

The Relationships Between Hindrance Stressors, Problem Drinking, and Somatic Complaints at Work

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Abstract

Problem drinking is an important behavioral phenomenon with numerous implications for employees' health and well-being within and outside the workplace. Although recent research has demonstrated that workplace stressors have effects on employees' problem drinking, additional research is needed to examine the role employees' problem drinking plays in the workplace stress–strain process. We draw from the transactional model of stress and the self-medication hypothesis to address this gap in prior research by offering a novel explanation for the indirect effects of hindrance stressors on employees' somatic complaints at work through problem drinking. Overall, we find support for the hypothesized model using a time-separated data collection with a heterogeneous sample of employee respondents from the United States ($n = 223$). This study extends prior stress research by making two important contributions to theory and research. First, we make an empirical contribution by examining problem drinking and somatic complaints at work, which are both understudied organizational phenomena that have importance to numerous organizational stakeholders. Second, we draw from the transactional model of stress and the self-medication hypothesis in a novel way that provides an important explanation for why

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hindrance stressors in the workplace are indirectly associated with somatic complaints at work through employees' use of problem drinking as a self-medication coping mechanism.

Keywords

problem drinking, stress, strain, transactional model, self-medication

Work is the curse of the drinking classes.

—Oscar Wilde

Workplace stress stems from organizational demands that disrupt employees' natural homeostatic balances (Lazarus & Folkman, 1984), and often results in short-term strains and long-term changes to mental and physical health (Ganster & Rosen, 2013). Workplace stress is a major concern for organizations because meta-analytic evidence demonstrates that job strain is negatively associated with an array of important employee outcomes, including job satisfaction, affective commitment, task performance, and organizational citizenship behaviors (Chang, Rosen, & Levy, 2009). Furthermore, there are numerous important employee health-related concerns and harmful coping behaviors that can meaningfully affect group and organizational functioning (Frone, 2016b). In particular, problem drinking (i.e., alcohol consumption that is personally and/or socially harmful; Bamberger & Bacharach, 2006) is an understudied coping mechanism through which workplace stress likely affects workplace strain.

Problem drinking meaningfully differs from other forms of drinking (e.g., average levels of alcohol consumption, drinking to intoxication), in that it focuses explicitly on alcohol consumption that has harmful consequences. In contrast, other assessments of alcohol consumption tend to focus on the actual quantity of alcoholic drinks consumed. It is important for organizational scholars and leaders to understand the effects of problem drinking on organizational phenomena because it has been linked to harmful effects on employees' individual health and well-being (Frone, 2016b). For example, prior research has demonstrated that problem drinking is associated with cardiovascular, liver, renal, metabolic, gastrointestinal, respiratory tract, and neurological disorders (see Chase, Neild, Sadler, & Batey, 2005 for a review), as well as physical injuries that contribute to emergency room visits (Cherpitel, 2007). Furthermore, the frequency of employees' problem drinking has been especially problematic in recent years due to the economic recession (Frone, 2016a).

Ultimately, problem drinking is a coping mechanism of considerable importance to researchers and practitioners because it harms employees'

physical and mental health, reduces employees' productivity, and increases organizations' health care costs (Frone, 2015). The prevalence and impact of the harm done by employees' problem drinking affect a number of organizational stakeholders (e.g., employees, organizations, stockholders, social communities located near the organizations; Lyons, Hoffman, Bommer, Kennedy, & Hetrick, 2016). Thus, it is important to study the antecedents and consequences (i.e., nomological network) of problem drinking. In this study, we examine hindrance stressors (i.e., workplace stressors that constrain employees' personal accomplishment and abilities to attain valued outcomes; Cavanaugh, Boswell, Roehling, & Boudreau, 2000) because the organizational constraints inherent in hindrance stressors are likely antecedents of problem drinking. Furthermore, we examine somatic complaints at work (i.e., bodily sensations that signal deviations from normal health; Ritsner, Modai, & Ponizovsky, 2002; Zijlema et al., 2013) as an important outcome of problem drinking because problem drinking likely has physiological effects on employees' bodies. Ultimately, we theorize that problem drinking is an important coping mechanism in the relationship between hindrance stressors and somatic complaints at work.

We draw from the tenets of the transactional model of stress (Lazarus & Folkman, 1984) and the self-medication hypothesis (Carrigan & Randall, 2003; Khantzian, 1997) to provide a novel explanation for why problem drinking is an important self-medication coping mechanism to examine in organizational stress research. Specifically, we theorize that problem drinking is a self-medication coping mechanism during the secondary appraisal stage of the transactional model of stress that explains why the demands posed by hindrance stressors in the primary appraisal stage of the transactional model are associated with somatic complaints at work. Our study answers recent calls for additional organizational research to fill gaps in extant research that examines employee problem drinking (Frone, 2013). Specifically, we provide a novel theoretical explanation that aligns the hedonic tone of the focal variables in our research model to improve our understanding of why problem drinking is a coping mechanism in the stress-strain process. The gaps in knowledge we address are important to study because the health-related consequences of employees' problem drinking and somatic complaints at work are far reaching and have the potential to harm numerous organizational stakeholders (Lyons et al., 2016).

Overall, our purpose and motivation for this study were to improve our understanding of the role of problem drinking as a self-medication coping mechanism for employees who experience the stress-strain process. We draw from the transactional model of stress and the self-medication hypothesis to explore why some employees may use the sedative effects of alcohol to cope

with the tension associated with exposure to hindrance stressors (Conger, 1956; Frone, 2016b; Greeley & Oei, 1999). Furthermore, we explore the resultant strain outcome (i.e., somatic complaints at work) that stems from hindrance stressors and using problem drinking as a self-medication coping mechanism. It is important to examine somatic complaints at work when studying problem drinking because the sedative effects of alcohol consumed during problem drinking likely result in bodily sensations that stem from coping with the tension created by hindrance stressors.

This study makes two contributions to theory and research. First, we make an empirical contribution by providing an empirical examination of problem drinking and somatic complaints at work, which are both understudied organizational phenomena that have importance to numerous organizational stakeholders. Furthermore, our examination of these phenomena can incrementally improve our understanding of how employees cope with hindrance stressors, as well as increase our knowledge of the potential somatic symptom-related consequences of problem drinking. Second, we make a theoretical contribution by drawing from the transactional model of stress and the self-medication hypothesis in a novel way that provides a theoretical explanation for why problem drinking is a self-medication coping mechanism in the stress-strain process. Neither the transactional model of stress nor the self-medication hypothesis can theoretically explain the research model in isolation, but drawing from both of these perspectives enables us to offer an insightful theoretical perspective that explains why hindrance stressors are indirectly associated with somatic complaints at work through problem drinking (see Figure 1). Ultimately, our study advances our understanding of the nomological network and job strain implications of problem drinking.

Background Research, Theory, and Hypothesis Development

Transactional Model of Stress

The transactional model of stress (Folkman & Lazarus, 1990; Lazarus & Folkman, 1984, 1987) provides a useful interactionist framework from which to examine how employees subjectively perceive, assess, and respond to job demands in their work environments (Mackey & Perrewé, 2014; Meurs & Perrewé, 2011). At its core, the transactional model of stress posits that employees undergo two appraisal processes that enable them to evaluate workplace demands, the threats demands pose, and how to cope with demands. Ultimately, the tenets of the transactional model of stress argue that

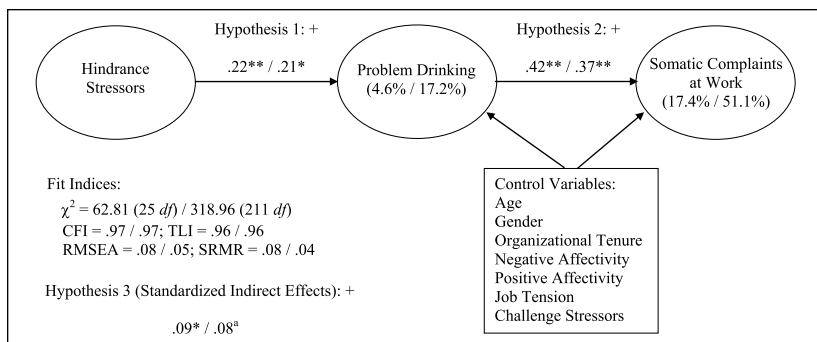


Figure 1. Hypothesized model and results of model estimation.

Note. The first values are the standardized effect size estimates (β) when not including the effects of the control variables. The second values are the standardized effect size estimates when controlling for the effects of age, gender, organizational tenure, negative affectivity, positive affectivity, job tension, and challenge stressors. Effect sizes for control variables are omitted for clarity. Variance explained (R^2) is included below the construct name. All statistical significance tests were based on two-tailed tests ($\alpha = .05$). $N = 223$. CFI = comparative fit index; TLI = Tucker–Lewis Index; RMSEA = root mean square error of approximation; SRMR = standardized root mean residual.

^a $p = .058$.

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

the primary and secondary appraisal stages result in a stress-coping-strain process as employees use the primary appraisal stage to evaluate demands and the secondary appraisal stage to determine coping options.

First, employees use the primary appraisal stage of the transactional model of stress to assess whether demands in their work environments are threats to their well-being. During the primary appraisal, employees determine whether demands they encounter harm their well-being, threaten to harm their well-being, provide challenging opportunities for personal gain, or are irrelevant to their well-being (Lazarus & Folkman, 1987). In our study, we examine when employees appraise demands as hindrance stressors that could harm their well-being or threaten to harm their well-being.

Then, employees engage in the secondary appraisal stage of the transactional model of stress to identify coping mechanisms that can be used to address the demands evaluated during the primary appraisal. Specifically, during the secondary appraisal, employees evaluate whether they can take any actions to control the harm, threat of harm, challenge, or irrelevant demands evaluated during the primary appraisal (Lazarus & Folkman, 1987). In our study, we examine problem drinking as a coping mechanism employees can use during the secondary appraisal stage to address the actual and/or

potential threats posed to their well-being by hindrance stressors during the primary appraisal stage. Ultimately, employees' choice of coping mechanisms during the secondary appraisal stage affects the strain they experience. Thus, we examine when employees choose problem drinking as a coping mechanism during the secondary appraisal stage of the transactional model of stress, as well as the resultant strain they experience (i.e., somatic complaints at work).

The job demands evaluated during the primary appraisal are the organizational, physical, or social features of employees' jobs that necessitate sustained costs. There are a multitude of stressors that can initiate employees' stress processes (e.g., role ambiguity, role conflict, role overload, time pressures; see Kopp et al., 2010 for a review). However, not all stressors demonstrate consistent effects on employees' strain. As a result, numerous stress frameworks have identified various ways of conceptualizing workplace stressors (see Ganster & Rosen, 2013; Meurs & Perrewé, 2011 for reviews).

Cavanaugh et al. (2000) provided clarity to research examining workplace stressors by demonstrating empirical support for a two-factor model of workplace stressors that differentiated between stressors that constrain personal accomplishment (i.e., hindrance stressors) and stressors that promote personal accomplishment (i.e., challenge stressors). Subsequent research has used the distinction between hindrance and challenge stressors to examine the differential effects of workplace stressors on employees' coping choices and strain responses (Podsakoff, LePine, & LePine, 2007). We examine hindrance stressors in our study because they are associated with harmful effects on coping choices and job strain (Chang et al., 2009; LePine, Podsakoff, & LePine, 2005).

Hindrance stressors stem from excessive or unwanted constraints that obstruct employees' abilities to attain valued goals (LePine et al., 2005). Chang et al. (2009) found meta-analytic evidence that hindrance stressors (i.e., perceptions of organizational politics, role ambiguity, and role conflict) were negatively associated with job satisfaction ($-.57 < \rho < -.48$; ρ was a meta-analytic population estimate of effect size corrected for measurement error and sampling error), affective commitment ($-.54 < \rho < -.30$), task performance ($-.22 < \rho < -.14$), and organizational citizenship behaviors ($-.20 < \rho < -.12$), as well as positively associated with strain ($.43 < \rho < .52$) and turnover intentions ($.43 < \rho < .45$). Overall, hindrance stressors typically trigger harmful forms of coping because they constrain employees' personal development, growth, and work-related accomplishment (LePine, LePine, & Saul, 2007). We theorize that demands in the work environment initiate the primary appraisal process for employees, which results in employees'

evaluations of hindrance stressors as actually or potentially threatening their well-being. Employees who perceive hindrance stressors during the primary appraisal stage of the transactional model of stress likely choose coping methods (e.g., problem drinking) to address it during the secondary appraisal stage (Mackey, Perrewé, & McAllister, 2017).

Problem Drinking

According to the self-medication hypothesis, employees who seek to cope with workplace stress are susceptible to engaging in self-medication to relieve it temporarily. Prior research demonstrates that some employees use alcohol to reduce the strain associated with exposure to workplace stressors (Frone, 2016b). At a biological level, stress exposure can cue neural circuits in the brain associated with alcohol craving (Sinha & Li, 2007), so employees who perceive hindrance stressors that threaten or potentially threaten their well-being during the primary appraisal may consciously or subconsciously experience alcohol craving as a means to cope with the actual or potential threats during the secondary appraisal.

The self-medication hypothesis (Carrigan & Randall, 2003; Khantzian, 1997) is particularly relevant to the examination of harmful self-medication coping mechanisms (e.g., problem drinking) because self-justification enables employees to engage in behaviors that can disregard their personal values, violate their role-based expectations, and/or contribute to harmful long-term consequences despite knowledge of their behaviors' potential harmful effects (Liu, Wang, Bamberger, Shi, & Bacharach, 2015). Thus, employees who perceive hindrance stressors at work during the primary appraisal stage of the transactional model of stress may opt to engage in problem drinking as a self-medication coping mechanism during the secondary appraisal stage of the transactional model of stress because it has sedative effects that can result in stress reduction that temporarily reduce the demands associated with hindrance stressors (Conger, 1956; Frone, 2016b; Greeley & Oei, 1999; Vijayasiri, Richman, & Rospenda, 2012).

Overall, it is hypothesized that hindrance stressors will be positively associated with employees' problem drinking outside the workplace because some employees likely use problem drinking as a self-medication coping mechanism during the secondary appraisal stage of the transactional model of stress to address hindrance stressors evaluated during the primary appraisal stage of the transactional model of stress.

Hypothesis 1: Hindrance stressors will be positively associated with problem drinking.

Somatic Complaints at Work

Problem drinking has important strain and health-related consequences for employees (Frone, 2016b). We theorize that problem drinking is positively associated with somatic complaints at work, which are bodily sensations that signal deviations from normal health (Ritsner et al., 2002; Zijlema et al., 2013). Somatic complaints at work include symptoms such as chest pain, dizziness, fatigue, lightheadedness, headaches, palpitations, shaking, shivering, shortness of breath, tingling sensations, and/or trembling in the workplace (Carlier et al., 2012).

Importantly, somatic complaints at work meaningfully differ from psychological strain (e.g., anxiety, fear, and tension) and physical diseases (e.g., cardiovascular disease and depression), in that they occur psychosocially (i.e., as environmental stressors within the work environment; Ganster & Rosen, 2013). Somatic health and wellness is an important manifestation of the long-term effects of demands on individuals, as theorized by proponents of the transactional model of stress (Lazarus, 1990). The strain associated with using problem drinking as a means to cope with hindrance stressors likely manifests in bodily sensations that signal deviations from normal health, especially because problem drinking tends to have harmful health and well-being consequences for problem drinkers' bodies (Frone, 2016b). Thus, problem drinking can have serious behavioral and physical health-related consequences for employees, including somatic complaints, especially if workplace conditions initiate and/or exacerbate it (Bamberger & Bacharach, 2006; Frone, 2013).

Ultimately, we theorize that employees who use problem drinking as a self-medication coping mechanism during the secondary appraisal stage of the transactional model of stress likely experience somatic complaints at work. Thus, we draw from the transactional model of stress and the self-medication hypothesis to theorize that problem drinking, as a self-medication coping mechanism, likely affects employees' somatic complaints at work. In summary, it is hypothesized that problem drinking will be positively associated with somatic complaints at work.

Hypothesis 2: Problem drinking will be positively associated with somatic complaints at work.

The Indirect Effect of Hindrance Stressors on Somatic Complaints at Work

A multitude of prior research has demonstrated an association between workplace stress and employees' general levels of health and well-being (Ganster

& Rosen, 2013), but less is known about how workplace stress is associated with somatic complaints experienced within the workplace. Theory-based assessments of the stress-strain process should examine stress and strain in the context in which it occurs (Lazarus, 1990). Thus, somatic complaints at work are an important outcome of the transactional model of stress when examining hindrance stressors that stem from the workplace. Hindrance stressors are associated with somatic complaints at work because they obstruct employees' pursuit of work-related accomplishment, which likely results in strain that manifests in bodily sensations that signal deviations from normal health (i.e., somatic complaints at work).

We draw from the tenets of the transactional model of stress and the self-medication hypothesis to provide a novel theoretical framework that explains why problem drinking is a self-medication coping mechanism used during the workplace stress-strain process. The transactional model of stress posits that a stress-coping-strain process exists in which demands evaluated during the primary appraisal initiate a choice of coping responses during the secondary appraisal, which ultimately results in strain outcomes. Drawing from the transactional model of stress and the self-medication hypothesis in tandem enables us to incrementally improve our understanding of the self-medication coping mechanisms that likely influence the stress-strain process. Specifically, we theorize that hindrance stressors experienced during the primary appraisal stage of the transactional model of stress likely are associated with employees' attempts to use problem drinking as a self-medication coping mechanism during the secondary appraisal stage of the transactional model of stress. Then, problem drinking likely has important effects on somatic complaints at work, which is the strain consequence of coping via problem drinking.

Overall, we draw from Lazarus's (1990) theory-based recommendations for investigating the transactional model of stress by examining how hindrance stressors affect somatic complaints at work using problem drinking as a self-medication coping mechanism. Furthermore, we align the hedonic tone of the examined variables throughout the research model to theorize that unwanted workplace demands are associated with undesirable effects on somatic complaints at work through a harmful self-medication coping mechanism. Importantly, we examine strain (i.e., somatic complaints at work) in the environment in which stress (i.e., hindrance stressors) occurs. Ultimately, drawing from the transactional model of stress and the self-medication hypothesis provides a useful theoretical framework from which to understand why problem drinking is a self-medication coping mechanism through which hindrance stressors in the workplace are indirectly associated with somatic complaints at work. Overall, it is hypothesized that hindrance stressors will be positively and indirectly associated with somatic complaints at work through problem drinking.

Hypothesis 3: Hindrance stressors will be positively and indirectly associated with somatic complaints at work through problem drinking.

Method

Participants and Procedure

Participants. Problem drinking is a phenomenon that affects employees across a variety of occupations, organizations, and industries. Therefore, we enlisted the help of Qualtrics' Panel Management Services to contact respondents from a variety of organizational contexts across the United States across two time periods, so we could examine data from a heterogeneous sample. The target respondent pool was adults aged 18 to 65 who lived in the United States and were employed at least 20 hr per week. Respondents had to indicate that they spoke English, lived in the United States, were at least 18 years of age, and worked at least 20 hr per week. Also, respondents had to complete the surveys from unique IP addresses and correctly respond to the quality check item included in each survey to be included in the final sample.

Four hundred fifty respondents were recruited via Qualtrics' Panel Management Services at Time 1. Of the 450 respondents who completed the first survey and met this study's inclusion criteria, 223 responded with complete data to a second survey approximately 3 weeks later (49.56% usable data at Time 2). There were 227 respondents from Time 1 who were not included in the final sample because 21 respondents failed the quality check item and 206 respondents chose not to participate in the Time 2 survey. Due to substantial respondent attrition, we ran the analyses using the final sample ($n = 223$) and a sample that included all available data ($n = 244$). The significance values obtained for the hypothesized effects were identical for the analyses that used the final sample and the sample that included all available data (see the Appendix). Thus, we proceeded with the cases that provided full data and met all inclusion criteria.

Respondents were compensated US\$5 for each completed survey. The respondents in the final sample averaged approximately 45.17 years of age ($SD = 10.80$), 11.11 years of organizational tenure ($SD = 8.85$), and 41.50 hr of work per week ($SD = 6.40$). About 37.22% of the respondents were male and 95.52% reported working full-time. Respondents reported various highest levels of education obtained (e.g., 32.74% bachelor's degrees, 19.28% some college), job functions worked (e.g., 15.25% administration, 14.80% management), levels in organizations employed (e.g., 40.81% staff/associate level, 21.52% middle management), and industries of employment (e.g., 18.83% educational, health, and social services, 9.87% manufacturing).

Procedure. Respondents were contacted via Qualtrics' Panel Management Services at two separate time periods approximately 3 weeks apart. The surveys were each designed to take approximately 15 min to complete. Each survey began with a letter of consent, then proceeded with measures of the substantive constructs of interest, and concluded with demographic information. Short measures of constructs not examined in this study were included throughout the surveys to help conceal the study's true purpose.

Finally, each survey contained one quality check item that required respondents to choose a particular response (e.g., "Please mark strongly disagree for this response"). The quality check items appeared approximately two thirds of the way through the surveys. Responses from individuals who did not choose the correct response for a quality check item in Time 1, Time 2, or both survey(s) were removed from the final sample. We used quality check items because they help identify respondents who fail to apply sufficient effort and/or intentionally refuse to follow survey instructions while completing surveys, which helps remove response patterns in the data (e.g., respondents choosing the same response repeatedly to complete the survey quickly). Overall, quality check items are a best practice recommendation for data screening (DeSimone, Harms, & DeSimone, 2015) because they are an effective means to ensure that respondents exerted appropriate effort when completing surveys (Meade & Craig, 2012).

Also, we followed procedural remedies outlined by prior research (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003; Podsakoff, MacKenzie, & Podsakoff, 2012) to help address common method bias (CMB) concerns to strengthen the study design before data collection began (Aguinis & Vandenberg, 2014). For example, we collected data over multiple points in time and altered the response formats among constructs (Podsakoff et al., 2003, 2012). Finally, we examined negative affectivity (i.e., NA) and positive affectivity (i.e., PA) as theoretically relevant transient mood states that could contribute to CMB concerns, and artificially inflate effects on stress and strain variables. The surveys included the aforementioned provisions to limit the potential for CMB to alter the observed relationships and/or pose a threat to the validity of study findings (Podsakoff et al., 2003, 2012).

Measures

Higher scores for each measure reflected greater perceptions of each construct than lower scores. Hindrance stressors, challenge stressors, and organizational tenure were collected at Time 1. Problem drinking, somatic complaints at work, age, gender, NA, PA, and job tension were collected at Time 2. See Table 1 for descriptive statistics and zero-order bivariate correlations for the study variables.

Table 1. Descriptive Statistics and Zero-Order Bivariate Correlations for Study Variables.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|--------------------------------|--------|-------|--------|--------|--------|-------|-------|-------|-------|------|
| 1. Age | — | | | | | | | | | |
| 2. Gender | -.05 | — | | | | | | | | |
| 3. Organizational tenure | .49** | -.14* | — | | | | | | | |
| 4. Negative affectivity | -.10 | .07 | -.03 | — | | | | | | |
| 5. Positive affectivity | -.04 | .00 | -.07 | -.33** | — | | | | | |
| 6. Job tension | -.07 | .08 | .02 | .56** | -.25** | — | | | | |
| 7. Challenge stressors | -.11 | -.05 | .09 | .23** | .08 | .49** | — | | | |
| 8. Hindrance stressors | -.03 | .01 | -.07 | .34** | -.23** | .42** | .41** | — | | |
| 9. Problem drinking | -.22** | -.08 | -.04 | .20** | .12 | .19** | .23** | .22** | — | |
| 10. Somatic complaints at work | -.02 | .07 | .02 | .57** | -.20** | .51** | .15* | .29** | .40** | — |
| M (x) | 45.17 | 0.63 | 133.37 | 1.65 | 3.19 | 3.53 | 4.70 | 3.62 | 1.46 | 1.54 |
| SD | 10.80 | 0.48 | 106.26 | 0.76 | 1.04 | 1.45 | 1.44 | 1.41 | 0.97 | 0.82 |
| Cronbach's alpha (α) | — | — | — | .86 | .92 | .91 | .93 | .79 | .88 | .92 |
| Composite reliability | — | — | — | .87 | .93 | .92 | .95 | .81 | .92 | .92 |
| AVE | — | — | — | .70 | .81 | .79 | .86 | .60 | .80 | .80 |

Note. Gender: male = 0, female = 1. Organizational tenure was measured in months. All statistical significance tests were based on two-tailed tests ($\alpha = .05$). $N = 223$. AVE = average variance extracted.

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

Hindrance stressors. Hindrance stressors were measured using Cavanaugh et al.'s (2000) five-item measure. Respondents reported the extent to which they agreed that demands contributed to their stress at work (1 = *strongly disagree*, 7 = *strongly agree*). "The amount of red tape I need to go through to get my job done" and "The lack of job security I have" were scale items (Cronbach's $\alpha = .79$).

Problem drinking. Problem drinking was measured using Ewing's (1984) four-item CAGE (i.e., cutting down, annoyance by criticism, guilty feeling, and eye-openers) measure. Our emphasis on the extent to which drinking was problematic necessitated that we used a measure of problem drinking that captured employees' self-perceptions of tendencies associated with problem drinking. Thus, we measured the frequency of problem drinking in general, rather than average levels of alcohol consumption, drinking to intoxication, the frequencies/intensities of experienced hangovers, heavy alcohol use, quantity of drinks consumed, or problem drinking within the workplace.

Respondents reported the frequency with which they experienced problems associated with their drinking (1 = *never*, 7 = *always*). "Have you ever felt you ought to cut down on your drinking?" "Have people annoyed you by criticizing your drinking?" "Have you ever felt bad or guilty about your drinking?" and "Have you ever had a drink first thing in the morning to steady your nerves or get rid of a hangover?" were the scale items ($\alpha = .88$).

Somatic complaints at work. Somatic complaints at work were measured using the seven-item somatization dimension of Carlier et al.'s (2012) 48-item symptom survey. Carlier et al.'s symptom survey includes eight dimensions: aggression, agoraphobia, anxiety, cognitive complaints, depression, somatic complaints, social phobia, and vitality/optimism. Carlier et al. demonstrated that each of the subscales was a distinct dimension of symptoms of disorders; subsequent reviews of somatic symptom questionnaires (e.g., Zijlema et al., 2013) have corroborated evidence that the somatization dimension of Carlier et al.'s survey is a distinct measure of somatic complaints. The phrase "at work" was added to the end of items to make them specific to the workplace. Respondents reported the frequency with which they felt somatic symptoms in the workplace (1 = *never*, 7 = *always*). "I felt dizzy or lightheaded at work" and "I felt chest pain (or pressure) at work" were scale items ($\alpha = .92$).

Control variables. We controlled for respondents' age, gender (*male* = 0, *female* = 1), and organizational tenure (in months) in the analyses. Also, we controlled for NA and PA using eight items from Watson, Clark, and Tellegen's (1988) Positive and Negative Affect Schedule (PANAS) measure; the

abbreviated measures of NA and PA we used have been included as control variables in prior stress research (e.g., Brouer & Harris, 2007; Harris, Harris, & Brouer, 2009; Zellars, Tepper, & Duffy, 2002). Respondents were asked to indicate the extent to which they felt distressed, upset, afraid, jittery, inspired, excited, strong, and active during the week preceding their completion of the surveys (1 = *very slightly or not at all*, 5 = *extremely*). Both measures demonstrated acceptable levels of internal consistency (NA: $\alpha = .86$; PA: $\alpha = .92$). Both, NA and PA, can be biasing factors in stress research because they tend to correlate highly with stress- and strain-related variables (Judge, Erez, & Thoresen, 2000; Watson & Pennebaker, 1989). In response, we examined NA and PA as variables that were theoretically relevant to the substantive variables in the present study, and measured NA and PA over the week prior to the Time 2 survey to capture transient mood states that could contribute to CMB concerns, and artificially inflate effects on stress and strain variables.

Next, we controlled for job tension (i.e., psychological job strain; employees' psychological responses to perceived interruptions in their work environments; Chisholm, Kasl, & Eskenazi, 1983) using House and Rizzo's (1972) seven-item measure. Respondents reported the extent to which they agreed with statements about their psychological job strain (1 = *strongly disagree*, 7 = *strongly agree*). "I work under a great deal of tension" and "My job tends to directly affect my health" were scale items ($\alpha = .91$).

Finally, we controlled for challenge stressors using Cavanaugh et al.'s (2000) six-item measure. Challenge stressors are job opportunities that can reward and promote employees' pursuit of personal growth and accomplishments (LePine et al., 2005). Respondents reported the extent to which they agreed that demands contributed to their stress at work (1 = *strongly disagree*, 7 = *strongly agree*). "The number of projects and/or assignments I have" and "The amount of responsibility I have" were scale items ($\alpha = .93$).

Assessment of Measures

Overall, the zero-order bivariate correlations reported in Table 1 were in the expected directions and of the approximately expected magnitudes. Importantly, hindrance stressors were positively associated with problem drinking ($r = .22$, $p < .01$) and somatic complaints at work ($r = .29$, $p < .01$). Also, problem drinking was positively associated with somatic complaints at work ($r = .40$, $p < .01$). Not surprisingly, NA, PA, job tension, and challenge stressors generally demonstrated moderate-to-strong associations with the substantive variables. Also, we found low means and standard deviations for problem drinking ($\bar{x} = 1.46$, $SD = 0.97$) and somatic complaints at work ($\bar{x} = 1.54$, $SD = 0.82$). Problem drinking and

somatic complaints are low-base-rate phenomena, so our results are typical of and consistent with prior research (e.g., Carlier et al., 2012; Ewing, 1984; Schultze-van Maaren et al., 2013; Zijlema et al., 2013). Below, we report the results of hypothesis testing both with and without the control variables (i.e., age, gender, organizational tenure, NA, PA, job tension, and challenge stressors) to facilitate interpretation of the results and demonstrate the robustness of our findings.

Plan for the Analyses

We followed Anderson and Gerbing's (1988) two-step approach to structural equation modeling (SEM) to test the study hypotheses. In the first step of Anderson and Gerbing's approach, we conducted confirmatory measurement models (i.e., confirmatory factor analyses [CFAs]) using AMOS 22.0 (Arbuckle, 2005) to examine the relationships between the indicators and the latent variables for each construct while allowing the latent variables to correlate freely. We examined the values for chi-square (χ^2), comparative fit index (CFI), Tucker–Lewis Index (TLI), root mean square error of approximation (RMSEA), and standardized root mean residual (SRMR) to determine whether the overall CFAs demonstrated acceptable fit between the model and the data (Hu & Bentler, 1999). Furthermore, we supplemented the CFAs by examining convergent validity. Also, we conducted hierarchically nested covariance structure model analyses to examine the extent to which CMB was present in the data.

We proceeded to the second step of Anderson and Gerbing's (1988) two-step approach by testing the hypothesized structural model in AMOS 22.0. We examined fit indices to determine if the model demonstrated acceptable fit with the data, as well as the standardized results and corresponding significance tests from the structural model testing to determine whether the study hypotheses were supported.

CFAs

We conducted CFAs in AMOS 22.0 (Arbuckle, 2005) using the maximum-likelihood estimation method as the first step of Anderson and Gerbing's (1988) two-step approach to SEM. We used the factorial algorithm partial disaggregation (parceling) technique (i.e., item-to-construct balance; Little, Cunningham, Shahar, & Widaman, 2002; Rogers & Schmitt, 2004; Williams, Vandenberg, & Edwards, 2009) to create three parcels for each latent variable in the analyses. Our efforts to create an equal number of parcels for each latent variable resulted in some parcels containing only one item for latent variables that were measured using fewer than six items.

The item-to-construct balance parceling technique is considered “perhaps the most attractive approach to forming parcels” because it creates “parcels that are equally balanced in terms of their difficulty and discrimination” (Williams et al., 2009, p. 550). Specifically, the item-to-construct balance parceling technique spreads the highest and lowest loading items across parcels, so that no single parcel consists of all of the lowest loading items (Williams et al., 2009). Parceling is appropriate when analyzing unidimensional variables that have nonnormally distributed item-level data, including variables for low-base-rate phenomena (Bandalos, 2002), such as problem drinking and somatic complaints at work. Thus, parceling was appropriate for our purposes because it enabled us to test a complex model with seven unidimensional constructs that included two low-base-rate constructs (i.e., problem drinking and somatic complaints at work). The standardized parcel loadings for the CFAs were used as the item-level loading estimates to calculate composite reliability and AVE values (Fornell & Larcker, 1981).

A list of items for each measure, the parcels to which they belong, and parcel loadings in the final structural model are presented in Table 2. According to Hu and Bentler’s (1999) recommended cutoff points, there was acceptable fit between the model and the data for the model that excluded control variables, $\chi^2(24) = 51.47$, CFI = .98, TLI = .97, RMSEA = .07, and SRMR = .04, and the model that included control variables, $\chi^2(168) = 272.48$, CFI = .97, TLI = .97, RMSEA = .05, and SRMR = .04. Age, gender, and organizational tenure were not included in the CFAs because they were each measured using a single item instead of a latent variable comprising multiple parcels. Thus, the demographic covariates were modeled at the item level, whereas the focal constructs, NA, PA, job tension, and challenge stressors were modeled at the construct level.

Then, we conducted tests of convergent validity (Fornell & Larcker, 1981), internal consistency, and CMB (Cote & Buckley, 1987). Acceptable levels of convergent validity were present because all parcels significantly loaded onto their intended constructs and demonstrated standardized item loadings of at least .50 (Fornell & Larcker, 1981). Furthermore, the AVE values for NA (.70), PA (.81), job tension (.79), challenge stressors (.86), hindrance stressors (.60), problem drinking (.80), and somatic complaints at work (.80) all were above .50, which demonstrated evidence of convergent validity. Next, acceptable levels of internal consistency were present because all Cronbach’s alpha values were above .70 and all composite reliability values were above .70.

Finally, we conducted hierarchically nested covariance structure model analyses to examine the extent to which CMB was present in the data (Cote

Table 2. Measures and Standardized Item Loadings From the Final Structural Model.

| Construct | Measure | Without control variables | With control variables |
|----------------------------|---|---------------------------|------------------------|
| Hindrances stressors | Please indicate the extent to which you agree or disagree that each of the demands below contributes to your stress at work. (1 = <i>strongly disagree</i> , 7 = <i>strongly agree</i>) | | |
| | Parcel 1 | .741 | .774 |
| | The lack of job security I have. | | |
| | The inability to clearly understand what is expected of me on the job. | | |
| | Parcel 2 | .917 | .885 |
| | The amount of red tape I need to go through to get my job done. | | |
| | The degree to which my career seems "stalled." | | |
| | Parcel 3 | .628 | .626 |
| | The degree to which politics rather than performance affects organizational decisions. | | |
| Problem drinking | Please indicate the frequency with which you experience each of the following statements by selecting the appropriate choice. (1 = <i>never</i> , 7 = <i>always</i>) | | |
| | Parcel 1 | .993 | .993 |
| | Have you ever felt bad or guilty about your drinking? | | |
| | Have you ever had a drink first thing in the morning to steady your nerves or get rid of a hangover? | | |
| | Parcel 2 | .822 | .822 |
| | Have you ever felt you ought to cut down on your drinking? | | |
| | Parcel 3 | .866 | .865 |
| | Have people annoyed you by criticizing your drinking? | | |
| Somatic complaints at work | Please indicate the frequency with which you experience each of the following statements at work by selecting the appropriate choice. (1 = <i>never</i> , 7 = <i>always</i>) | | |
| | Parcel 1 | .967 | .959 |
| | I was shaking or trembling at work. | | |

(continued)

Table 2. (continued)

| Construct | Measure | Without control variables | With control variables |
|----------------------|--|---------------------------|------------------------|
| Negative affectivity | I was short of breath with minimal exertion at work. | | |
| | I felt chest pain (or pressure) at work. | | |
| | Parcel 2 | .895 | .900 |
| | I felt shaky or I had shivers at work. | | |
| | I felt palpitations at work. | | |
| | Parcel 3 | .818 | .824 |
| | I felt dizzy or lightheaded at work. | | |
| | I felt a tingling, for example, in my hands, at work. | | |
| | Please read each item, and then mark the appropriate answer. Indicate to what extent you have felt this way during the past week (1 = <i>very slightly or not at all</i> , 5 = <i>extremely</i>). | | |
| | Parcel 1 | — | .991 |
| Positive affectivity | Distressed. | | |
| | Jittery. | | |
| | Parcel 2 | — | .778 |
| | Upset. | | |
| | Parcel 3 | — | .719 |
| | Afraid. | | |
| | Please read each item, and then mark the appropriate answer. Indicate to what extent you have felt this way during the past week (1 = <i>very slightly or not at all</i> , 5 = <i>extremely</i>). | | |
| | Parcel 1 | — | .957 |
| | Excited. | | |
| | Active. | | |
| Job tension | Parcel 2 | — | .854 |
| | Inspired. | | |
| | Parcel 3 | — | .883 |
| | Strong. | | |
| | Please indicate the extent to which you agree or disagree with the following statements by selecting the appropriate choice (1 = <i>strongly disagree</i> , 7 = <i>strongly agree</i>). | | |
| | Parcel 1 | — | .930 |
| | Problems associated with my job have kept me awake at night. | | |

(continued)

Table 2. (continued)

| Construct | Measure | Without control variables | With control variables |
|---------------------|--|---------------------------|------------------------|
| Challenge stressors | My job tends to directly affect my health. | | |
| | I have felt nervous before attending meetings in my company. | | |
| | Parcel 2 | — | .852 |
| | I work under a great deal of tension. | | |
| | I have felt fidgety or nervous as a result of my job. | | |
| | Parcel 3 | — | .890 |
| | If I had a different job, my health would probably improve. | | |
| | I often "take my job home with me" in the sense that I think about it when doing other things. | | |
| | Please indicate the extent to which you agree or disagree that each of the demands below contributes to your stress at work (1 = <i>strongly disagree</i> , 7 = <i>strongly agree</i>). | | |
| | Parcel 1 | — | .868 |
| | The number of projects and/or assignments I have. | | |
| | The amount of time I spend at work. | | |
| | Parcel 2 | — | .954 |
| | The volume of work that must be accomplished in the allotted time. | | |
| | The scope of responsibility my position entails. | | |
| | Parcel 3 | — | .950 |
| | The amount of responsibility I have. | | |
| | Time pressures I experience. | | |

Note. Standardized item loadings are reported.

& Buckley, 1987). The results indicated that more of the variance was explained by the trait factor (without control variables: 59.96%; with control variables: 67.51%) than the method factor (without control variables: 15.86%; with control variables: 12.22%) and random error (without control variables: 24.18%; with control variables: 20.27%). Overall, we concluded that CMB did not pose a substantial threat to the validity of the inferences drawn from this study. Thus, we retained the hypothesized model and proceeded with the second step of Anderson and Gerbing's (1988) two-step approach to SEM by examining the structural models with the latent variables measured in the CFAs.

Table 3. Summary of Structural Equation Modeling Results.

| Independent variable | $\beta_{\text{No controls}}$ | 95% CI _{No controls} | $\beta_{\text{With controls}}$ | 95% CI _{With controls} |
|--|------------------------------|-------------------------------|--------------------------------|---------------------------------|
| Dependent variable: Problem drinking | | | | |
| Age | — | — | -.25** | [-.36, -.13] |
| Gender | — | — | -.11 | [-.23, 0.01] |
| Organizational tenure | — | — | .09 | [-.03, 0.22] |
| Negative affectivity | — | — | .17* | [0.00, 0.38] |
| Positive affectivity | — | — | .22** | [0.03, 0.39] |
| Job tension | — | — | .01 | [-.26, 0.29] |
| Challenge stressors | — | — | .00 | [-.22, 0.19] |
| Hindrance stressors | .22** | [0.05, 0.37] | .21* | [0.00, 0.42] |
| Dependent variable: Somatic complaints at work | | | | |
| Age | — | — | .11 | [0.01, 0.22] |
| Gender | — | — | .06 | [-.05, 0.15] |
| Organizational tenure | — | — | .02 | [-.07, 0.11] |
| Negative affectivity | — | — | .32** | [0.14, 0.52] |
| Positive affectivity | — | — | -.04 | [-.20, 0.10] |
| Job tension | — | — | .35** | [0.17, 0.54] |
| Challenge stressors | — | — | -.16* | [-.29, -.03] |
| Problem drinking | .42** | [0.16, 0.62] | .37** | [0.18, 0.53] |

Note. We report standardized (β) effect sizes. 95% CI = 95% confidence interval. All statistical significance tests were based on two-tailed tests ($\alpha = .05$). $N = 223$.

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

Results

Results of hypothesis testing are presented in Table 3 and depicted in Figure 1. First, the results indicated an acceptable fit of the model to the data (Hu & Bentler, 1999) for models that excluded, $\chi^2(25) = 62.81$, CFI = .97, TLI = .96, RMSEA = .08, and SRMR = .08, and included, $\chi^2(211) = 318.96$, CFI = .97, TLI = .96, RMSEA = .05, and SRMR = .04, the control variables. In addition to examining fit statistics and effect sizes, we obtained 95% confidence intervals (CIs) around standardized effect sizes using bootstrapping ($n = 5,000$) in AMOS 22.0.

Hypothesis 1 predicted that hindrance stressors would be positively associated with problem drinking. The results demonstrated that hindrance stressors were positively associated with problem drinking ($\gamma_{\text{Control variables excluded}} = .22$, $p < .01$, 95% CI = [0.05, 0.37]; $\gamma_{\text{Control variables included}} = .21$, $p < .05$, 95% CI = [0.00, 0.42]). Thus, Hypothesis 1 was supported.

Hypothesis 2 predicted that problem drinking would be positively associated with somatic complaints at work. The results demonstrated that problem drinking was positively associated with somatic complaints at work ($\beta_{\text{Control variables excluded}} = .42, p < .01, 95\% \text{ CI} = [0.16, 0.62]$; $\beta_{\text{Control variables included}} = .37, p < .01, 95\% \text{ CI} = [0.18, 0.53]$). Thus, Hypothesis 2 was supported.

Hypothesis 3 predicted that hindrance stressors would be positively and indirectly associated with somatic complaints at work through problem drinking. Overall, the standardized indirect effects demonstrated that hindrance stressors had a positive indirect effect on somatic complaints at work through problem drinking (.09 without control variables, $p < .05, 95\% \text{ CI} = [0.01, 0.20]$; .08 with control variables, $p = .058, 95\% \text{ CI} = [0.00, 0.17]$). Thus, Hypothesis 3 was supported.

Discussion

We found evidence that hindrance stressors in the workplace indirectly affected employees' tendencies to experience somatic complaints at work through problem drinking, with and without theoretically and practically relevant control variables (i.e., age, gender, organizational tenure, NA, PA, job tension, and challenge stressors). Ultimately, this study contributes to stress research by drawing from the transactional model of stress and the self-medication hypothesis to offer a novel explanation for why problem drinking is a self-medication coping mechanism through which hindrance stressors are indirectly associated with somatic complaints at work.

Contributions to Theory and Research

This study makes two important contributions to stress and problem drinking theory and research. First, it makes an important empirical contribution by explicitly examining problem drinking and somatic complaints at work as outcomes of hindrance stressors. Although much research has examined the effects of hindrance stressors and psychological job strain (e.g., job tension), little research has examined the effects of hindrance stressors on somatic complaints at work. The distinction between psychological strain and somatic complaints at work is theoretically, conceptually, and empirically important because bodily signals that indicate deviations from normal health can be indicators of substantial psychosocial strain that occurs within the context in which stressors

exist. Thus, our novel examination of hindrance stressors and somatic complaints at work provides much needed clarity to examining the stress–strain process in the workplace, as well as the nomological network of problem drinking as a coping mechanism for work-related stress–strain processes. Our assessment of problem drinking provides new insights into the self-medication coping mechanisms employees may use to address hindrance stressors that can be associated with somatic complaints at work.

Second, we make an important theoretical contribution by drawing from the transactional model of stress and self-medication hypothesis to explain why problem drinking is the self-medication coping mechanism through which hindrance stressors indirectly affect employees' somatic complaints at work. Drawing from these two theoretical perspectives offers incremental knowledge that neither theoretical framework can offer alone. Specifically, the transactional model of stress describes the primary and secondary appraisal stages of the stress–strain process but fails to identify the specific coping mechanisms through which stress affects strain. Furthermore, the self-medication hypothesis identifies means for employees to cope with unwanted demands in their environments (e.g., hindrance stressors) but fails to identify the outcomes of problem drinking. Thus, drawing from the transactional model of stress and the self-medication hypothesis provides new insights into how using problem drinking as a self-medication coping mechanism during the secondary appraisal stage of the transactional model of stress affects the general stress–strain process that underlies much of workplace stress research.

Strengths and Limitations

This study had several strengths. The time-separated nature of the data and the procedural remedies we used to address CMB concerns (i.e., varied response formats among variables, inclusion of quality check items, inclusion of nonexamined variables to mask the true purpose of the study to avoid priming effects; Podsakoff et al., 2003, 2012) were important strengths of this study. Furthermore, our ability to demonstrate evidence for the hypothesized model while controlling for theoretically and practically important demographic variables (i.e., age, gender, and organizational tenure) and factors that can bias stress and strain perceptions (i.e., NA, PA, job tension, challenge stressors) was a major strength of this study.

In particular, the NA and PA variables we examined enabled us to incorporate a procedural remedy into the study design that controlled for theoretically important variables as transient mood states that could contribute to CMB. Both NA and PA tend to demonstrate strong associations with problem drinking and strain (e.g., somatic complaints) variables (e.g., Judge et al., 2000; Spector, Zapf, Chen, & Frese, 2000), so including these theoretically important control variables and assessing their potentially biasing effects on the obtained results was important. Furthermore, demonstrating the robustness of our findings while controlling for challenge stressors and psychological job strain (i.e., job tension) was important.

Despite the strengths noted above, there were some limitations that could affect the inferences and conclusions we drew from this study (Brutus, Aguinis, & Wassmer, 2013). This study's main limitations stem from the self-report nature of the data examined. Self-report data were appropriate for our study because the nature of experienced stress and strain necessitates the use of self-report data because stress is an unverifiable internal state (Chan, 2009) that stems from perceptions of organizational demands. Nonetheless, CMB was a limitation of this study due to the self-reported nature of the data. Thus, we included procedural and statistical remedies to address CMB concerns, as well as conducted hierarchically nested covariance structures to ensure that the variables examined in this study were sufficiently distinct from one another, and that CMB likely did not substantively bias the obtained results. Also, measuring the variables we examined across only two time periods was a limitation because we could not make strong claims of causality, so we recommend that future research use cross-lagged, longitudinal study designs and statistical models to make stronger causal inferences than we could. Furthermore, our limited use of techniques to assess insufficient effort responding (DeSimone et al., 2015; Meade & Craig, 2012) is a limitation of our study. Thus, we recommend that researchers utilize multiple methods for assessing insufficient effort responding that include multiple instructed items and the long string method (i.e., ensuring that respondents did not choose the same response repeatedly) when replicating and extending our findings.

Next, respondent attrition (Goodman & Blum, 1996) was a limitation because only 223 of the 450 respondents (i.e., 49.56%) provided complete and usable data across Times 1 and 2. Although our response rate is consistent with other stress studies that collected multiwave data through Qualtrics' Panel Services (e.g., Dawson, O'Brien, & Beehr, 2016) and

response rates for Internet-based surveys (Cook, Heath, & Thompson, 2000), our high attrition rate and modest sample size are still limitations that could affect the power of our study and the validity of the inferences we drew from it. Also, we could have bolstered our confidence in the strength of the inferences drawn from our study and the validity of the obtained results if we measured and controlled for the effects of the mediator (i.e., problem drinking) and dependent variable (i.e., somatic complaints at work) at Time 1.

Also, the measure of problem drinking we used was limited by not asking respondents to consider their problem drinking behaviors within the pre-specified time period between the first and second survey. Furthermore, our measure of problem drinking was a narrow assessment of alcohol involvement because we did not include measures of average levels of alcohol consumption, drinking to intoxication, the frequencies/intensities of experienced hangovers, heavy alcohol use, the quantity of drinks consumed, or problem drinking within the workplace. We recommend that future research carefully consider the limitations noted above when designing a measure of problem drinking to ensure that the measure appropriately matches the research question being examined.

Directions for Future Research

We provide an actionable agenda for future research that could incrementally build on this study's findings. First, studies that attempt to constructively replicate and extend this study's findings would benefit from assessing various types of somatic symptoms via medical instruments that can obtain objective readings of somatic symptoms (e.g., blood pressure, cholesterol). Thus, it would be informative to study whether perceived versus physiologically measured somatic symptoms demonstrate different relationships with hindrance stressors and problem drinking. Furthermore, future research would benefit from assessing problem drinking from the perspective of a secondary respondent who knows the primary respondent well (e.g., spouses) because there may be differences between primary and secondary respondents' assessments of the presence of problem drinking and/or what constitutes problem drinking that meaningfully affect the results we obtained in our study.

Also, future research could measure problem drinking in different ways that can meaningfully extend this study's findings. For example, future research could label individuals nondrinkers, moderate drinkers, or problem drinkers (Ewing, 1984), measure quantities of

alcohol consumed (Cooper, Russell, & George, 1988), assess drinking to intoxication, measure the frequencies/intensities of experienced hangovers, measure heavy alcohol use, or examine problem drinking within the workplace. Perhaps, the actual quantity of alcohol consumed or consuming alcohol in the workplace instead of elsewhere has a more direct impact on somatic complaints at work than perceptions of problem drinking. In particular, future research could incorporate multiple means of assessing problem drinking to fully capture the dynamics of problem drinking. In addition, future research would benefit from examining qualitative data that assess respondents' views regarding the perceived benefits of drinking alcohol as a self-medication coping mechanism for addressing hindrance stressors.

There is still much to learn about self-medication coping mechanisms and their role in the workplace stress-strain process. Accordingly, the stress and problem drinking literatures would benefit from future research that examines various types of somatic complaints and personal outcomes that occur when problem drinking is used as a self-medication coping mechanism for addressing hindrance stressors. Also, future research would benefit from examining qualitative data (e.g., conducting interviews, audio diaries) that can shed light on how self-medication processes unfold. Qualitative research could help clarify why consuming alcohol is seen as a viable self-medication coping mechanism for addressing hindrance stressors. Finally, research would benefit from quantitative and qualitative data that could help clarify the extent to which substance use climates (e.g., drinking climates; Frone, 2012) affect employees' tendencies to engage in problem drinking as a response to workplace stress and strain. Thus, we encourage future research to consider the role of drinking climate as a boundary condition in the model we examined.

Practical Implications

This study's findings can bridge the gap between research and practice to inform practitioners (Cascio & Aguinis, 2008) in several important ways. Employees' work stress can affect their health and well-being in numerous ways (Ganster & Rosen, 2013). We advocate for awareness that hindrance stressors are associated with problem drinking and somatic complaints at work, even when accounting for the effects of challenge stressors, psychological job strain (i.e., job tension), and general tendencies to experience events in favorable (i.e., PA) or unfavorable (i.e., NA)

ways. Thus, practitioners likely would benefit from limiting employees' exposure to hindrance stressors (e.g., role ambiguity, role conflict, and role overload) as a means to manage employees' problem drinking and somatic complaints at work.

Recent research demonstrates that organizations' efforts to manage harmful self-medication employee behaviors that occur outside the workplace (e.g., problem drinking, off-duty deviance) can help protect organizations and their stakeholders (Lyons et al., 2016). We advocate for practitioners' awareness that monitoring and discouraging employees' harmful self-medication coping attempts could help limit employees' somatic complaints at work (e.g., chest pain, dizziness, lightheadedness, shaking, shortness of breath). Furthermore, organizations likely would benefit from attempts to manage employees' stress and harmful coping attempts because individual-level stress affects employees' team-level stress (Savelsbergh, Gevers, van der Heijden, & Poell, 2012). Ultimately, organizations that actively attempt to manage their employees' stress by providing alternatives to problem drinking and other harmful forms of self-medication coping attempts may have healthier and more productive employees who experience less strain than organizations that do not actively attempt to manage their employees' stress, strain, and coping efforts.

Conclusion

In this study, we draw from the transactional model of stress and the self-medication hypothesis to explain why there is an indirect relationship between employees' workplace stress (i.e., hindrance stressors) and workplace strain (i.e., somatic complaints at work) through problem drinking. We found empirical evidence from a heterogeneous sample of U.S. employees that supported the hypothesized model. The novel contributions we make lay a foundation for future studies to develop a systematic program of research that incrementally improves our understanding of how workplace stress affects somatic complaints at work, the role of problem drinking in employees' stress processes, and the effects of self-medication coping mechanisms in the stress-strain process. We hope our findings encourage future research that provides novel insight into the relationships between employees' stress and strain, as well as the important role of problem drinking as a self-medication coping mechanism in this process.

Appendix

Summary of Structural Equation Modeling Results.

| Independent variable | Results in paper (n = 223) | | | | Results with all data (n = 244) | | | |
|--|------------------------------|-------------------------------|--------------------------------|---------------------------------|---------------------------------|-------------------------------|--------------------------------|---------------------------------|
| | $\beta_{\text{No controls}}$ | 95% CI _{No controls} | $\beta_{\text{With controls}}$ | 95% CI _{With controls} | $\beta_{\text{No controls}}$ | 95% CI _{No controls} | $\beta_{\text{With controls}}$ | 95% CI _{With controls} |
| Dependent variable: Problem drinking | | | | | | | | |
| Age | — | — | -.25** | [-0.36, -0.13] | — | — | -.28** | [-0.38, -0.16] |
| Gender | — | — | -.11 | [-0.23, 0.01] | — | — | -.11 | [-0.23, 0.01] |
| Organizational tenure | — | — | .09 | [-0.03, 0.22] | — | — | .09 | [-0.01, 0.21] |
| Negative affectivity | — | — | .17* | [0.00, 0.38] | — | — | .21* | [0.03, 0.39] |
| Positive affectivity | — | — | .22** | [0.03, 0.39] | — | — | .28** | [0.11, 0.43] |
| Job tension | — | — | .01 | [-0.26, 0.29] | — | — | -.01 | [-0.24, 0.22] |
| Challenge stressors | — | — | .00 | [-0.22, 0.19] | — | — | -.06 | [-0.24, 0.13] |
| Hindrance stressors | .22** | [.05, .37] | .21* | [0.00, 0.42] | .24** | [.07, .38] | .26* | [0.06, 0.44] |
| Dependent variable: Somatic complaints at work | | | | | | | | |
| Age | — | — | .11 | [0.01, 0.22] | — | — | .12* | [0.01, 0.22] |
| Gender | — | — | .06 | [-0.05, 0.15] | — | — | .05 | [-0.06, 0.14] |
| Organizational tenure | — | — | .02 | [-0.07, 0.11] | — | — | .00 | [-0.08, 0.09] |
| Negative affectivity | — | — | .32** | [0.14, 0.52] | — | — | .33** | [0.15, 0.51] |
| Positive affectivity | — | — | -.04 | [-0.20, 0.10] | — | — | -.05 | [-0.20, 0.09] |
| Job tension | — | — | .35** | [0.17, 0.54] | — | — | .31** | [0.14, 0.48] |
| Challenge stressors | — | — | -.16* | [-0.29, -0.03] | — | — | -.13* | [-0.27, -0.01] |
| Problem drinking | .42** | [.16, .62] | .37** | [0.18, 0.53] | .43** | [.20, .62] | .39** | [0.20, 0.54] |

Note. N = 223 for the Results in Paper. N = 244 for the Results with All Data. We report standardized (β) effect sizes. 95% CI = 95% confidence interval. All statistical significance tests were based on two-tailed tests ($\alpha = .05$).

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

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References

- Aguinis, H., & Vandenberg, R. J. (2014). An ounce of prevention is worth a pound of cure: Improving research quality before data collection. *Annual Review of Organizational Psychology and Organizational Behavior*, 1, 569-595.
- Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, 103, 411-423.
- Arbuckle, J. L. (2005). *Amos 6.0 user's guide*. Chicago, IL: SPSS.
- Bamberger, P. A., & Bacharach, S. B. (2006). Abusive supervision and subordinate problem drinking: Taking resistance, stress, and subordinate personality into account. *Human Relations*, 59, 723-752.
- Bandalos, D. L. (2002). The effects of item parceling on goodness-of-fit and parameter estimate bias in structural equation modeling. *Structural Equation Modeling*, 9, 78-102.
- Brouer, R., & Harris, K. (2007). Dispositional and situational moderators of the relationship between leader-member exchange and work tension. *Journal of Applied Social Psychology*, 37, 1418-1441.
- Brutus, S., Aguinis, H., & Wassmer, U. (2013). Self-reported limitations and future directions in scholarly reports: Analysis and recommendations. *Journal of Management*, 39(1), 48-75.
- Carlier, I., Schulte-Van Maaren, Y., Wardenaar, K., Giltay, E., Van Noorden, M., Vergeer, P., & Zitman, F. (2012). Development and validation of the 48-item Symptom Questionnaire (SQ-48) in patients with depressive, anxiety and somatoform disorders. *Psychiatry Research*, 200, 904-910.
- Carrigan, M. H., & Randall, C. L. (2003). Self-medication in social phobia: A review of the alcohol literature. *Addictive Behaviors*, 28, 269-284.
- Cascio, W. F., & Aguinis, H. (2008). Research in industrial and organizational psychology from 1963 to 2007: Changes, choices, and trends. *Journal of Applied Psychology*, 93, 1062-1081.
- Cavanaugh, M. A., Boswell, W. R., Roehling, M. V., & Boudreau, J. W. (2000). An empirical examination of self-reported work stress among U.S. managers. *Journal of Applied Psychology*, 85, 65-74.
- Chan, D. (2009). So why ask me? Are self-report data really that bad? In C. Lance & R. Vandenberg (Eds.), *Statistical and methodological myths and urban legends: Doctrine, verity and fable in the organizational sciences* (pp. 309-332). New York, NY: Routledge.

- Chang, C.-H., Rosen, C. C., & Levy, P. E. (2009). The relationship between perceptions of organizational politics and employee attitudes, strain, and behavior: A meta-analytic examination. *Academy of Management Journal*, 52, 779-801.
- Chase, V., Neild, R., Sadler, C. W., & Batey, R. G. (2005). The medical complications of alcohol use: Understanding mechanisms to improve management. *Drug and Alcohol Review*, 24, 253-265.
- Cherpitel, C. J. (2007). Alcohol and injuries: A review of international emergency room studies since 1995. *Drug and Alcohol Review*, 26, 201-214.
- Chisholm, R. F., Kasl, S. V., & Eskenazi, B. (1983). The nature and predictors of job related tension in a crisis situation: Reactions of nuclear workers to the Three Mile Island accident. *Academy of Management Journal*, 26, 385-405.
- Conger, J. (1956). Reinforcement theory and the dynamics of alcoholism. *Quarterly Journal of Studies on Alcohol*, 17, 296-305.
- Cook, C., Heath, F., & Thompson, R. L. (2000). A meta-analysis of response rates in web- or internet-based surveys. *Educational and Psychological Measurement*, 60, 821-836.
- Cooper, M. L., Russell, M., & George, W. H. (1988). Coping, expectancies, and alcohol abuse: A test of social learning formulations. *Journal of Abnormal Psychology*, 97, 218-230.
- Cote, J. A., & Buckley, M. R. (1987). Estimating trait, method, and error variance: Generalizing across 70 construct validation studies. *Journal of Marketing Research*, 24, 315-318.
- Dawson, K. M., O'Brien, K. E., & Beehr, T. A. (2016). The role of hindrance stressors in the job demand-control-support model of occupational stress: A proposed theory revision. *Journal of Organizational Behavior*, 37, 397-415.
- DeSimone, J. A., Harms, P. D., & DeSimone, A. J. (2015). Best practice recommendations for data screening. *Journal of Organizational Behavior*, 36, 171-181.
- Ewing, J. A. (1984). Detecting alcoholism: The CAGE questionnaire. *Journal of the American Medical Association*, 252, 1905-1907.
- Folkman, S., & Lazarus, R. S. (1990). Coping and emotion. In N. L. Stein, B. Leventhal, & T. Trabasso (Eds.), *Psychological and biological approaches to emotion* (pp. 313-332). Hillsdale, NJ: Lawrence Erlbaum.
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18, 39-50.
- Frone, M. R. (2012). Workplace substance use climate: Prevalence and distribution in the U.S. workforce. *Journal of Substance Use*, 17(1), 72-83.
- Frone, M. R. (2013). *Alcohol and illicit drug use in the workforce and workplace*. Washington, DC: American Psychological Association.
- Frone, M. R. (2015). Relations of negative and positive work experiences to employee alcohol use: Testing the intervening role of negative and positive work rumination. *Journal of Occupational Health Psychology*, 20, 148-160.
- Frone, M. R. (2016a). The great recession and employee alcohol use: A U.S. population study. *Psychology of Addictive Behaviors*, 30, 158-167.

- Frone, M. R. (2016b). Work stress and alcohol use: Developing and testing a biphasic self-medication model. *Work & Stress*, 30, 374-394.
- Ganster, D. C., & Rosen, C. C. (2013). Work stress and employee health: A multidisciplinary review. *Journal of Management*, 39, 1085-1122.
- Goodman, J. S., & Blum, T. C. (1996). Assessing the non-random sampling effects of subject attrition in longitudinal research. *Journal of Management*, 22, 627-652.
- Greeley, J., & Oei, T. (1999). Alcohol and tension reduction. In K. E. Leonard & H. T. Blane (Eds.), *Psychological theories of drinking and alcoholism*. New York, NY: Guilford Press.
- Harris, K. J., Harris, R. B., & Brouer, R. L. (2009). LMX and subordinate political skill: Direct and interactive effects on turnover intentions and job satisfaction. *Journal of Applied Social Psychology*, 39, 2373-2395.
- House, R. J., & Rizzo, J. R. (1972). Toward the measurement of organizational practices: Scale development and validation. *Journal of Applied Psychology*, 56, 388-396.
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6, 1-55.
- Judge, T. A., Erez, A., & Thoresen, C. J. (2000). Why negative affectivity (and self-deception) should be included in job stress research: Bathing the baby with the bath water. *Journal of Organizational Behavior*, 21, 101-111.
- Khantzian, E. J. (1997). The self-medication hypothesis of substance use disorders: A reconsideration and recent applications. *Harvard Review of Psychiatry*, 4, 231-244.
- Kopp, M. S., Thege, B. K., Balog, P., Stauder, A., Salavecz, G., Rózsa, S., . . . Ádám, S. (2010). Measures of stress in epidemiological research. *Journal of Psychosomatic Research*, 69, 211-225.
- Lazarus, R. S. (1990). Theory-based stress measurement. *Psychological Inquiry*, 1(1), 3-13.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York, NY: Springer.
- Lazarus, R. S., & Folkman, S. (1987). Transactional theory and research on emotions and coping. *European Journal of Personality*, 1, 141-169.
- LePine, J. A., LePine, M. A., & Saul, J. R. (2007). Relationships among work and non-work challenge and hindrance stressors and non-work and work criteria: A model of cross-domain stressor effects. In P. L. Perrewé & D. C. Ganster (Eds.), *Exploring the work and non-work interface, Research in occupational stress and well being* (pp. 35-72). Oxford, UK: Elsevier.
- LePine, J. A., Podsakoff, N. P., & LePine, M. A. (2005). A meta-analytic test of the challenge stressor-hindrance stressor framework: An explanation for inconsistent relationships among stressors and performance. *Academy of Management Journal*, 48, 764-775.
- Little, T. D., Cunningham, W. A., Shahar, G., & Widaman, K. F. (2002). To parcel or not to parcel: Exploring the question, weighing the merits. *Structural Equation Modeling*, 9, 151-173.

- Liu, S., Wang, M., Bamberger, P., Shi, J., & Bacharach, S. B. (2015). The dark side of socialization: A longitudinal investigation of newcomer alcohol use. *Academy of Management Journal*, 58, 334-355.
- Lyons, B. D., Hoffman, B. J., Bommer, W. H., Kennedy, C. L., & Hetrick, A. L. (2016). Off-duty deviance: Organizational policies and evidence for two prevention strategies. *Journal of Applied Psychology*, 101, 463-483.
- Mackey, J. D., & Perrewé, P. L. (2014). The AAA (appraisals, attributions, adaptation) model of job stress: The critical role of self-regulation. *Organizational Psychology Review*, 4, 258-278.
- Mackey, J. D., Perrewé, P. L., & McAllister, C. P. (2017). Do I fit in? Perceptions of organizational fit as a resource in the workplace stress process. *Group & Organization Management*, 42, 455-486.
- Meade, A. W., & Craig, S. B. (2012). Identifying careless responses in survey data. *Psychological Methods*, 17, 437-455.
- Meurs, J. A., & Perrewé, P. L. (2011). Cognitive activation theory of stress: An integrative theoretical approach to work stress. *Journal of Management*, 37, 1043-1066.
- Podsakoff, N. P., LePine, J. A., & LePine, M. A. (2007). Differential challenge stressor-hindrance stressor relationships with job attitudes, turnover intentions, turnover and withdrawal behavior: A meta-analysis. *Journal of Applied Psychology*, 92, 438-454.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88, 879-903.
- Podsakoff, P. M., MacKenzie, S. B., & Podsakoff, N. P. (2012). Sources of method bias in social science research and recommendations on how to control it. *Annual Review of Psychology*, 63, 539-569.
- Ritsner, M., Modai, I., & Ponizovsky, A. (2002). Assessing psychological distress in psychiatric patients: Validation of the Talbich Brief Distress Inventory. *Comprehensive Psychiatry*, 43, 229-234.
- Rogers, W. M., & Schmitt, N. (2004). Parameter recovery and model fit using multidimensional composites: A comparison of four empirical parceling algorithms. *Multivariate Behavioral Research*, 39, 379-412.
- Savelsbergh, C., Gevers, J. M. P., van der Heijden, B. I. J. M., & Poell, R. F. (2012). Team role stress: Relationships with team learning and performance in project teams. *Group & Organization Management*, 37(1), 67-100.
- Schulte-van Maaren, Y., Carlier, I. V. E., Giltay, E. J., van Noorden, M. S., de Waal, M. W. M., van der Wee, N. J. A., & Zitman, F. G. (2013). Reference values for mental health assessment instruments: Objectives and methods of the Leiden Routine Outcome Monitoring Study. *Journal of Evaluation in Clinical Practice*, 19, 342-350.
- Sinha, R., & Li, C.-S. R. (2007). Imaging stress- and cue-induced drug and alcohol craving: Association with relapse and clinical implications. *Drug and Alcohol Review*, 26, 25-31.

- Spector, P. E., Zapf, D., Chen, P. Y., & Frese, M. (2000). Why negative affectivity should not be controlled in job stress research: Don't throw the baby out with the bath water. *Journal of Organizational Behavior*, 21, 79-95.
- Vijayasiri, G., Richman, J. A., & Rospenda, K. M. (2012). The Great Recession, somatic symptomatology and alcohol use and abuse. *Addictive Behaviors*, 37, 1019-1024.
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, 54, 1063-1070.
- Watson, D., & Pennebaker, J. W. (1989). Health complaints, stress, and distress: Exploring the central role of negative affectivity. *Psychological Review*, 96, 234-254.
- Williams, L. J., Vandenberg, R. J., & Edwards, J. R. (2009). Structural equation modeling in management research: A guide for improved analysis. *The Academy of Management Annals*, 3, 543-604.
- Zellars, K. L., Tepper, B. J., & Duffy, M. K. (2002). Abusive supervision and subordinates' organizational citizenship behavior. *Journal of Applied Psychology*, 86, 1068-1076.
- Zijlema, W. L., Stolk, R. P., Löwe, B., Rief, W., BioSHaRE White, P. D., & Rosmalen, J. G. M. (2013). How to assess common somatic symptoms in large-scale studies: A systematic review of questionnaires. *Journal of Psychosomatic Research*, 74, 459-468.

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