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Work Stress and Alcohol Use: Examining the Tension-Reduction Model as a Function of Worker's Parent's Alcohol Use

Sarah Moore^{a,*}, Patricia Sikora^b, Leon Grunberg^c, and Edward Greenberg^d

a Department of Psychology, University of Puget Sound, 1500 North Warner, Tacoma, WA 98416, USA; smooore@ups.edu Tel: 1-253/879-3749 FAX 1-253/879-3500

b Sikora Associates, LLC, 2247 Grayden Ct., Superior, CO 80027, USA; patsik@aol.com

c Department of Comparative Sociology, University of Puget Sound, 1500 North Warner, Tacoma, WA 98416, USA; grunberg@ups.edu

d Institute of Behavioral Science, University of Colorado at Boulder, Boulder, CO 80309, USA; Edward.Greenberg@Colorado.edu

Abstract

In an effort to identify groups who may be more vulnerable to tension-reduction drinking (Frone, 2003), we examine whether drinking alcohol in response to work stress varies as a function of whether workers were raised in homes where (a) both parents abstained from alcohol, (b) at least one parent drank nonproblematically, (c) at least one parent drank problematically, or (d) both parents drank problematically. Employees participating in a large, longitudinal study who reported using alcohol in the previous year ($N=895$) completed various measures of work stressors, alcohol use, and alcohol problems. We found few mean group differences for either the work stressor or alcohol measures, but we did find a greater number of significant and moderate correlations between work stressors and alcohol for those reporting that both parents drank alcohol problematically. Interestingly, a number of significant correlations were found for those reporting that both parents abstained from alcohol; few were found for the two groups reporting that at least one parent drank with or without alcohol problems. Results are interpreted in light of where and how alcohol expectancies and other coping methods are learned.

Keywords

Occupational stress; Alcohol drinking patterns; Worker's Parents

1. Introduction

Despite the fact that it is widely believed that increased alcohol consumption is a common response to work-related stress, empirical tests of this “spillover” or “tension-reduction” model have consistently failed to support a strong relationship (e.g., Cooper, Russell, & Frone, 1990; Cooper, Russell, Skinner, Frone, & Mudar, 1992). Among particular vulnerable subgroups of employees, however, such as those who not only believe that alcohol will help them cope with the work-related distress, but who also have few other coping mechanisms,

*Corresponding author: Department of Psychology, University of Puget Sound, 1500 North Warner, Tacoma, WA 98416, USA; smooore@ups.edu Tel: 1-253/879-3749 FAX 1-253/879-3500

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researchers have found greater support for tension reduction drinking. Continued identification of such subgroups has been emphasized as a fruitful direction for future research (Frone, 1999, 2003).

In this paper, we examine tension-reduction drinking among a subgroup of employees who we posit may be vulnerable to using alcohol in response to work stress, namely, workers whose parents had alcohol problems. Although much previous research has demonstrated the heightened risks both children of alcoholics (COAs) and adult children of alcoholics (ACAs) face for many indices of poor adjustment (e.g., Black, 1986; Giglio & Kaufman, 1990), there is very little research that has examined occupational functioning per se' (Greenfield, Swartz, Landerman, & George, 1993). The few studies that do exist have failed to find occupationally-related differences between ACAs and nonACAs; however, they have tended to examine mean group differences rather than to treat parental alcohol problems as a variable that moderates the relationship between work stressors and alcohol use or problems. Previous investigations that have examined coping-related differences between ACAs and nonACAs, moreover, speak to the way and degree to which one's occupational functioning could be affected. There is some support for the contention that ACAs may lack coping resources required for dealing with work-related stress, thereby perceiving increased work stress as compared to their nonACA counterparts. They might also model their alcoholic parent's strategies that include avoidance and escape-related tactics (Chalder, Elgar, & Bennett, 2006; Clair & Genest, 1987; Greenfield et al., 1993).

In addition, we explore whether the tension-reduction relationship is stronger among those where both parents are reported to have had alcohol problems. Cumulative risk theory (Coffelt, Forehand, Olson, Jones, Gaffney, & Zens, 2006) would predict that having both parents use alcohol problematically, rather than only one parent, places two rather than one risk factor in a child's environment. In addition to heightened genetic vulnerability, there is greater environmental instability in the home and less chance to model useful coping responses when both parents misuse alcohol.

2. Method

2.1 Participants

As part of a larger, longitudinal study, 2142 respondents who had responded to at least one previous data collection were mailed a letter and survey to their home. One thousand, one-hundred three (51%) responded (65.6% men, 34.4% women, mean age 50.3 years); of these, 895 replied that they had consumed alcohol in the past year and were included in the analyses.

2.2. Procedures and Materials

Respondents were mailed a multi-item survey which asked them to report their work experiences, job attitudes, and health problems; they were paid \$35.00 for their participation. Descriptions of the job stress and alcohol measures may be found in Table 1. In addition to these variables, we asked respondents if their father was an (a) abstainer, (b) drinker but never known to have had a problem with alcohol, or (c) drinker with alcohol problem. The following question on the survey then asked same of the respondent's mother. To create the four parental alcohol groups used in the analyses, we crossed the three levels of the father's drinking with the three levels of mother's drinking, resulting in nine combinations (e.g., father abstainer and mother problem drinker). Of the 891 usable responses, 163 (18.3%) reported that *both parents were abstainers*, 536 (60.1%) reported that at least one parent drank but neither had a problem, 154 (17.3%) reported that *either the mother or father had a problem* (i.e., the nonproblem drinking parent was either an abstainer or drinker without problem), and 38 (4.3%) reported that *both parents drank problematically*. Predictably, our sample sizes were vastly unequal in

this nonclinical sample of employees, thereby limiting the types of statistical tests we were able to perform. That noted, we believe that the amount of environmental disruption, the degree to which one had an opportunity to learn varied and effective coping techniques, and the degree to which one saw alcohol used problematically varied in important ways between the groups identified in this study.

3. Results and Discussion

Table 2 presents the intercorrelations between the measures. The relatively low or moderate intercorrelations among the work stressors, and among the alcohol measures, support our assertion that these measures tap different components of these constructs and warrant independent examination. Consistent with previous research that has failed to find strong, direct associations between work stress and alcohol use or problems, we found relatively small or nonsignificant correlations between these two groups of variables.

Tables 3 and 4 present the means for each of the parental alcohol groups and results from the one-way analyses of variance for the work stressor and alcohol variables, respectively. Similar to the few studies examining occupational functioning, we too found that parental drinking failed to show any consistent pattern with the work stressors, despite the fact that the literature has much to say about the diminished coping abilities of ACAs. In terms of alcohol use and problems, only two of the five tests achieved significance, although the pattern of means suggested that having two parents drink problematically posed increased risk to one's own alcohol behavior. Failure to find more pronounced differences could stem from the fact that our sample, a fairly high-functioning, nonclinical group of workers, necessarily reduced the variation one might find on such measures.

To examine whether varying degrees of parental alcohol problems differentially affected the relationships between various forms of work stress and alcohol outcomes, we conducted a series of partial correlations (controlled for gender which differed significantly by group, $F [3,866] = 3.06, p < .05$) between each work stressor and each alcohol measure separately for the four parental alcohol groups (See Table 5). Recognizing that the Type I error rate was high for the group reporting that both parents had alcohol problems, we endeavored to examine the overall pattern of correlations rather than place much emphasis on any single correlation. Within the entire sample of workers, we found that disrespectful treatment demonstrated the strongest relationship to all alcohol measures. Of the work stressors examined in this research, this particular type was clearly different from the others. General job stress, role ambiguity, role overload, low job security, and lack of job autonomy, while not desired, are frequently experienced, and not unexpected work conditions. Disrespectful treatment, however, is likely considered to be outside of the boundary of a normal working environment; Rospenda and colleagues (2000) have posited that only "unnecessary" forms of work stress, such as disrespectful treatment, may result in spillover drinking whereas more common and expected types of workplaces stressors (e.g., low decision latitude) may not. Future research that confirms these findings with other forms of unnecessary types of job stress could examine the underlying mechanisms that make a tension-reduction response more likely in the face of these particular types of work stressors.

In an effort to summarize the pattern of correlations more simply, we counted the number of partial correlations within a given range for each of the four parental alcohol groups (Table 6). Examining the patterns independently of statistical significance, we found that of the 30 partial correlations conducted for each group, 10 were greater than $r = .30$ for the group reporting that both parents drank alcohol problematically, while the abstaining group had three correlations and the other two groups had none. Several findings are worth highlighting. Of interest, first, is the relatively greater number of very low correlations for the group reporting that at least

one parent drank without any alcohol problems. Given that this parental drinking pattern characterizes the majority of our sample, it is not surprising that previous efforts to link work stress to tension-reduction drinking have yielded nonsignificant findings in studies that fail to identify vulnerable groups of workers.

Second, we found a curious pattern within the group whose parents both abstained from using alcohol; namely, the respondents with abstaining parents, rather than the group with one problem drinking parent, seemed to show greater propensity to drink in response to work stress. Further complicating the picture, respondents with abstaining parents reported relatively *lower* (although not significantly so) levels of escape motives for drinking, alcohol consumption, and alcohol problems (Table 4). Thus, despite the fact that they drank less often and had fewer alcohol problems, we found that when they did drink, it was more frequently associated with work stress. Although we do not have the data to test possible reasons for this finding, part of the answer may stem from the various motive(s) the respondent's parents chose to abstain from alcohol. For example, it is possible that during the respondent's earlier childhood, his or her parents drank problematically, subsequently opting to abstain from alcohol as part of their recovery efforts. Thus, our respondents may have witnessed alcohol being used excessively, problematically, and as a means to escape at some point during their childhood. It is also possible that respondents who were raised in homes where alcohol was never used had very limited exposure to light or moderate drinking, drinking for social reasons, or drinking alcohol merely as one of many possible beverages. Presumably, even though these respondents were not exposed to the disruption that alcoholism often brings to a family, they still may have failed to witness "appropriate" use of alcohol.

Third, and consistent with our expectations, we found that those with two parents who drank problematically were more likely to display a spillover, or tension-reduction type of drinking in response to work stress as evidenced in the greater number of moderate partial correlations relative to the other three parental alcohol groups. We also note that this relationship was stronger for the measures assessing escapist drinking motives and alcohol problems more so than for alcohol consumption, suggesting that a certain type of problematic drinking, perhaps one that is modeled from one's own parents, contributed to the respondent's own type of alcohol use patterns. Thus, our findings suggest that future work on tension-reduction drinking may be aided by considering where, how, and from whom adults have learned their alcohol expectancies as tools for coping with work stress.

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Table 1
Description of Work Stressor and Alcohol Measures

Scales	Description	Items	Range	Citation
Work Stressors				
General job stress	Felt stress and tension while at work (e.g., "pressured?")	6	(0-18)	Stanton et al., 2001
Disrespectful treatment	Number of times experienced various types of abusive tx at work in past year(e.g., talked down to you?)	9	(0-18)	Richman et al., 1999
Role ambiguity	Degree to which work tasks and job responsibilities are well-defined	4	(4-20)	Caplan et al., 1980
Role overload	Enough time to complete work; Fair workload?	3	(3-15)	Cammann et al., 1983
Job security	Worry over past, present, and future employment with company	3	(3-12)	Armstrong-Stassen, 1993
Job autonomy	Amount of freedom and control workers had in setting work goals and requirements for their work	6	(6-30)	Hrebiniak, 1974
Alcohol Measures				
Escape drinking reasons	Degree to which one uses alcohol to change mood or affect	6	(6-17)	Fennel, et al. 1981
Number of alcoholic drinks past 6 months ^a	Number of times (ranging from <i>never in the past 6 months</i> to <i>daily</i>) one had drunk (a) 1 or 2 alcoholic drinks, (b) 3 or 4 alcoholic drinks, (c) 5 to 7 alcoholic drinks, and (d) 8 or more	4	(0-1356)	Developed for this study
Days drink to effect	Report of the number of days in the last 30 days respondent had enough to drink to feel the effects of alcohol	1	(0-30)	Developed for this study
CAGE	Alcohol problems experienced past 5 years (E.g., Felt you should cut down on drinking, <i>yes or no?</i>)	4	(0-4)	Ewing, 1984
Negative consequences	Alcohol problems experienced past 12 months (e.g., Number of times driving when intoxicated)	5	(0-11)	Jessor et al., 1991. Calahan (1970)

Note. All scales were scored such that higher totals reflected greater levels of the named construct.

^aNumber of occasions was multiplied by the number of drinks to arrive at a total number of alcoholic drinks consumed in the past 6 months.

Table 2

Intercorrelations Between Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13
Sex (1)	--												
Age (2)	-.08*	--											
General job stress (3)	.07*	-.08*	(.82)										
Disrespectful tx (4)	.13*	-.08*	.36*	(.80)									
Role ambiguity (5)	.02	-.06*	.22*	.33*	(.89)								
Role overload (6)	.04	-.16*	.54*	.24*	.22*	(.77)							
Job security (7)	.01	.09	-.12*	-.31*	-.31*	-.06*	(.84)						
Job autonomy (8)	.05	.01	-.14*	-.24*	-.34*	-.04*	.38*	(.87)					
Escape drinking (9)	-.05	-.04	.15*	.23*	.16*	.15*	-.08*	-.07*	(.74)				
Alcohol consumption (10)	-.16*	.02	.01	.07*	.03	.04*	.01	.46*	.46*	--			
Days drink to effect (11)	-.14*	-.12*	-.01	.07*	.03	.07*	.02	.47*	.47*	.59*	--		
CAGE (12)	-.05	-.02	.01	.17*	.08*	.05	-.06*	-.03	.45*	.47*	.50*	(.64)	
Negative consequences (13)	-.17*	-.04	-.04	.16*	.08*	.01	-.09*	-.02	.38*	.46*	.47*	.51*	(.61)

Note. Internal consistency reliability estimates are in the main diagonal.

* p < .05.

Table 3

Group Means and Analysis of Variance Results on Work Stressor Variables

Variable	Parental Drinking Status				F-test and post-hoc results
	Both parents abstainers (0: n= 161)	At least one parent drank without problem (1: n = 528)	At least one parent drank problematically (2: n=151)	Both parents drank problematically (3: n = 37)	
Job stress	10.63	11.07	11.82	9.64	nonsignificant
Disrespectful tx	4.20	3.85	4.89	4.83	F (3, 859) = 2.93 (2 > 1)
Role ambiguity	8.74	8.41	8.69	8.94	nonsignificant
Role overload	9.57	9.79	9.57	9.19	nonsignificant
Job security	8.66	9.16	8.27	8.51	F (3, 852) = 6.10 (1 > 2)
Job autonomy	22.20	22.47	21.91	22.81	nonsignificant

Note. Higher mean scores reflect higher levels of the named construct (e.g., more role ambiguity, more job autonomy).

Table 4

Group Means and Analysis of Variance Results on Alcohol Variables

Variable	Parental Drinking Status				F-test and post-hoc results
	Both parents abstainers (0: n= 161)	At least one parent drank without problem (1: n = 528)	At least one parent drank problematically (2: n=151)	Both parents drank problematically (3: n = 37)	
Escape drinking Alcohol consumption past 6 months	7.12 103.52	7.39 127.52	7.30 125.89	7.59 145.24	nonsignificant nonsignificant
Days drink to effect	2.29	3.41	2.15	4.84	F(3,873) = 3.93 1 > 0
CAGE	.28	.41	.45	.86	F (3,878) = 6.16 3 > 0, 1, 2
Negative consequences	.33	.43	.55	.53	nonsignificant

Note. Higher mean values reflect greater alcohol expectancies, use, or problems.

^a All alcohol variables transformed before analysis (square root transformation), but untransformed means are presented in table for ease of interpretation.

Table 5
 Partial Correlations ^a between Work Stressors and Alcohol-related outcomes ^b; By Parental Drinking Status

	General Job Stress			Disrespectful treatment		
	Escape	Alc con	Neg con	Escape	Alc con	Neg con
Both parents						
Abstainer	.15		.05	.37*	.15	.33*
1 parent drank without problem	.19*	-.05	-.05	.21*	.04	.18*
1 parent drank with problem	.16	.01	-.12	.29*	.17	-.03
Both parents						
Problem drinkers	.09	-.03	.15	.23	.09	.34 ^f
					Role Overload Days	
Escape		Alc con	Neg con	Escape	Alc con	Neg con
Both parents						
Abstainer	.28*	.20*	.25*	.09	.02	.12
1 parent drank without problem	.13*	.01	.05	.21*	.04	-.01
1 parent drank with problem	.13	.01	-.03	.06	-.01	-.13
Both parents						
Problem drinkers	.47*	.20	.40*	.32 ^f	.20	.31 ^f
					Job Autonomy Days	
Escape		Alc con	Neg con	Escape	Alc con	Neg con
Both parents						
Abstainer	-.07	-.11	-.10	-.21*	-.09	-.02
1 parent drank without problem	-.02	.08	-.05	-.04	.01	.00
1 parent drank with problem	-.17	-.10	-.08	-.03	.11	.07
Both parents						
Problem drinkers	-.09	-.09	-.41*	-.39*	.15	-.43*
					Job Security Days	
Escape		Alc con	Neg con	Escape	Alc con	Neg con
Both parents						
Abstainer	-.07	-.11	-.10	-.21*	-.09	-.02
1 parent drank without problem	-.02	.08	-.05	-.04	.01	.00
1 parent drank with problem	-.17	-.10	-.08	-.03	.11	.07
Both parents						
Problem drinkers	-.09	-.09	-.41*	-.39*	.15	-.43*

Note. Degrees of freedom for the groups: Abstainer (n = 125), at least 1 parent drank without problem (n = 440), at least one parent drank with problem (n = 123), and both parents problem drinkers (n = 26).

^aPartialled out the effects of gender.

^bAll alcohol variables transformed before correlating (square root transformation).

* p < .05

^f p < .10.

Table 6
 Frequency Count of Partial Correlations within a Given Range by Parental Alcohol Group

	Partial Correlation Range			
	$r < .10$	$r = .10 \text{ to } .19$	$r = .20 \text{ to } .29$	$r = .30 \text{ to } .39$
Both parents abstainer	11	10	6	3
1 parent drank without problem	24	4	2	0
1 parent drank with problem	17	12	1	0
Both parents problem drinkers	9	5	6	6
				$r > .40$
				0
				0
				0
				4