lower order and higher order terms. In addition, in testing for the interaction posited in Hypothesis 3, we controlled for the quadratic effects of the two interaction terms. As noted by McClelland and Judd (1993), "controlling first for quadratic effects can eliminate (spurious) interactions that are statistically significant if only the linear effects of X and Z (i.e., the variables in the interaction term) are controlled" (p. 385).

Results

Means, standard deviations, and correlations among the dependent, independent, and control variables are displayed in Table 1. The correlations among the independent and control variables do not indicate any multicollinearity, with only the correlation between the proportion of unit males viewing the occupation as male and the embeddedness of permis-

sive norms exceeding .50. As noted earlier, 72% of females reported experiencing one or more instances of gender harassment in the previous year. On average, 26% of the males in work units reported a heavy/at-risk pattern of general alcohol consumption. Furthermore, despite the fact that in each of the organizations studied, drinking during one's lunch break (even if done off-premises) was either an explicit violation of shop rules or implicitly frowned upon by management, on average, over one third of the men in each of the work units studied reported having at least one referent coworker deeming it acceptable to do so.

Results of the multilevel analyses are presented in Table 2. We began by testing a model including the control variables only. As shown in the first column of this table, only four of the 12 control variables included in Model 1 (namely quantity of alcohol consumed by the respondent, minority, neuroticism, and gender dissimilarity) had a statistically significant association with gender harassment. Neither random effect of the work unit nor that of the enterprise/union was statistically significant.

To test our first two hypotheses (regarding the link between the percentage of unit males with a heavy or at-risk pattern of drinking and the embeddedness of permissive drinking norms, on the one hand, and the relative risk of female gender harassment, on the other), we added the two drinking variables to the control variables included in Model 1. A contrast analysis indicated that the inclusion of the two male drinking variables (i.e., percentage of heavy drinking males and embeddedness of norms) resulted in a significant improvement in overall model fit ($F_{2, 15} = 17.48; p < .001$). However, the results indicate empirical support only for Hypothesis 1. Specifically, consistent with Hypothesis 1, the proportion of unit males at risk was found to be significantly associated with the risk of female gender harassment (estimate = 0.01; $p < .01$). The relative risk estimate of 1.01 indicates that for a one point increase in the percentage of unit males that are heavy/at-risk drinkers, there is a nearly 1% increase in the likelihood that the women employed in that unit will experience gender harassment. And relative to women employed in work units in which 26% of their male coworkers are heavy/at-risk drinkers (i.e., the across-unit average), based on the exponentiated model estimates, women in units with approximately $\frac{1}{2}$ standard deviation more at-risk males (i.e., 36%) are 8.5% more likely to experience gender harassment (relative risk of 1.085). Although the embeddedness of unit lunchtime drinking norms was, as hypothesized, also as-

Table 1
Correlations Among the Independent and Dependent Variables for Females (N= 262)

	Mean	SD	Gender harassment	Education	Minority	Age	Occup. as male	Alc. consump	Neuroticism	Gender dissimilarity	Supervisor willingness	Positive contribution	Cover-up	Heavy drinking
Gender harassment	.72	.45												
Education (4-level ordinal variable)	2.18	.65	.02											
Minority (1 = yes)	.61	.49	-.15*	-.08										
Age	5.65	2.11	-.06	-.11	-.11									
Prop. unit males viewing occup. as male	.29	.17	-.02	-.13	.14*	.21**								
Quantity alc. consump.	1.61	1.66	-.13*	.00	-.10	-.18**	-.01							
Neuroticism	2.24	.48	.09	-.01	-.03	-.12	-.20**	.08	ALPHA = .82					
Gender dissimilarity	.62	.17	.15*	-.13	-.11	.05	.42**	.02	-.15*					
Supervisor willingness	3.51	.60	.03	-.15*	.06	.09	.07	-.01	-.05	-.03	ALPHA = .70 ICC ₂ = .70			
Mean frequency of active positive contributions by unit members	5.31	.46	.15*	-.07	-.15*	-.10	-.32**	.01	.16*	-.02	.03	ALPHA = .79 ICC ₂ = .61		
Proportion of unit members reporting to have covered-up coworker impairment at work at least once in past year	.09	.08	.09	-.12	.11	-.08	.18**	.02	-.03	.50**	.44**	.17*		
Proportion of males at risk	.26	.22	.15*	-.07	.04	-.01	.14*	.07	-.02	.16*	.01	.01	.09	
Embeddedness of permissive drinking norms	.36	.20	-.05	-.09	-.01	.26**	.54**	-.02	-.19**	.36**	.30**	-.29**	.31**	-.03

Note. Occup. = occupation; Alc. consump = alcohol consumption; Prop. unit males viewing occup. as male = proportion of unit males viewing the occupation as male; Quantity alc. consump. = quantity of alcohol consumption.
* p < .05. ** p < .01.

Table 2
GLIMMIX Analysis of the Relative Risk of Females' Reporting at Least One Incident of Gender Harassment

Variable	Model 1—control			Model 2—main effects			Model 3—interaction		
	Est	SE	Rel. risk ^b	Est	SE	Rel. risk ^b	Est	SE	Rel. risk ^b
Intercept	-1.15	.21		-1.19	.31		-1.34	.28	
Prop. unit males viewing occup. as male	.37	.31	1.45	.10	.32	1.11	1.31*	.56	3.69
Quantity of alcohol consumption	-.07*	.04	.93	-.08*	.04	.92	-.08*	.03	0.92
Education – Less than 12 years ^a	-.24	.18	.78	-.19	.16	.83	-.23	.12	.80
Education – Vocational ^a	.08	.15	1.08	.09	0.09	1.10	.03	.12	1.03
Education – 12 years completed ^a	.14	.10	1.15	.09	.07	1.10	.10	.05	1.10
Minority	.15*	.07	1.17	.13*	.06	1.14	.10	.07	1.10
Age	-.02	.02	.98	-.02	.02	.99	-.01	.02	.99
Neuroticism	.20**	.05	1.22	.21**	.06	1.23	.24**	.06	1.27
Gender dissimilarity	.01**	.00	1.01	.01**	.00	1.01	.00	.00	1.00
Mean perceptions of spvsr. willingness	-.01	.10	.99	-.08	.11	.93	.03	.08	1.03
Mean freq. of unit members' pos. contrib.	.16	.08	1.17	.07	.14	1.07	.24**	.04	1.27
Proportion reporting to cover-up	.36	.85	1.43	-.22	.58	.80	-.99	1.01	.37
Percent of unit males at risk ^c				.01**	.00	1.01	.02**	.00	1.02
Embed. of permissive drinking norms ^c				.004	.002	1.00	-.01**	.002	.99
Percent of unit males at risk squared ^d							-.00	.00	1.00
Embed. of permis. drinking norms sqrd. ^d							-.00**	.00	1.00
Percentage at risk * embeddedness ^e							.004**	.00	1.27 ^f
									.84 ^g
Variance of unit-level intercepts	.00	.00	—	.00	.00	—	.00	.00	—
Variance of enterprise-level intercepts	.00	.00	—	.00	.00	—	.00	0.00	—

Note. Rel. risk = relative risk; Prop. unit males viewing occup. as male = proportion of unit males viewing the occupation as male; Mean perceptions of spvsr. willingness = mean perceptions of supervisor willingness; Mean freq. of unit members pos. contrib. = mean frequency of unit members positive contributions; Embed. of permis. drinking norms sqrd. = embeddedness of permissive drinking norms squared.

^a Reference group is 13 or more years of education completed. ^b As defined by relative prevalence (exponentiated estimate).

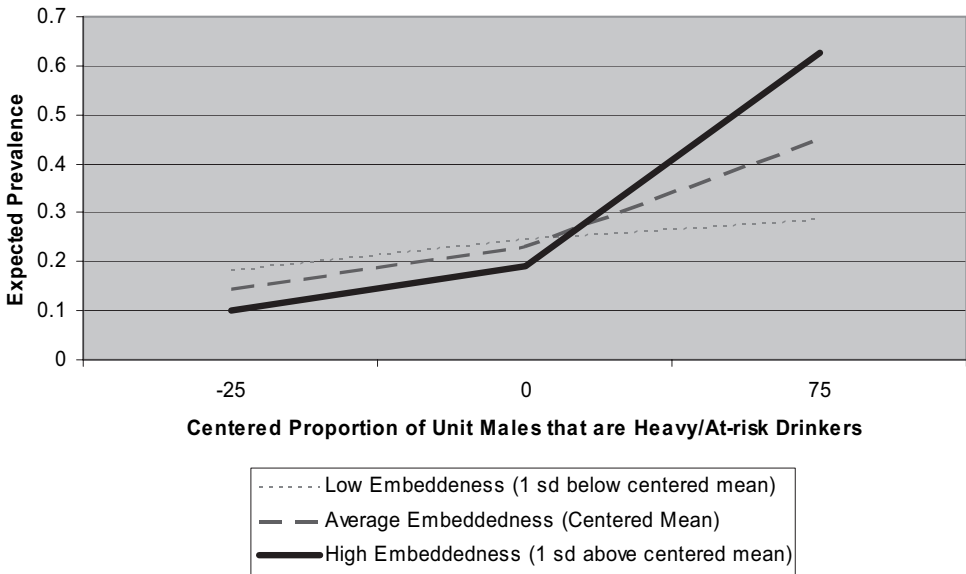
^c Centered values. ^d Square of centered values. ^e Product of centered values. ^f Relative risk of 20 percentage point increase (1 std. dev.) above the mean of the non-centered value (i.e., 0 for centered value) in both interaction variables. ^g Relative risk of 20 percentage point decrease (1 std. dev.) below the mean of the non-centered value (i.e., 0 for centered value) in both interaction variables.

* $p < .05$. ** $p < .01$.

sociated with an increased risk of gender harassment on the part of unit females, the estimate (0.004) was only marginally significant ($p = .068$). As in the case of Model 1, no significant effects were found for any of the control variables or for the random effects of either the unit or the enterprise/union.

In order to Test Hypothesis 3 (which posited that the positive association between proportion of unit males who are heavy or at-risk drinkers and the risk of female gender harassment would be amplified in units in which a greater proportion of unit males reported having at least one referent other viewed as deeming it legitimate to consume an alcoholic beverage during a lunch break), we constructed Model 3 by adding to Model 2 a variable capturing the interaction between the proportion of unit males at risk and the embeddedness of permissive drinking norms.

As noted above, per convention, we also included in this model the quadratic effects of the two interaction terms. The inclusion of this interaction (and its quadratic components) significantly contributed to the overall fit of the model relative to the more restrictive model tested in Model 2 ($F_{3,15} = 545.16; p < .001$). Moreover, consistent with Hypothesis 3, our findings indicate a significant positive interaction effect for these two unit-level drinking-related variables, with the embeddedness of permissive drinking norms significantly strengthening the impact of the proportion of males at risk on the probability of female gender harassment. In practical terms, relative to women in average work units, for women in units in which both the proportion of heavy/at-risk male drinking and the embeddedness of permissive drinking norms are each 20 percentage points (i.e., approximately one stan-



95% Confidence Intervals for the Three Plotted Levels

Proportion of heavy drinkers (centered)	Embeddedness of permissive drinking norms	Lower Confidence Limit (of log of expected prevalence)	Upper Confidence Limit (of log of expected prevalence)	Overlap in Confidence Intervals?
-25	Low	-2.255	-1.164	Low - Avg.: YES
-25	Avg.	-2.381	-1.50	Avg. - High: YES
-25	High	-2.682	-1.916	Low - High: YES
0	Low	-2.164	-.660	Low - Avg.: YES
0	Avg.	-2.127	-.813	Avg. - High: YES
0	High	-2.266	-1.046	Low - High: YES
75	Low	-1.454	-1.023	Low - Avg.: YES
75	Avg.	-1.107	-.488	Avg. - High: YES
75	High	-.873	-.058	Low - High: NO

Figure 1. Functional form of the interaction.

dard deviation) higher than the mean, the risk of gender harassment is 27% higher (i.e., relative risk of 1.271). In contrast, relative to women in average work units, for women in units in which both the proportion of heavy/at-risk male drinking and the embeddedness of permissive drinking norms are each 20 percentage points (i.e., approximately one standard deviation) lower than the mean, the risk of gender harassment is nearly 16% lower (i.e., relative risk of 0.844).

We plotted the interaction in order to assess the degree to which its functional form was indeed con-

sistent with the amplification effect posited in Hypothesis 3 (See Figure 1). We plotted this interaction considering the full range of observations for the (centered) proportion of unit males who are heavy/at-risk drinkers (i.e., .25 to .75) and (per Aiken & West, 1991) for the centered mean level of embeddedness as well as for the levels of embeddedness at one standard deviation (approximately 20 percentage points) above and below the centered mean. Consistent with Hypothesis 3, whereas the average slope of females' risk relative to the proportion of unit males

who are heavy/at-risk drinkers is rather flat in units with a low degree of embeddedness of permissive drinking norms (i.e., one standard deviation below the mean), it increases in steepness among women in units with an average and average plus one standard deviation level of embeddedness of permissive drinking norms. It is interesting to note that contrary to our hypothesis, the graph suggests that risk is lower for women in units with a lower proportion of heavy/at-risk male drinkers when permissive drinking norms are more embedded and higher in these same types of units when permissive drinking norms are less embedded. However, whereas the confidence intervals for the predicted value associated with each of the three levels of embeddedness overlap in units with mean and low proportions of heavy/at-risk drinking males, they do not overlap in units with high proportions of heavy/at-risk drinking males (i.e., upper confidence limit for low embeddedness units is lower than the lower confidence limit for high embeddedness units), thus providing further evidence that the functional form of the interaction is indeed largely consistent with Hypothesis 3.

Discussion and Conclusion

The findings presented above indicate that the prevalence of heavy/at-risk drinking among unit males is associated with the risk of gender harassment faced by the female members of these same work units and that this risk is further amplified in those work units characterized by more embedded permissive work-related drinking norms among unit males' referent others. More specifically, although we found that of the two alcohol-related factors examined, only the percentage of males in a female's work unit exhibiting a heavy/at-risk pattern of alcohol consumption had a direct association with the risk of female gender harassment, we also found the direct effect of the proportion of males manifesting a pattern of heavy/at-risk drinking on the risk of gender harassment to be stronger among females employed in units in which a greater proportion of the males in the unit also reported having at least one referent other deeming it acceptable to consume alcohol during a meal break. Moreover, contrast analyses indicated that both the direct and moderated effects of male drinking significantly contributed unique explanatory power in the prediction of gender harassment above and beyond that of females' demographic vulnerability; unit gender composition; and a reckless, tolerant, or generally permissive work unit culture.

As to why only a marginal direct effect was found for the embeddedness of permissive drinking norms,

the significant interaction between the proportion of heavy drinking males and the proportion of males perceiving permissive drinking norms may provide a clue. Specifically, the nature of this interaction suggests that the lack of a significant direct effect for the embeddedness of permissive drinking norms on gender harassment may stem from the operationalization of this variable in terms of the proportion of unit males having at least one coworker perceived as deeming the consumption of one or more drinks at lunch to be legitimate. Given that, on average, 74% of unit males were not heavy/at-risk drinkers, even in units characterized by more embedded lunch-time drinking norms, it is likely that for most unit males this norm motivated only moderate lunch-time drinking, a level of consumption perhaps insufficient to generate the degree of sustained impairment necessary in order to substantially increase the risk posed to female coworkers. Indeed, our results indicate that the embeddedness of inferred permissive workplace drinking norms is associated with a significantly increased risk of female gender harassment only when considering those units also characterized by a higher proportion of heavy/at-risk male drinkers. That is, more permissive unit drinking cultures appear to expose female unit members to a significantly heightened risk of gender harassment only in those cases in which a larger proportion of unit males tend to drink heavily on those occasions when they drink.

Taken as a whole, our results both reinforce and expand upon previous findings. Specifically, our findings are consistent with the conclusions reached by those studying the link between alcohol use and aggressive behavior in general. They are also consistent with the recent worksite alcohol literature suggesting that employee alcohol consumption both during and before work hours heightens the risk of aggressive workplace behaviors. However, we believe that beyond extending these earlier findings to gender harassment as a particular form of workplace aggression, our study offers a number of important conceptual and methodological advances in the analysis of the link between alcohol and workplace aggression. Specifically, to date, studies of the link between drinking and workplace problems have been conducted strictly at the individual level, focusing on an individual's drinking behavior and its relationship with subsequent problems, such as those involving relations with coworkers. Building on such research, the current study examines the prevalence of male drinking and the embeddedness of perceived referent norms as compositional characteristics of the work unit and demonstrates how such alcohol-related unit

characteristics may be related to gender harassment as a particular form of workplace aggression. This is no small leap in levels of analysis in that, whereas previous research suggests a link between the drinking behavior of a potential individual perpetrator and female gender harassment, the current study suggests that particular alcohol-related compositional characteristics of the work unit may also pose a risk to female members of the work unit. And to the extent that alcohol-related compositional characteristics of the work unit pose a risk to unit females, then even more of the onus for female gender harassment would implicitly fall on the organization as that entity responsible for determining and controlling the compositional nature of its work units.

From a methodological perspective, our study makes a further contribution in that previous studies of the link between drinking and workplace aggression have largely relied on retroactive perpetrator self-reports of drinking and aggression (Greenberg & Barling, 1999; McFarlin et al., 2001), observer reports of aggressive behaviors of coworkers which they deem to be alcohol-related (Esler & Bell, 1998), or employee descriptions of both alcohol use in their unit and aggressive workplace incidents (Bennett & Lehman, 1996). While perpetrator self-report designs are subject to social desirability biases, all three of these approaches are problematic in that they are all subject to the problem of same-source bias. The design adopted in the current study allowed us to avoid such problems by aggregating alcohol-related data collected from male unit members to the unit level and by relying on these workers' female colleagues strictly for data on gender harassment experiences. Furthermore, by using the combined approach to assessing harassment recommended by Ilies et al. (2003) and Pryor and Fitzgerald (2003) and taking neuroticism into account, we further reduced the likelihood that the self-reports of gender harassment collected in this study might have been influenced by individual personality-based differences.

Limitations

Despite these methodological advantages, several methodological constraints may affect the interpretation and generalizability of our results. First, because we did not ask respondents to report about unwanted sexual attention and sexual coercion, we cannot conclude that our findings are generalizable to these other two forms of sexual harassment. Similarly, lacking items relating to racial or other more general forms of harassment (e.g., bullying), we are also

unable to generalize our findings to these workplace behaviors. Thus, it may be that while the pervasiveness of male drinking behavior and perceived coworker drinking norms predict gender harassment, they are not sufficiently robust to influence these other forms of harassment, be they sexual, racial, or more general in nature.

Second, our analyses focused on data from only a relatively small proportion (i.e., 48%) of the female respondents in the five unions studied. Moreover, while 262 females responded to the gender harassment item in the 58 units included in our analysis, an additional 121 females in these same units (i.e., 32% of the females in these units) failed to respond, thus increasing the risk of sample bias. On the one hand, the limited rate of response on this particular item would increase the risk of overestimating the prevalence of gender harassment, if those women who experienced gender harassment might have been more likely to respond than those who did not. On the other hand, if the bulk of those females failing to respond to the gender harassment item in the 58 units studied were in fact victims who were reluctant for whatever reason to respond, this may have led to the underestimation of gender harassment prevalence. Overall, however, given that we have no reason to assume either form of systematic bias, it is likely that our findings are no less robust than others reported in the literature, particularly since, as noted by Berdahl and Moore (2006), it is quite common for 60 or 70% of those surveyed not to respond to questions of this sort.

Additionally, it should be noted that the 72% incidence rate for gender identified in the sample examined, while consistent with incident rates reported in other studies (Ilies et al., 2003; O'Connell & Korabik, 2000), is still toward the high end of the range reported in meta analyses (Ilies et al., 2003) and literature reviews (Welsh, 1999). While it may be that the incidence of gender harassment for females is indeed higher in the predominantly blue-collar occupations surveyed in the current study, the figures may also have been artificially inflated by the broad manner in which gender harassment was operationalized (i.e., a single-item, dichotomous variable). As noted earlier, while such a mixed, direct query/behavioral experiences approach may have its advantages, it is possible that the integration of particular behavioral experiences into this single-item measure generates the same tendency toward overestimation noted by Gutek et al. (2004) with respect to the S.E.Q.

Fourth, our results may be somewhat biased by the fact that we lacked data on the precise frequency and

timing of heavy/at-risk drinking. As a result, we focused strictly on the prevalence of men exhibiting a self-reported "usual" pattern of heavy drinking on those days on which they drink, implicitly excluding from our prevalence estimates those men who, while typically manifesting a "moderate" pattern of alcohol consumption, may, on occasion, consume five or more servings at a time. Nevertheless, we caution researchers about adopting more liberal definitions of heavy drinking in that although occasional heavy drinkers may also report to work impaired and, thus, may also pose a risk to female unit members, since they do so relatively infrequently, the risk they pose to their female coworkers is likely to be less pervasive than that posed by those engaging in heavy drinking on a more regular basis. Thus, their inclusion in prevalence estimates is likely to result in the attenuation of the association between the prevalence of male drinking in a work unit and the risk of gender harassment toward unit females.

Finally, our results may also be somewhat underestimated in that we assessed overall male heavy/at-risk drinking rather than the occurrence of alcohol consumption on the job per se. Assuming that the drinking-aggression link has a pharmacological underpinning, any association between drinking and gender harassment, in theory, would likely have been even more robust had we used a consumption measure focused more specifically on time frames proximate to those periods during which women are at risk of being subjected to job-based gender harassment (i.e., drinking during or just before work hours). Indeed, Frone (1998) has demonstrated that while both overall substance use and work-related substance use are correlated with work injuries when considered independently, when modeled simultaneously, only work-related substance use is predictive of injuries. Thus it may be that the effects documented above are the result of heavy drinking that occurs specifically just prior to or during working hours. Although this suggests that researchers should next attempt to examine the unique role played by male unit members' alcohol use or impairment during working hours in explaining the probability of female coworkers' gender harassment experiences, unfortunately, from a practical perspective, there are substantial methodological problems inherent to the assessment of alcohol consumption during work hours that must be overcome before researchers can attempt to do this. The first problem has to do with the apparently low base rate of alcohol consumption on the job. As noted above, using a national probability sample of workers, Frone (2006) estimates the

prevalence of one or more episodes of actual alcohol use during work hours during the previous 12-month period at just 7% of the workforce. Given the low base rate of reported on-the-job use, researchers would need to collect data from extremely large samples in order to have the required statistical power to demonstrate a significant association with gender harassment. The second problem has to do with the collection of employee work-based alcohol use data in a particular enterprise since workers are typically reluctant to disclose such information (even anonymously) for fear that it may somehow reach management and be used against them, and since (as was the case in the current study) unions are typically unwilling to allow such information to be collected from their members.

In the current study, among members of those unions allowing us to collect such data, the rate of missing data for items regarding individuals' actual rates of consumption in the 2-hr period before work exceeded 35%, while the rate of missing data for items regarding drinking on the job and during work breaks exceeded 50%. Such high rates of missing data for such highly sensitive items further complicates the power-related issues noted above and raises additional concerns with regard to response bias. In the current study, we sought to sidestep these problems by focusing on the relative prevalence of overall heavy/at-risk drinking among unit males and then to examine the degree to which the association between this variable and female gender harassment is, as would be expected, amplified in those units characterized by a more embedded ambiance of permissiveness with regard to alcohol consumption during work hours. However, until it can be demonstrated that the proportion of unit males engaging in overall heavy drinking remains significantly associated with the risk of gender harassment among unit females when a variable capturing the proportion of unit males engaging in heavy drinking during or at times proximate to the work day is also included in the model, we deem it unwise to interpret our results as suggesting a blanket link between overall heavy drinking among males and the risk of female gender harassment. Rather, we interpret our findings more conservatively as suggesting evidence of a link between the proportion of unit males engaging in heavy drinking during or proximate to the work day and the risk of female coworker gender harassment.

Implications

Despite these limitations, our findings have important implications for both researchers and practitio-

ners. For researchers, as noted above, our findings suggest a number of important new avenues of research into the antecedents of sexual harassment, as well as the potential applicability of the dual approach to assessing at least gender harassment. For example, our findings emphasize the need to focus on male subcultures in organizational work units and, in particular, the alcohol-related norms and behaviors defining these subcultures.

Our findings also point to the need to examine the link between employee drinking behavior and other forms of harassment, such as bullying and racial harassment of both men and women. While, as noted above, researchers have looked at the link between alcohol consumption and both problematic workplace relationships and general workplace aggression, we are unaware of research that has specifically examined the link between drinking and these other forms of workplace harassment.

For practitioners, our findings suggest the need to broaden sexual harassment prevention initiatives to include actions aimed at assessing and, where needed, reducing the prevalence of particular behaviors and norms in work units potentially predisposing the male members of such units to engage in the gender harassment their female coworkers. Moreover, our findings indicate that there may be limits to the effectiveness of more mainstream gender harassment policies and intervention practices such as those involving harasser assessment and treatment (Sbraga & O'Donohue, 2000), particularly if these policies are implemented and enforced in work environments in which heavy drinking among males is prevalent and/or characterized by more deeply embedded permissive workplace drinking norms. Particularly under such conditions, it may be important to supplement the more typical sexual harassment prevention interventions with interventions designed to shift employee perceptions about the acceptability of drinking before, during, or around work times.

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