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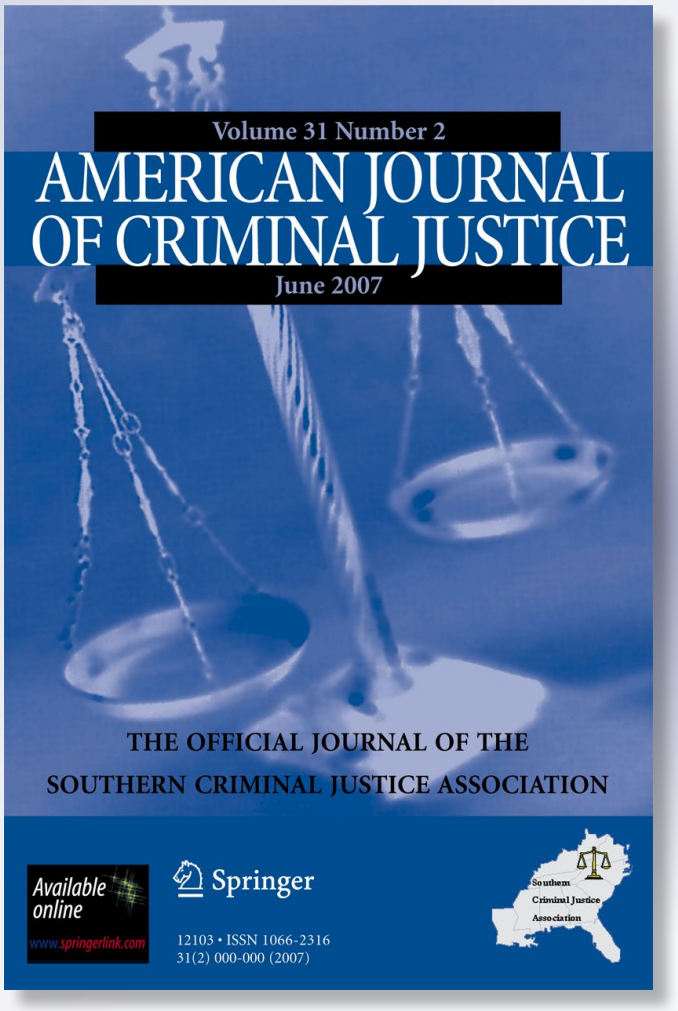
American Journal of Criminal Justice
The Journal of the Southern Criminal Justice Association

ISSN 1066-2316
Volume 36
Number 4

Am J Crim Just (2011) 36:344-356
DOI 10.1007/s12103-011-9121-7



Springer

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Police and Alcohol Use: A Descriptive Analysis and Associations with Stress Outcomes

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Received: 27 August 2010 / Accepted: 30 March 2011 /
Published online: 23 June 2011

Abstract Alcohol misuse is a significant problem in police work. This study describes alcohol use correlates and examines psychological outcomes of stress associated with the use and level of alcohol by police officers. Measures: (1) AUDIT-Alcohol Use Disorders Identification Test; (2) demographics; (3) Center for Epidemiological Studies Depression scale; (4) Impact of Events Scale (PTSD); and (5) life events scale. The mean AUDIT score was M=5.64 (low risk <8). Male officers had significantly higher scores in overall AUDIT total, hazardous alcohol use domain, and dependent symptoms domain (p=0.004, 0.002, 0.031, respectively). Women officers in the hazardous drinking range on the AUDIT were significantly younger than women officers in the lower AUDIT range (p=0.050). Males in the hazardous drinking range had significantly higher external life event scores than females (p=0.037), suggesting a need for increased attention to the spillover effect of police work.

Keywords Police · Alcohol use · Stress · Family spillover effect

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Introduction

Alcohol abuse is an important problem in law enforcement. A considerable amount of previous research has focused on police alcohol use as a consequence of demographics, job stress, and the police culture (Lindsay & Shelley, 2009). Certainly, demographics and lifestyle are important factors associated with alcohol use and we will examine them in the present study. Our second objective is to extend the concept of police "stress" as a factor related to alcohol use. Previous studies focused on factors in police work that we consider occupational "stressors" and not outcomes of stress (Violanti, Marshall & Howe, 1985; Beehr, Johnson & Nieva, 1995; Violanti, 2001; Kohan & O'Connor, 2002; Lindsay & Shelley, 2009). We will consider both police work stressors and stress outcomes associated with alcohol use in police work: (1) depressive symptoms; (2) posttraumatic stress symptoms; and (3) life event stress external to work.

Police Alcohol Use

According to Substance Abuse and Mental Health Services Administration (SAMHSA) data (Larson, Eyerman, Foster & Gfroerer, 2007), 8.3% of "protective service workers" in the United States reported heavy alcohol use in the past month, ranking this occupational group ninth of twenty-one occupations. A study by Davey, Obst, and Sheehan (2000) of a large sample of Australian police officers found that 30% of officers scored in the "at risk of harmful consumption" category on the World Health Organizations Alcohol Use Disorders Identification Test (AUDIT) while 3% scored in the 'alcohol dependant' category. At examination, male officers, officers 18–35 years of age, those divorced or separated, constables and operational personnel, and officers who have served between 4–10 years were the groups most likely to fall in these risk categories.

The police network has the same risk factors for alcohol abuse as other "hard-drinking" occupations – stress, peer pressure, isolation, young males, and a culture that approves alcohol use. Officers tend to drink together and reinforce their own values. It is not uncommon, for example, for police officers to gather at a local bar after a work shift to have a "few drinks." There is evidence that the social network, in particular, "drinking buddies" is very important when considering alcohol use. Longitudinal evidence exists that "drinking buddies" are related to heavy alcohol use as well as problem use (Homish & Leonard, 2008; Leonard & Homish, 2008).

Additionally, the police network is reluctant to report a fellow officer for alcohol related difficulties. Officers may go to great lengths to protect fellow officers in trouble (Kirschman, 1997). Davy et al. (2000) correlated alcohol consumption with frequent social interaction among police officers. Obst, Davey, and Sheehan (2001) found that risk of harm from alcohol increased for the police recruits as their training progressed, suggesting that the training process introduces recruits into a culture of alcohol consumption. Beehr et al. (1995) also attributed drinking behavior to the influence of the police subculture.

Lindsay and Shelley (2009) examined reasons why police officers drink in a study of 1,328 full time officers. Officers most at risk for drinking problems admitted that "fitting in" with the group was highest on their list of why they drank alcohol.

Violanti (2001) found that high stress police academy training led to maladaptive coping strategies among recruits, with the use of alcohol being a prominent strategy. Violanti (2004) found that the combined effect of alcohol use and post traumatic stress disorder (PTSD) led to a ten-fold greater risk of suicide ideation among police officers.

Posttraumatic Stress

PTSD is a unique set of symptoms brought about by exposure to a traumatic event that compromises the physical integrity or life of an individual and produces intense fear (American Psychiatric Association, Diagnostic and Statistical Manual of Mental Disorders- IV, Text, 2000). Many work related exposures of police officers are often characterized as traumatic compared to other occupations (Paton, Violanti, Burke, & Gerhke, 2009; Violanti, & Paton, 2006). Exposures perceived as disturbing or traumatic are generally ranked by police officers as the most stressful. Law enforcement officers are confronted daily with the reality of trauma. Faced with responding to fatal accidents, crime, child abuse, homicide, suicide, and rape, police officers are exposed to all the potential factors that can precipitate a traumatic response (Carlier, Lamberts, & Gersons, 2000). Posttraumatic stress symtomatology can produce many negative outcomes, including increased alcohol use. Previous research has identified an association between PTSD and alcoholism (Murphy & Wetzel, 1990). Epidemiologic Catchment Area (ECA) survey findings suggest that the rate of alcohol disorders significantly exceeds rates that would be expected by chance alone (Kessler, Borges, & Walters, 1999).

Depression

Depression is associated with several factors including interpersonal relationships. Interpersonal relationships are the relationship between individuals and the reactions and emotions of each individual expressed directly and discreetly to each other. Common interpersonal relationships include the family and the work environment (Gotlib & Hammen, 1992). Hartley, Violanti, Fekedulgen, Andrew, and Burchfiel (2007) examined the effects of both traumatic work and external life events on depression among police officers. Their results indicated that exposure to multiple life events is significantly associated with elevated depression scores in officers. Violanti, Charles, Hartley, Mnatsakanova, Andrew, Fekedulgen, et al. (2008) found that depressive symptoms among police officers were higher than in the general population: 12.5% among women and 6.2% among men, compared to 5.2% in the population at large.

Life Events

The psychological effects of life events have been well studied. Negative life events have often been associated with depressive episodes (Kendler, Kessler, Neale, Heath & Eaves, 1993) and anxiety and alcoholism (Kendler, Karkowski & Prescott, 1998). Kannady (1993) argued that the effects of the police workplace spill over into

personal life and the effects of personal life spill over to the workplace, affecting the officer's job performance. Burke (1993) found that more than 40% of the officers in their study reported taking things out on their families and friends. Stenmark, DePiano, Wackwitz, Cannon, and Walfish (1982) reported that spouses of police officers felt that their husband's job interfered with their children's acceptance within the community (Kirschman, 1997).

In sum, the present paper has two objectives: (1) provide a descriptive analysis of the demographic and lifestyle factors associated with alcohol use among police, and (2) focus on the association of alcohol use not only with police work stressors, but also with *outcomes* of personal stress experienced by officers, to include life events outside of police work. The latter objective is intended to extend present research concerning stress and police alcohol use.

Methods

Sample

This cross-sectional study involved 115 randomly selected police officers from a mid-sized urban police department of 934 officers. Women officers were over-sampled to increase representation. Data were collected at a university clinic site as part of a larger study on police health. Officers were informed of the purpose of the study, their responses were voluntary, and they were asked to read and sign informed consent forms. The study was approved by the University of New York at Buffalo Health Sciences Institutional Review Board. One hundred percent of the officers agreed to participate; however, of the 115 officers who did participate 105 had complete information available (no missing data). Officers with complete data were similar to officers who had incomplete data with respect to age, gender, education, and marital status. No specific inclusion criteria were indicated for the study, other than the participant was a sworn police officer and willing to participate in the study.

Measures

Audit

The Alcohol Use Disorders Identification Test (AUDIT) developed by the World Health Organization (WHO) has been found to be an appropriate and reliable measure of alcohol use across gender, age, and race (Saunders, Aasland, Babor, Fuente, & Grant, 1993; Steinbauer, Cantor, Holzer, & Volk, 1998; Volk, Steinbauer, Cantor, & Holzer, 1997), as well as an appropriate and reliable indicator of potentially damaging levels of consumption in the United States (Dawson, Grant, Stinson, & Zhou, 2005) and among law enforcement officers (Davey et al., 2000; Lindsay & Shelley, 2009). A within sample analysis resulted in a Chronbach alpha of 0.77.

Scores for each question on the AUDIT range from 0 to 4, with the first response for each question scoring 0 (never), the second scoring 1 (less than monthly), the third scoring 2 (monthly), the fourth scoring 3 (weekly), and the last response

scoring 4 (daily or almost daily). For questions 9 and 10, which only have 3 responses, the scoring is 0, 2 and 4 (from left to right). A score of 8 or more is associated with harmful or hazardous drinking. A score of 13 or more in women and 15 or more in men is likely to indicate alcohol dependence.

The 10 items in the AUDIT are also classified into three domains. The first domain is titled "*hazardous alcohol use"* (Q1-3) and measures the quantity and frequency of alcohol consumption. The second domain is titled "*dependence symptoms"* (Q4-6) and measures abnormal drinking behavior. The third domain is titles *"harmful alcohol use"* (Q7-10) and measures negative consequences related to alcohol use. A score of four or more for females and five or more for males in Domain 1 (range: 0–12) indicates risk of a hazardous level of drinking. A score of four or more in Domain 2 (range 0–12) indicates risk of psychological or physical dependence. A score of four or more in Domain 3 (range 0–16) indicates risk of significant life problems due to excessive alcohol consumption.

External Life Events

Officers were asked to complete a 41-item life events scale assessing types of stressful events encountered during the previous year, including events related to work, home and family, using a yes and no response format. This scale was slightly modified from the 1971 version of Paykel's Life Events Scale (Paykel, Prusoff, & Uhlenhuth, 1971). The life events score ranged from 0 to 16 for our sample.

Depressive Symptoms

The Center for Epidemiological Studies Depression scale (CES-D) scale is a 20-item test measuring symptoms of depression (e.g., restlessness, sadness, poor appetite). Respondents rate items on a 4-point scale according to how often the symptom occurred in the past 7 days: 0 (rarely or none of the time, less than 1 day), 1 (some or little of the time, 1–2 days), 2 (occasionally or a moderate amount of the time, 3–4 days), and 3 (most of all of the time, 5–7 days). Scores are calculated by summing the 20 items and can range from 0 to 60. The CES-D has been widely used in identifying symptoms of depression. Respondents with scores between 0–15 are unlikely to be clinically depressed, scores of 16–21 indicate mild to moderate depression, and scores of 22 or greater are associated with major depression (Radloff, 1977). A score of ≥16 has been reported as an indicator of clinical depression (McDowell & Newell, 1996). The CES-D score ranged from 0 to 38 for our sample.

Posttraumatic Stress Symptoms

The Impact of Events Scale (IES) was employed to assess PTSD symptoms in general and not in reference to a specific incident (Sundin &Horowitz, 2002). Seven of the items on the questionnaire measure intrusive symptoms (intrusive thoughts, nightmares, intrusive feelings and imagery), and the remaining eight items measure avoidance symptoms (numbing of responsiveness, avoidance of feelings, situations, ideas), and combination of these provide a total subjective score of traumatic stress

symptomatology. Respondents rate items on a 5-point scale, based on degree of distress within the past 7 days: 0 (not at all), 1 (a little bit), 2 (moderate), 3 (quite a bit), and 4 (extremely). The IES was completed by the participants during the clinical examination. The IES score ranged from 0 to 67 for our sample.

Analysis

Data were analyzed to determine significant statistical differences in AUDIT scores between male and female officers or for non-homogeneity in demographic, lifestyle, occupational, and psychosocial outcomes between AUDIT score cut-off values within gender. All data were analyzed to ensure inference test assumptions were met. Student's t-tests were used to look for differences between continuous variables. Fisher's exact tests were used to look for differences between categorical variables, as expected values for some cells were low. All data were analyzed using SAS v9.2 (SAS Institute, Cary, NC). All outcomes were considered significant at $\alpha<0.05$. With the fixed sample size of $n=105$ and an alpha level of 0.05, we had the ability to detect effect sizes of 0.30 at a power level greater than 0.80.

Results

Table 1 displays demographic information. The sample consisted mostly of male (61.9%), married (65.7%), and Caucasian (74.3%) officers. The mean age of the sample was 39.3±7.6 years and the mean duration of police service was 12.9± 9.0 years. There were significant differences between male and female officers in terms of shift work and years of service, with female officers more likely to work day shift and having fewer years of police service.

Table 2 presents AUDIT scores and related psychosocial factors in police work. The total sample mean AUDIT score was $M=5.64$ (lower risk <8), and male officers had a higher total mean AUDIT score than female officers (6.54 vs. 4.18; $p=0.004$). In the three listed AUDIT domains (hazardous alcohol use, dependence symptoms, and harmful use), the total sample was highest in hazardous alcohol use (4.23 vs. 0.27 vs. 1.14, respectively). Males had a significantly higher mean hazardous alcohol use score ($p=0.002$) and significantly higher dependence symptom score than women ($p=0.031$).

Table 3 provides a comparison of demographic characteristics for officers categorized in the hazardous versus lower AUDIT score range (≥8 vs. <8) stratified by gender. Age was significantly associated with AUDIT score category in women, with female officers in the hazardous category being nearly 5 years younger than those in the low category (39.0 vs. 34.1 years, respectively; $p=0.050$). Marital status was significantly associated with AUDIT score category in men, with officers in the hazardous category being more likely to be single or divorced than those in the lower AUDIT category (44.0% vs. 17.5%, respectively; $p=0.026$).

Table 4 displays police occupational and psychosocial variables by total AUDIT category score. Males in the hazardous drinking range had significantly higher external life event scores than men in the lower risk range (4.0 vs. 2.6, respectively;

Table 1 Descriptive characteristics of police officers

Characteristics	All officers (n=105)	Women (n=40)	Men (n=65)	P-value*
Education				
≤HS/GED	17 (16.2)	5 (12.5)	12 (18.5)	0.622
<4 yrs college	59 (56.2)	22 (55.0)	37 (56.9)	
≥4 yrs college	29 (27.6)	13 (32.5)	16 (24.6)	
Marital status				
Single/Divorced	36 (34.3)	18 (45.0)	18 (27.7)	0.091
Married	69 (65.7)	22 (55.0)	47 (72.3)	
Race				
White	78 (74.3)	30 (75.0)	48 (73.9)	0.061
Black	20 (19.0)	10 (25.0)	10 (15.4)	
Hispanic	7 (6.7)	0 (0)	7 (10.8)	
Shift work				
Day	47 (46.5)	26 (72.2)	21 (32.3)	<0.001
Afternoon	33 (32.7)	6 (16.7)	27 (41.5)	
Night	21 (20.8)	4 (11.1)	17 (26.2)	
Officer duty				
Patrol	66 (62.9)	29 (72.5)	37 (56.9)	0.146
Other	29 (37.1)	11 (27.5)	28 (43.1)	
Age (years)	39.3 (7.6)	38.2 (6.0)	40.0 (8.4)	0.202
Years of service	12.9 (9.0)	9.1 (6.2)	15.2 (9.6)	<0.001

Results are n (%) or mean (SD)

*p-value for the differences between women and men from the Fisher's exact test (categorical data) or Student's *t*-test (continuous data)

p=0.037). No significant associations were seen between years of service, officer duty, or psychosocial factors and AUDIT category score.

Table 5 displays hazardous drinking scores for all officers and by gender. There was a significant difference between men and women in how often officers would have a drink containing alcohol, with a more frequent consumption pattern evident

Table 2 Descriptive results of AUDIT Scores by gender

	All officers (n=105)	Women (n=40)	Men (n=65)	P-value*
AUDIT score (total)	5.64 (4.33)	4.18 (3.65)	6.54 (4.50)	0.004
AUDIT Domain scores				
Hazardous Alcohol Use	4.23 (2.84)	3.20 (2.36)	4.86 (2.94)	0.002
Dependence Symptoms	0.27 (0.63)	0.13 (0.33)	0.36 (0.74)	0.031
Harmful Alcohol Use	1.14 (1.68)	0.85 (1.56)	1.32 (1.74)	0.153

Results are means (SD)

*p-value for the differences between women and men are from the Student's *t*-test

Table 3 Demographic characteristics by AUDIT category stratified by gender

	Women				Men			
	Audit score category				Audit score category			
Characteristics	N	<8 (*n*=33)	≥8 (*n*=7)	P-value*	N	<8 (*n*=40)	≥8 (*n*=25)	P-value*
Education								
≥4 yrs college	5	5 (15.2)	0 (0.0)	0.617	12	7 (17.5)	5 (20.0)	0.781
≤HS/GED	22	17 (51.5)	5 (71.4)		37	24 (60.0)	13 (52.0)	
<4 yrs college	13	11 (33.3)	2 (28.6)		16	9 (22.5)	7 (28.0)	
Marital status								
Single/Divorced	18	16 (48.5)	2 (28.6)	0.427	18	7 (17.5)	11 (44.0)	0.026
Married	22	17 (51.5)	5 (71.4)		47	33 (82.5)	14 (56.0)	
Race								
White	30	24 (72.7)	6 (85.7)	0.656	48	27 (67.5)	21 (84.0)	0.132
Black	10	9 (27.3)	1 (14.3)		10	9 (22.5)	1 (4.0)	
Hispanic	0	0 (0.0)	0 (0.0)		7	4 (10.0)	3 (12.0)	
Age (years)	40	39.0 (5.9)	34.1 (5.1)	0.050	65	40.9 (7.8)	38.5 (9.2)	0.300

Results are n (%) or mean (SD)

*p-value for the differences between AUDIT score cut-off values are from the Fisher's exact test (categorical data) or Student's *t*-test (continuous data)

Table 4 Occupational and psychosocial variables by AUDIT categories stratified by gender

	Women				Men			
	Audit score category				Audit score category			
Characteristics	N	<8 (*n*=33)	≥8 (*n*=7)	P-value*	N	<8 (*n*=40)	≥8 (*n*=25)	P-value*
Shift work								
Day	26	22 (75.9)	4 (57.1)	0.417	21	16 (40.0)	5 (20.0)	0.186
Afternoon	6	4 (13.8)	2 (28.6)		27	16 (40.0)	11 (44.0)	
Night	4	3 (10.3)	1 (14.3)		17	8 (20.0)	9 (36.0)	
Officer duty								
Patrol	29	23 (69.7)	6 (85.7)	0.650	37	20 (50.0)	17 (68.0)	0.201
Other	11	10 (30.3)	1 (14.3)		28	20 (50.0)	8 (32.)	
Years of service	40	9.1 (6.3)	8.9 (6.1)	0.920	65	16.0 (9.4)	14.0 (10.0)	0.426
CES-D scores	38	8.8 (8.9)	6.5 (6.0)	0.452	61	7.3 (6.0)	6.6 (5.4)	0.622
IES scores	39	15.9 (17.9)	12.7 (13.4)	0.601	65	15.5 (16.3)	15.8 (16.3)	0.943
Life Events scores	40	2.5 (2.2)	2.1 (1.8)	0.614	65	2.6 (2.1)	4.0 (3.1)	0.037

Results are n (%) or mean (SD)

*p-value for the differences between AUDIT score cut-off values are from the Fisher's exact test (categorical data) or Student's *t*-test (continuous data)

in male officers (p=0.006). In addition, consumption of six or more alcoholic drinks on one occasion were reported more frequently in male than female officers (p=0.045).

Discussion

This study provided a descriptive analysis of alcohol use among police officers and potential internal and external personal outcomes of stressful police work exposure.

The mean AUDIT score was in the lower risk drinking range (M=5.64; low risk <8). However, the sample was highest in the AUDIT domain hazardous alcohol use category (hazardous alcohol use, dependence symptoms, harmful use: 4.23 vs. 0.27 vs. 1.14, respectively). Males were significantly higher in hazardous alcohol use (p=0.002) and significantly higher in alcohol dependence symptoms (p=0.031) than women.

The recommended lower risk drinking level set by WHO research on brief interventions is no more than 20 g of alcohol per day, 5 days a week (recommending two non-drinking days)(Saunders et al., 1993). In the present sample, 13.3% consumed four or more drinks a week, close to and perhaps exceeding the WHO recommended levels for lower risk drinking. According to the WHO (2001), the

Table 5 Hazardous drinking AUDIT domain scores stratified by gender

AUDIT domain item	All officers (n=105)	Women (n=40)	Men (n=65)	P-value*
How often do you have a drink containing alcohol?				
Never	8 (7.6)	3 (7.5)	5 (7.7)	0.006
Monthly or less	28 (26.7)	18 (45.0)	10 (15.4)	
2–4 times a month	30 (28.6)	7 (17.5)	23 (35.4)	
2–3 times a week	25 (23.8)	10 (25.0)	15 (23.1)	
4+ times a week	14 (13.3)	2 (5.0)	12 (18.5)	
How many drinks containing alcohol do you have on a typical day when you are drinking?				
1 or 2	38 (36.2)	18 (45.0)	20 (30.8)	0.134
3 or 4	36 (34.3)	16 (40.0)	20 (30.8)	
5 or 6	19 (18.1)	4 (10.0)	15 (23.1)	
7 to 9	11 (10.5)	2 (5.0)	9 (13.9)	
10 or more	1 (1.0)	0 (0.0)	1 (1.5)	
How often do you have six or more drinks on one occasion?				
Never	42 (40.0)	22 (55.0)	20 (30.8)	0.045
Less than monthly	31 (29.5)	12 (30.0)	19 (29.2)	
Monthly	14 (13.3)	2 (5.0)	12 (18.5)	
Weekly	17 (16.2)	4 (10.0)	13 (20.0)	
Daily or almost daily	1 (1.0)	0 (0.0)	1 (1.5)	

*p-values are from Fisher's Exact Test between genders

typical drink in the United States consists of 14 g of pure alcohol and no more than 20 g per day should be consumed. 63.9% of our sample exceeded the daily recommendations of the WHO. 11.5% drank seven or more drinks on a typical day, amounting to at least 98 g, close to exceeding the recommended level for the entire week. 17.2% of the sample drank six or more drinks on one occasion, considered hazardous drinking, on a weekly or daily basis. This rate was nearly twice as high (17.2% police vs. 8.8% U.S. sample) in comparison to a national workplace sample (SAMHSA, Larson et al., 2007).

In female officers, there was a significant difference (p=0.050) in mean age between low and hazardous risk drinking (low <8; hazardous ≥8), with women in the hazardous drinking range being about 5 years younger than women in the low risk range. Younger female officers are more likely than males to experience social isolation and conflict with superiors, colleagues, and subordinates (Dormann & Zapf, 2002; Mercer & Khavari, 1990). Young female officers may attempt to emulate the male police role to be accepted, including drinking (Mayberry, 2003).

According to Davey et al. (2000), this trend may be attributable to the male dominated work environment which has been shown to impact the drinking levels of both male and female employees. Pendergrass and Ostrove (1986) noted that female officers drank more alcohol than women in the general population, thereby suggesting that female officers were influenced by the mores of their more numerous male colleagues.

Life events occurring outside of police work, including divorce or separation, was associated with an increased likelihood of hazardous drinking behavior, especially for male officers. This result is significant in that it expands work stress and alcohol associations that are generally focused on stressors within the work role. Outside influences such as life stress should be incorporated into police work and alcohol research to underscore the importance of distinguishing between work-to-family and family-to-work stress.

This finding also suggests a need for increased attention to the spillover effects of police. Kannady (1993) argued that the effects of the workplace spill over into personal life and the effects of personal life spill over to the workplace, affecting the police officer's job performance. Burke (1993) found that more than 40% of the officers in their study reported taking things out on their families and friends. They also found that officers took pressures of their work home, thus affecting the officer's family. Stenmark, DePiano, Wackwitz, Cannon, and Walfish (1982) reported that spouses of police officers felt that their spouses job interfered with their acceptance in the community. Patterson & Violanti (2001) found that the majority of police officers, 62%, reported that spillover occurred from the workplace and affected their home life, while 40% perceived that spillover from their home life affected the workplace. Police officers with spouses at home reported the greatest degree of pressure spilling over from the workplace into their home life (Patterson, 2001).

This study was limited by sample size and utilized cross-sectional data, therefore causal relationships cannot be determined. We cannot determine the direction of alcohol use as related to personal stress or life events. It is possible that hazardous alcohol use was present prior to life events or to occupational stressors. Strengths of this study include the use of the AUDIT, standardized measures, and a high response rate by officers.

In summation, results suggested that (1) in general, males were more at risk for higher mean levels of hazardous alcohol use; (2) younger female officers were at higher risk for hazardous drinking than older female officers; and (3) police work related stress factors (i.e. PTSD, depression, shift work) were not significantly associated with drinking behavior among officers. External life events, including divorce or separation, were associated with increases in hazardous drinking behavior in male officers. These results suggest a need for increased attention to the spillover effect of police work into personal and family life. Additionally, there is a paucity of research on female police officers and a need to further examine gender differences in police work. Police officers are a unique occupational group given their frequent exposure to various forms of acute and chronic stress. Efforts to understand these sources of stress, as well as harmful outcomes associated with these sources, could be beneficial in developing strategies for prevention. Future work will be completed with larger samples using a longitudinal study design.

Grant Sponsor: The Centers for Disease Control, National Institute for Occupational Safety and Health.

Grant Number: 1R03OH003772-01.

Disclaimer The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

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