

Workplace Stress and Culture Factors Predicting ATOD Use among Young Workers

Sara M. Martin

Christopher J. L. Cunningham

Abstract

The present study was designed to determine whether work-related factors such as permissive culture or workplace stress are associated with the day-to-day use of alcohol, tobacco or other drugs (ATOD) among young adult workers. Previous research has found stronger relationships between ATOD use and workplace factors when ATOD use was measured on and off the job separately. To isolate on the job factors from off the job ATOD use, participants were asked to complete daily diary entries regarding their workday experiences. It was predicted that workers who reported stressful workdays and ATOD-tolerant workplace cultures would report more ATOD use. While there was no direct link between stress factors and ATOD use, participants in more ATOD-tolerant work environments were more likely to use.

Background

- **Effects of ATOD use**
 - Impair task performance (Frone, 2003)
 - Accidents and injuries (Frone, 2003)
 - Absenteeism (McFarlin et al., 2000)
 - Turnover (Frone, 2003)
 - Elevate healthcare costs (Frone, 2003)
- **Scope of ATOD use**
 - The majority of illicit drug users are employed
 - >10% of workers admit to heavy or binge drinking (Bennet & Lehman, 2001)

Butler, Dodge, & Faurote (2010)

- Online daily survey procedure
- Compared daily work stressors to daily alcohol consumption among employed college students.
- Found no relationship between workload and ATOD when using a two-item job demands scale

Goals of the Present Study

- Identify workplace factors that contribute to alcohol, tobacco or other drugs use (ATOD) among a young adult sample
 - Young workers (18-25) are entering the workforce at the age when most individuals who engage in substance use are likely to start (Frone, 2003).
 - Early work-related causal factors could establish maladaptive coping strategies that stick.
- Establish that workplace factors can affect ATOD use both on and off the job (Frone, 2008)

ATOD Use Both on and off the Job

- Appraisal-disruption model (Sayette, 1993)
 - The appraisal of an event as stressful can be reduced by the consumption of ATOD.
 - A drug's ability to regulate stressor-induced negative emotions is highest when the drug is used prior to exposure to the stressor
 - Or, an individual might be motivated to use ATOD after the event to regulate negative emotions

Workplace Factors

- Stress Factors

- Heavy workloads, Rigid deadlines, Job insecurity
- Workplace stressors have been shown to trigger substance use before and after the workday (Frone, 2008)

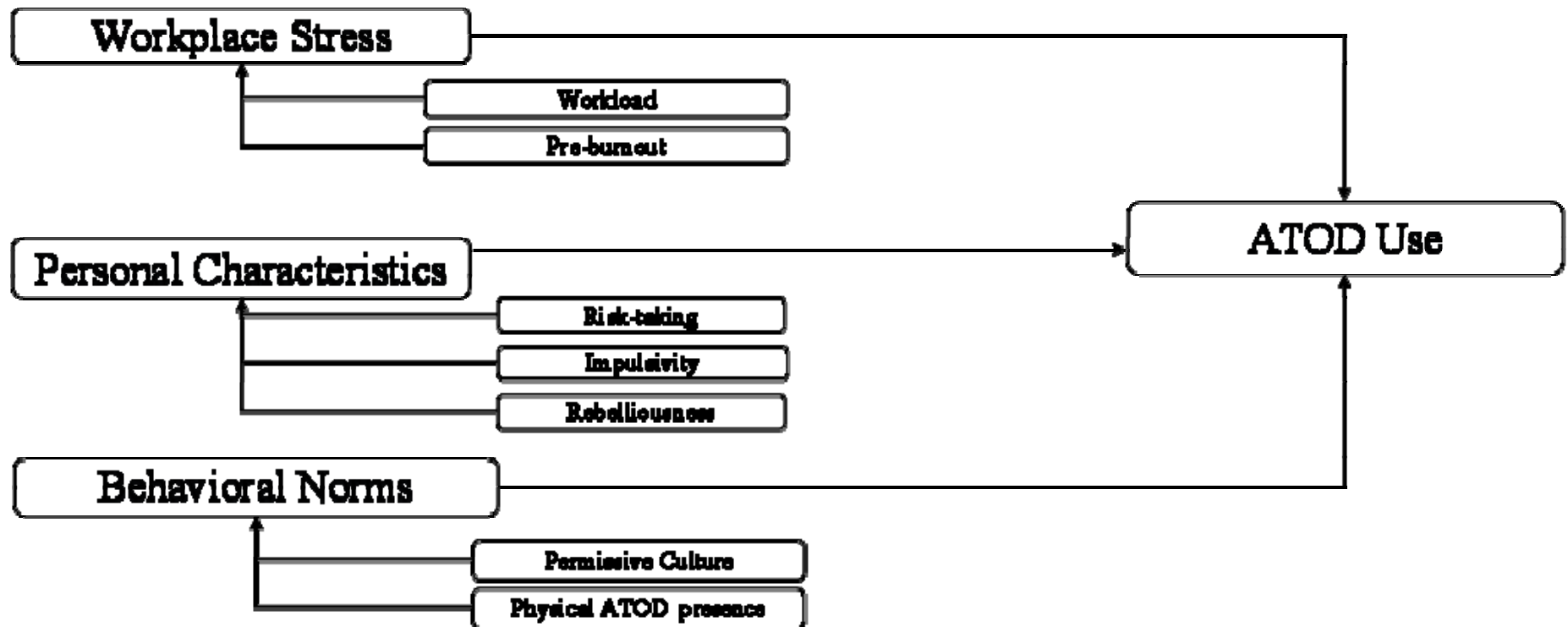
- Workplace Culture

- Cultures and norms exist that implicitly encourage drinking (Bacharach et al., 2002)
 - Positively related to alcohol use
 - Both mediate and moderate effects of other risk factors

General Workforce vs. Younger Workers

- Factors that predict substance use
 - Workforce as a whole
 - Norms that permit drinking (Bacharach et al., 2002)
 - Substance use outcome expectancies (Cooper et al., 1995)
 - Stress (Frone, 2008)
 - Young workers
 - Social availability
 - Rebelliousness
 - Impulsivity
 - Risk-taking (Frone, 2003)

Figure 1. Conceptual Model of Workplace Factor Effects on ATOD Use



Hypotheses

- *Hypothesis 1:* Daily stress levels are positively related to ATOD use that occurs on and off the job.
- *Hypothesis 2:* Daily behavioral norms encouraging ATOD use are positively related to daily ATOD use on and off the job.
- *Hypothesis 3:* Daily physical presence of ATOD in the workplace is positively related to daily ATOD use on and off the job.
- *Hypothesis 4:* Young adult workers with risk-taking, rebellious, and impulsive personalities are more likely to use ATOD.

Method

- Participants
 - 187 undergraduate men (70) and women (106), 18-25 years old ($M = 21$)
 - Must have part-time job (at least 15 hours a week)
 - Recruited from undergraduate courses
 - Offered incentive: 2 points extra credit for completing baseline + $\frac{1}{2}$ point for each daily survey
- Materials
 - Internet-based structured questionnaires (SurveyMonkey delivery)
 - Perceived job-related stress, Situational norms, Temporal context and nature of personal ATOD use

Procedure

Baseline

Risk Taking

Impulsivity

Rebelliousness

Quantitative
Workload

Cultural
Norms
(overall)

Daily Survey

Stress

Cultural Norms (daily)

ATOD use

Analyses

- ATOD use scores
 - “Yes” responses coded as “1”
 - “No” responses coded as “0”
 - Flag variable created to determine workplace use
- Overall ATOD use was rather low for the sample
 - Only 32% used any ATOD over the study period
 - This limited the value of day-by-day comparisons
- Scores were collapsed across days and across weekends vs. week days

Results

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Sex	<i>mf</i>	<i>mf</i>														
2. Age	21.06	0.15	.18 *													
3. ATOD Use	<i>mf</i>	<i>mf</i>	-.05 *	.10												
4. Quantitative Workload	16.41	4.79	-.10	.00	-.09											
5. Pressure	5.06	0.34	-.17	.00	.11	.32 **										
6. Threat	4.92	0.35	-.16	-.02	.04	.21 *	.72 **									
7. Supervisor Contact	5.16	0.07	-.06	.00	-.10	.12	-.14	-.23 *								
8. Supervisor Ability	4.88	0.12	-.15 *	.07	-.19 *	.15	-.05	-.07	.28 **							
9. Supervisor Willingness	5.67	0.11	.02	.07	-.14	-.02	-.11	-.19	.22 **	.61 **						
10. Conventional ATOD Presence	0.28	0.03	-.19	-.07	.49 **	-.01	.27 **	.19 *	-.07	-.24 *	.01					
11. Physical ATOD Presence	0.18	0.31	-.06	-.08	.38 *	-.07	.10	.14	-.06	-.36 **	-.15	.69 **				
12. Rebelliousness	2.81	0.59	.18 *	.09	.03	-.11	.10	.11	-.11	-.39 **	-.16 *	.12	.20 *			
13. Impulsivity	3.07	0.61	.04	.05	-.18	.11	.07	.10	.01	-.20 *	-.11	-.11	-.02	.38 **		
14. Kick-Taking	3.43	0.72	.08	.11	-.11	.23 **	-.06	-.08	-.14	-.12	-.06	-.11	.03	.06	.36 **	

H1: Not Supported
 H2 & H3: Supported
 H4: Not Supported

Note: *N* = 185; * *p* < .05, ** *p* < .01; Female coded 1 = Female, 0 = Male; Values for ATOD Use and other dichotomous variables are Phi Correlation Coefficients; Values for one continuous and one dichotomous variables are Point-Biserial Correlation Coefficients.

Results: HI Weekend vs. Weekday

- HI not supported
- Weekend vs. weekday association with ATOD use
 - Weekend Pressure: $r = .18, p = .12$
 - Weekend Threat: $r = .07, p = .59$
 - Weekday Pressure: $r = -.07, p = .54$
 - Weekday Threat: $r = .04, p = .74$

Results: H2 & H3

Weekend vs. Weekday

- H2 and H3 supported
- H2: Weekend vs. weekday use
 - Weekday behavioral norms: $r = .51, p = .00$
 - Weekend behavioral norms: $r = .41, p = .00$
- H3: Weekend vs. weekday use
 - Weekday coworker use: $r = .39, p = .05$
 - Weekend coworker use: $r = .50, p = .00$

Discussion

- The present study tested hypothesized links between personality and work-related variables and ATOD among young adults
- Stress-ATOD use link partially supported by results
 - Those who reported that their work environments were stressful also reported more use among coworkers.
 - A relationship was found between stressful work environments and ATOD use, just not for participants themselves.

Discussion

- Strong evidence for the affects of behavioral norms on ATOD use
 - Participants who reported that ATOD was conversationally and physically present in their work environment were more likely to use themselves
 - Perceived supervisor ability decreased participant ATOD use both on and off the job
 - Findings consistent with Frone (2008) who found that behavioral norms can influence employee behavior when he or she is no longer at work

Limitations

- Sample
 - Convenience sample may not be representative of young workers in other settings/contexts
- Need to replicate with additional samples of young workers
 - ATOD use was much lower than Frone's (2003) population level estimates
- Attrition
 - 66% of participants dropped out after baseline survey
 - 40% completed each daily survey

Conclusion & Future Directions

- Provided a further examination of the relationships between workplace variables and young worker ATOD use that has been called for in previous literature. (Butler et al., 2010; Frone, 2003)
- Supervisor support and strict drug and alcohol norms at the supervisory level might decrease overall use.
- Overall low level of ATOD use among participants in this young adult sample raises question of whether ATOD use is the best focus – perhaps some other focal point would be better (e.g., intentions to use, perceived risk/benefit, etc.)

Selected References

- Bacharach, S. B., Bamberger, P. A., & Sonnenstuhl, W. J. (2002). Driven to drink: Managerial control, work-related risk factors, and employee problem drinking. *Academy of Management Journal*, 45(4), 637-658.
- Butler, A. B., Dodge, K. D., & Faurote, E. J. (2010). College student employment and drinking: A daily study of work stressors, alcohol expectancies, and alcohol consumption. *Journal of Occupational Health Psychology*, 15(3), 291-303.
- Cooper, M. L., Frone, M. R., Russell, M., & Mudar, P. (1995). Drinking to regulate positive and negative emotions: A motivational model of alcohol use. *Journal of Personality and Social Psychology*, 69, 990-1005.
- Frone, M. R. (2003). Predictors of overall and on-the-job substance use among young workers. *Journal of Occupational Health Psychology*, 8, 39-54.
- Frone, M. R. (2008). Are work stressors related to employee substance use? The importance of temporal context in assessments of alcohol and illicit drug use. *Journal of Applied Psychology*, 93, 199-206.
- Sayette, M. A. (1993). An appraisal-disruption model of alcohol's effects on stress responses in social drinkers. *Psychological Bulletin*, 114, 459-476.