

Military Experience and Levels of Stress and Coping in Police Officers

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Abstract: Policing is a stressful occupation and working in this environment may make officers more vulnerable to adverse psychological and physiological outcomes. The impact of prior military experience on work stress and coping strategies has not been well-studied in police. The purpose of this cross-sectional study was to examine differences in levels of police-related stress and coping in officers with and without military experience. Participants were 452 police officers from the Buffalo Cardio-metabolic Occupational Police Stress Study. Officers were categorized into three groups: non-military ($n=334$), non-combat military ($n=84$), and military with combat ($n=34$). Age, sex and education adjusted levels of psychological stress and coping measures were compared across the three groups using ANCOVA. P -values were derived from post-hoc comparisons. Non-military police officers had significantly higher stress levels for physically and psychologically threatening events compared to non-combat officers ($p=0.019$). Non-military officers also reported experiencing significantly more organizational stressors and physically and psychologically threatening events in the past year than combat and non-combat officers ($p<0.05$). Combat officers had significantly lower levels of planning and active coping styles compared to non-combat officers ($p=0.026$, $p=0.032$, respectively) and non-military officers ($p=0.010$, $p=0.005$, respectively). In summary, police officers without military experience reported experiencing more organizational and life-threatening events than officers who served in the military. Yet combat officers were less likely to utilize positive coping than non-combat and non-military officers. These findings demonstrate the potential positive influence of military experience on police stress. Further research is needed as military veterans return to police work. [International Journal of Emergency Mental Health and Human Resilience, 2013, 15(4), pp. 229-240].

Key words: military, police officers, work stress, coping

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Introduction

In general, police departments operate within a military or quasi-military structure, including chain of command, rank structure and hierarchy of authority (Uchida, 1997; Cooper, 1982). Police training regiments are usually rigorous and highly stressful under the auspices that preparation for the field is going to be similar to war (Wright, Dai, & Greenback, 2011). Given the similarities, police officers with military service should be somewhat more familiar with and adapt easier to police work than those who do not have such service. Andrisani (1991) suggests while training for war likely cannot be carried over into policing, the military experience provides useful skills such as self-confidence, interpersonal relationships, and discretion.

Policing is widely recognized as a stressful occupation and working in this environment may make officers more vulnerable to adverse psychological and physiological outcomes. Police stressors range from routine organizational events, such as job conflicts and excessive paperwork, to inherent and potentially life-threatening events including high speed chases and making arrests while alone. Prior studies of police officers are inconsistent regarding the type of work events which are most stressful. Taylor & Bennel (2006) found that police officers ranked organizational stressors as more stressful than inherent police stressors. Conversely, Violanti and Aron (1994) and Hartley et al. (2011) found that officers rank the inherent stressors as more stressful than organizational stressors. The role of prior military experience as a help or hindrance to officers in dealing with these various types of stressors has not been thoroughly explored (Patterson, 2002).

Most studies on police with prior military service tend to find no differences in perceptions of stress (Stacey, 1991; Bumgarner, 1993; Patterson, 2002). Wright, Dai and Greenback (2011), for example, found that prior military experience was not a significant predictor of successful completion of the police academy after controlling for other factors. Patterson (2002) concluded that there were no significant differences in terms of perceived stress between police officers with more years of military experience and officers that did not have such experience. Although these studies mention stress as an outcome variable, the specific types of stressors were not examined. Additionally, the descriptions of military service do not specify whether or not the officer was involved in combat. Examination of other factors such as the type of psychological distress and coping strategies is

also rare. The present study is based on the hypothesis that prior military experience may be protective against stress and psychological distress in police work. Differences in reported police stress, psychological distress, posttraumatic stress, and coping across categories of military experience (i.e. no experience, combat and non-combat) were examined in a cross-sectional study of police officers.

METHODS

Study Population

Participants were police officers from the Buffalo Cardio-metabolic Occupational Police Stress (BCOPS) Study. The BCOPS Study was a cross-sectional study (2004-2009) examining the association between psychological stress and subclinical cardiovascular disease among police officers. Data were collected at the Center for Health Research, School of Public Health and Health Professions, University at Buffalo, Buffalo, NY. Inclusion criteria were being a sworn police officer and willingness to participate in the study. Women officers pregnant at the time of examination were excluded ($n=2$). All participants provided informed consent and all phases, testing, and reports of the study were approved by the State University of New York at Buffalo Internal Review Board and the National Institute for Occupational Safety and Health Human Subjects Review Board. Data were collected from 464 officers. Of these, 12 did not report whether they had prior military experience and were excluded from the study leaving 452 as a final sample. Additionally, officers with missing data for a given measure were excluded from analysis for that measure. Specifically, retired officers and new recruits with less than one year experience ($n=74$) were excluded from the police-specific stress measure (i.e. Spielberger Police Stress Survey).

Measures

Police-specific stress was measured using the 66-item Spielberger Police Stress Survey (Spielberger, Westberry, Grier & Greenfield, 1981). Items are related to three categories: organizational and administrative pressure, physical and psychological danger, and lack of support. Officers assigned a 'stress rating' to each event, this is how stressful the event would be if experienced on a scale from 0 (not stressful) to 100 (most stressful). Officers reported the number of times each event occurred in the past month and year. Stress indices were the product of the stress rating and the frequency.

Coping was measured using the 28-item Brief COPE scale (Carver, 1997). The Brief COPE is a shortened version of the COPE and has been shown to have acceptable internal reliability (Carver, Scheier & Weintraub, 1989; Carver, 1997). The Brief COPE measures dispositional coping and consists of 14 coping aspects (2 questions each): planning, positive reframing, acceptance, active coping, instrumental support, emotional support, self-distraction, venting, self-blame, denial, behavioral disengagement, substance use, humor and religion. Responses were provided on a 4-point scale ranging from 0 (I have not done this at all) to 3 (I have done this a lot) when coping with stressful situations. The mean for each coping style is calculated; higher scores indicate greater use of the coping style.

Perceived social support was measured using the Social Provisions Scale (SPS) (Cutrona & Russell, 1987). The scale consists of 24 items with four items for each of six social provisions: guidance, reliable alliance, attachment, social integration, reassurance of worth and opportunity for nurturance. Respondents are asked to consider their current relationships with family, friends, co-workers and the community. Four responses are possible ranging from 1 (strongly disagree) to 4 (strongly agree). A sum for each of the six provisions is calculated. The six provisions are highly correlated; therefore, it is appropriate to sum them to obtain a global perceived social support score (Cutrona & Russell, 1987; Wills & Shinar, 2000).

The Dispositional Resilience Scale was used to measure hardiness (Bartone, 2007). The 15-item scale measures three dimensions: control, believing one is capable of managing potentially stressful events; commitment, ability to find meaning in potentially stressful events; and challenge, ability to interpret potentially stressful events as opportunities. Participants assigned a level based on a 4-point scale [range from 0 (not at all true) to 3 (completely true)] to each of the 15 statements. The overall hardiness score is obtained by summing the 15 items with higher scores indicating more resilience.

Perceived stress was measured using the 14-item Perceived Stress Scale (Cohen, Kamarck & Mermelstine, 1983). The scale assesses global not event-specific stress levels and measures the degree in which situations are appraised as stressful. For each item, participants assigned a rating on a 5-point scale from 0 (never) to 4 (very often) as to how often the event occurred in the past month. Scores for the 14 items are summed to create a global stress score with higher scores

indicating greater perceived stress.

Post-traumatic stress disorder (PTSD) symptomatology was measured with two scales: the PTSD Checklist-Civilian Version (PCL-C) and the Impact of Event Scale – Revised (IES-R). The PCL-C was developed by the U.S. Department of Veterans Affairs, National Center for PTSD and consists of 17 questions which correspond to the three DSM-IV symptom clusters of intrusion, avoidance and hyperarousal (Weathers, Litz, Herman, Huska & Keane, 1993). Officers rated the severity of each symptom in the past month using a 5-point Likert scale ranging from 1 (not at all) to 5 (extremely). The overall PCL-C score is the sum of the 17 items. An overall symptom severity score (range = 17 - 85) and scores for each symptom cluster can be calculated. A diagnosis of PTSD is indicated if the total score exceeds a given threshold, which varies depending on the setting (e.g. the Department of Defense uses a cut point between 30-35 for the general population) (Weathers, 1993). A different approach utilizes the symptom clusters to diagnose full or partial PTSD. Full PTSD is met when a rating of three or higher is present for one or more symptoms of the re-experiencing cluster, three or more symptoms of the avoidance cluster, and two or more symptoms of the hyperarousal cluster. Partial PTSD is indicated if two out of three symptoms are present (Maia, 2007). The overall score and cluster analyses were used in the present study.

The IES-R is a 22-item measure of subjective impact or symptom related to a traumatic event (Weiss, 2004). Like the PCL-C, the IES-R has three subscales, intrusion, avoidance and hyperarousal, which correspond to the DSM-IV clusters. Officers indicated how much they were bothered by each item during the past seven days using a 5-point response ranging from 0 (not at all) to 4 (extremely). The subscales are presented as the mean of the appropriate items; the overall IES-R score is the sum of the 22 items.

Peritrauma was measured using the Peritraumatic Dissociative Experiences (PDE) Questionnaire (Marmar, Weiss & Metzler, 1998). The 10-item survey measures symptoms of dissociation during and immediately after a recent traumatic event using a 5-point scale ranging from 1 (not at all true) to 5 (extremely true). Higher scores on the PDE indicate greater peritrauma. The questionnaire has been found to have high internal consistency in a sample of police officers (Brunet et al., 2001).

Anxiety symptoms were measured using the 21-item Beck Anxiety Inventory (McDowell, 2006a). The inventory

assesses somatic symptoms of anxiety and panic cognitions but not depression. Using a 4-point scale [range: 0 (not at all) to 3 (severely, I could barely stand it)], officers indicated how much each symptom bothered them in the past seven days. A summary score is obtained by summing the 21 items; higher scores indicate more anxiety symptoms.

Feelings of hopelessness were assessed with the Beck Hopelessness Scale (Beck, Weissman, Lester & Trexler, 1974). The scale measures feelings of pessimism about the future, loss of motivation and expectations in the past week using 20 true/false statements. Nine statements are keyed false and 11 are keyed true. For each statement, a score of 0 or 1 is assigned and a total hopelessness score is summed with higher scores indicating more hopelessness. The scale was found to have good internal consistency in non-clinical samples (Steed, 2001).

Depressive symptoms are measured using the Center for Epidemiologic Studies – Depression (CES-D) Scale (Radloff, 1977). The CES-D is a 20-item scale designed to assess depressive symptoms in the general population. For each item, officers indicated how often each symptom occurred in the past seven days: ‘0 - rarely or none of the time, less than 1 day’, to ‘3 = most or all of the time, 5-7 days’. The CES-D correlates well with other depression measures and across various populations. Scores of 16 and greater have been reported as an indicator of clinical depression (McDowell, 2006b).

Statistical Analyses

Descriptive statistics were used to characterize the study population. Potential confounders (age, sex, and education) were selected based on the information in the literature and/or their associations with military status. Officers were categorized into three groups: combat, non-combat and non-military. Mean levels of psychosocial variables were examined across these military groups using analysis of variance (ANOVA) and covariance (ANCOVA). P-values from pairwise comparisons were reported. All analyses were performed using SAS version 9.2 (SAS Institute, Cary, NC).

RESULTS

About one-quarter of officers had prior military experience: 34 or 28.8% of those had been in combat and 71.2% had been in the military but not directly in a war conflict (Table

1). Officers without military experience were significantly younger than those with combat and non-combat experience, were more likely to be female and have fewer years of police service. Those with combat experience reported significantly less alcoholic beverage consumption than others. Of those with combat experience, 41.2% were in the Persian Gulf War, 23.5% Vietnam War, 20.6% in the Iraq War, and the remaining 14.7% in other war theaters such as Korea and Operation Noble Eagle.

Police-specific stressors were compared by military experience (Table 2). These values were adjusted for age, sex and education. In general, officers without military experience ($n = 294$) rated the police-specific events as more stressful and reported experiencing more events than those with military experience, including combat ($n = 22$) and non-combat ($n = 62$). Non-military officers rated physically and psychologically threatening events significantly more stressful than non-combat officers (1115.6 vs. 923.7; p -value = 0.019). Non-military officers reported experiencing significantly more organizational stressors in the past month than combat officers (43.0 vs. 29.6; p -value = 0.041). Non-military officers also reported more physical and psychologically threatening events in the past month than both combat (38.4 vs. 27.5; p -value = 0.036) and non-combat (38.4 vs. 31.0; p -value = 0.032) officers. Similarly, non-military officers reported more organizational and physically and psychologically threatening events than combat and non-combat officers (p -value < 0.05). The stress index (product of the stress rating and the frequency) for physically and psychologically threatening events was significantly higher for non-military officers compared to combat (7506.1 vs. 4629.5; p -value = 0.022) and non-combat (7506.1 vs. 5833.4; p -value = 0.041) officers.

Select psychologically “protective” factors, including types of coping, levels of social support and hardiness, were compared by military experience (Table 3). Combat officers had significantly lower levels of planning compared to non-combat (3.56 vs. 4.16; p -value = 0.026) and non-military (3.56 vs. 4.18; p -value = 0.010) officers. The same differences were found for active coping: combat officers (3.77) were significantly lower than non-combat (4.32; p -value = 0.032) and non-military (4.41; p -value = 0.005) officers. No differences were found for support seeking coping skills. Non-military officers had significantly higher scores for venting (2.68 vs. 2.31; p -value = 0.034) and humor (3.16 vs. 2.60; p -value = 0.017) than non-combat officers. No differences were found for social support or hardiness levels.

Table 1.
Unadjusted demographic and lifestyle characteristics by military experience.

Characteristics	Combat N = 34		Non-Combat N = 84		Non-Military N = 334		p-value*
	N	Mean (SD) or %	N	Mean (SD) or %	N	Mean (SD) or %	
Age, years	34	45.2 (11.7)	84	46.9 (10.1)	334	40.8 (7.2)	<0.0001
Gender, %							
Male	31	9.1	73	21.5	235	69.3	<0.0001
Female	3	2.7	11	9.7	99	87.6	
Race/Ethnicity, %							
Caucasian and Hispanic	26	7.3	62	17.3	270	75.4	0.23
African American	7	8.0	22	25.0	59	67.1	
Education, %							
High School, <4 yrs College	22	7.4	58	19.5	217	73.1	0.79
College 4+ years	12	7.8	26	16.9	116	75.3	
Marital Status, %							
Single	0	0.0	9	10.8	45	13.5	0.09
Married	28	82.4	60	72.3	248	74.3	
Divorced	6	17.6	14	16.9	41	12.3	
Years of Service, years	34	17.1 (9.9)	84	20.1 (9.6)	334	14.2 (7.4)	<0.0001
Rank, %							
Police Officer	20	6.6	48	16.0	233	77.4	0.92
All Higher Ranks	7	6.5	19	17.6	82	75.9	
Shift Work, %							
Day	11	36.7	23	28.7	106	33.4	0.36
Afternoon	11	36.7	43	53.8	134	42.3	
Night	8	26.6	14	17.5	77	24.3	
Second Job, %	10	32.3	34	41.1	104	31.5	0.26
Smoking, %							
Current or Former	16	8.6	39	20.9	123	70.6	0.44
Never	18	6.9	45	17.2	199	76.0	
Alcohol, drinks/week	34	2.1 (2.7)	81	7.1 (11.7)	327	5.6 (9.3)	0.038
Physical Activity, METS/week	34	279.4 (35.8)	83	278.9 (41.0)	326	284.5 (47.0)	0.55
Sleep, hours/night	32	6.1 (1.3)	81	6.2 (1.3)	324	6.1 (1.1)	0.77
War Conflict, %							
Gulf War	14	41.2					
Vietnam War	8	23.5					
Iraq War	7	20.6					
Other, Unknown	5	14.7					

*P-values are from Chi-square and Fisher's exact test.

Adjusted levels of psychological distress were compared by military experience (Table 4). In general, levels of perceived stress, anxiety, hopelessness and peritrauma were similar across the three groups. Scores for both PTSD symptomatology measures and depressive symptomatology did not differ significantly by military experience.

DISCUSSION

In this study, we assessed differences in police stressors and psychological distress symptoms among a sample of police officers with and without prior military experience. To our knowledge few prior studies have examined the

Table 2.
Adjusted* Spielberger Police Stress Survey scores by military experience.

Spielberger Police Stress Survey	Combat N = 22	Non-Combat N = 62	Non-Military N = 294
Stress Rating			
Organizational	713.7 (96.6)	728.6 (58.7)	816.1 (26.5)
Physical/Psychological Danger	962.3 (73.6)	923.7 (73.6)+	1115.6 (33.2)
Lack of Support	450.3 (63.8)	434.3 (38.8)	504.7 (17.5)
Frequency in Past Month			
Organizational	29.6 (6.3)^	35.1 (3.8)	43.0 (1.7)
Physical/Psychological Danger	27.5 (5.1)^	31.0 (3.1)+	38.4 (1.4)
Lack of Support	15.0 (3.0)	15.3 (1.8)	17.9 (0.8)
Frequency in Past Year			
Organizational	111.4 (20.8)^	142.7 (12.7)+	170.8 (5.7)
Physical/Psychological Danger	103.9 (17.8)^	126.4 (10.8)+	156.3 (4.9)
Lack of Support	52.9 (10.3)	59.2 (6.2)	68.5 (2.8)
Stress Indices for Past Month			
Organizational	1476.3 (400.2)	1777.3 (243.3)	2031.3 (109.9)
Physical/Psychological Danger	1217.1 (332.9)	1415.8 (202.4)	1823.9 (91.4)
Lack of Support	785.3 (232.3)	857.9 (141.2)	1015.6 (63.8)
Stress Indices for Past Year			
Organizational	5470.0 (1404.7)	7040.8 (853.9)	8000.1 (385.7)
Physical/Psychological Danger	4629.5 (1207.3)^	5833.4 (733.9)+	7506.1 (331.5)
Lack of Support	2584.9 (761.8)	3258.4 (463.1)	3775.9 (209.2)

* Adjusted for age, sex and education.

^ Scores for Combat are significantly different from Non-Military, p-value < 0.05.

+ Scores for Non-Combat are significantly different from Non-Military, p-value < 0.05.

influence of military experience on stress levels in police officers and our study may be the first in recent years. Over one-quarter of our study population (26.1%) reported having served in the U.S. military in the past: 34 officers (7.5%) were directly involved in a war conflict (i.e. combat) and 84 officers (18.6%) not in a war conflict (i.e. non-combat). The majority of combat experienced officers served in more recent war conflicts (Gulf War = 41.2%; Iraq War = 20.6), although 23.5% served in the Vietnam War.

In general, officers without military experience rated police-specific events as more stressful and reported experiencing more events than those with military experience, including those with and without combat experience. Specifically, events that involve physical and psychological

threats were reported to be significantly more stressful to non-military officers compared to non-combat officers. The difference was also noticeable when comparing non-military to combat officers, although it was not statistically significant. Non-military officers also reported experiencing physically and psychologically threatening events more frequently than military officers, both combat and non-combat.

Prior studies that evaluated the impact of military experience on stress in policing are limited, conflicting and do not separate combat and non-combat officers. Patterson (2002) found no significant differences in stress related to field work events (i.e. events encountered while working in the community) between officers with and without military experience. However, Ivie and Garland (2011) compared

Table 3.
Adjusted* protective psychological factors by military experience.

Characteristics	Combat		Non-Combat		Non-Military	
	N	Mean (SD)	N	Mean (SD)	N	Mean (SD)
Coping (Brief Cope)						
Active/Cognitive Restructuring	31	3.45 (0.17) [^]	72	3.85 (0.12)	302	3.98 (0.06)
Planning	31	3.56 (0.23)** [^]	72	4.16 (0.15)	303	4.18 (0.07)
Positive Reframing	31	2.84 (0.25)	73	3.22 (0.17)	303	3.33 (0.08)
Acceptance	31	3.63 (0.23)	73	3.66 (0.16)	304	3.99 (0.07)
Active Coping	31	3.77 (0.21)** [^]	73	4.32 (0.14)	302	4.41 (0.07)
Support Seeking	31	3.23 (0.24)	73	3.38 (0.16)	303	3.45 (0.08)
Instrumental Support	31	3.07 (0.25)	73	3.19 (0.17)	303	3.35 (0.08)
Emotional Support	31	3.39 (0.26)	73	3.57 (0.18)	303	3.54 (0.08)
Passive/Avoidance	31	1.53 (0.14)	73	1.62 (0.10)	298	1.72 (0.05)
Self-Distracton	31	2.68 (0.24)	73	2.89 (0.16)	303	3.09 (0.08)
Venting	31	2.49 (0.23)	73	2.31 (0.15)+	302	2.68 (0.07)
Self-Blame	31	2.01 (0.25)	73	2.18 (0.17)	302	2.20 (0.08)
Denial	31	0.76 (0.19)	73	0.95 (0.13)	303	0.78 (0.06)
Behavioral Disengagement	31	0.49 (0.16)	73	0.43 (0.11)	301	0.60 (0.05)
Substance Use	31	0.75 (0.27)	73	1.00 (0.18)	302	0.93 (0.09)
Humor	31	2.72 (0.31)	73	2.60 (0.21)+	303	3.16 (0.10)
Religion	31	2.91 (0.36)	73	2.65 (0.24)	303	2.67 (0.12)
Social Support (Social Provisions Scale)	32	82.7 (1.6)	77	82.9 (1.1)	322	83.2 (0.5)
Hardiness (Dispositional Resilience Scale)						
Challenge	32	7.9 (0.5)	82	8.3 (0.3)	325	8.1 (0.1)
Commitment	33	10.2 (0.4)	82	10.1 (0.2)	325	10.2 (0.1)
Control	33	9.8 (0.4)	83	9.7 (0.2)	326	9.7 (0.1)

* Adjusted for age, sex and education.

** Scores for Combat significantly different from Non-Combat, p-value < 0.05.

[^] Scores for Combat significantly different from Non-Military, p-value < 0.05.

+ Scores for Non-Combat significantly different from Non-Military, p-value < 0.05.

stress and burnout levels among 231 officers with military experience and 369 officers without military experience. Similar to the current study findings, Ivie and Garland found that exposure to traumatic work events affected work stress levels for those officers without military experience, but did not find an association in those with prior military experience.

While combat during war is not the same as policing (Andrisani, 1991), such training teaches discipline and survival under dangerous and unpredictable circumstances involving life threatening incidents which also occur in police work. Ivie and Garland (2011) suggest that military experience may provide emotional resilience to police offi-

cers. In essence, military training may help the officer adapt to possible danger at work, thereby raising the threshold of stress. Further, Hodgins, Creamer and Bell (2001) propose that multiple trauma exposures may provide an inoculating effect, which protects the individual from subsequent traumatic stress reactions. These results are consistent with past research showing that preparation to deal with stress improves the stress response. Arnetz, Nevedal, Lumley, Backman and Lublin (2008) found that rookie police officers who participated in a police-specific training program had better police performance during a field simulation, and improved mental and physical health and adjustment over

Table 4.
Adjusted* psychological distress by military experience.

<i>Characteristics</i>	Combat		Non-Combat		Non-Military	
	N	Mean (SD)	N	Mean (SD)	N	Mean (SD)
Perceived Stress	32	19.7 (1.4)	80	19.9 (0.9)	330	20.1 (0.4)
Anxiety (Beck)	31	6.4 (1.3)	80	6.2 (0.8)	327	6.3 (0.4)
Hopelessness (Beck)	32	11.4 (0.2)	82	11.7 (0.1)	326	11.6 (0.1)
Peritraumatic Dissociative Experience	28	13.8 (1.0)	61	13.2 (0.7)	234	14.2 (0.3)
Post-Traumatic Stress Symptoms						
PTSD Checklist-Civilian						
Total Score	30	25.6 (1.7)	70	25.8 (1.1)	301	26.3 (0.5)
Partial PTSD**	--	32.0 (3.1)	--	34.3 (2.4)	34	35.5 (0.7)
Full PTSD**	--	46.7 (6.9)	--	57.9 (4.4)	19	49.7 (1.9)
Impact of Event Scale-Revised						
Total	31	12.5 (2.3)	78	12.2 (1.5)	324	11.8 (0.7)
Intrusive	32	0.58 (0.12)	82	0.60 (0.08)	328	0.58 (0.04)
Avoidance	32	0.63 (0.12)	81	0.59 (0.08)	328	0.59 (0.04)
Hyperarousal	33	0.43 (0.09)	81	0.49 (0.06)	326	0.40 (0.03)
Depressive Symptoms (CES-D)						
Mean	33	7.7 (1.2)	84	7.7 (0.8)	332	7.7 (0.4)
≥16**	--	23.1 (3.5)	--	25.9 (2.6)	43	22.7 (0.9)

Note: PTSD – Post-traumatic stress disorder, CES-D – Center for Epidemiologic Studies-Depression Scale.

* Adjusted for age, sex and education.

** The cell sizes for combat and non-combat officers for partial and full PTSD and CES-D score ≥16 are too small to report.

two years of police work. Further, such preparation could increase resilience including adaptive responses during and after exposure by allowing officers frequent practice of both exposure and skills (Arnetz, et al. 2008). While military service is not a specific type of formal intervention in and of itself, it provides future officers with the necessary tools for dealing with police work, i.e. discipline, dealing with danger, unpredictability while on the job, and administrative challenges. Thus previous military training in officers may, in effect inoculate them against stress.

Non-military officers also reported experiencing more organizational stressors than non-combat officers and

significantly more organizational stressors than combat officers. Organizational stressors include organizational inefficiency, inadequate salaries, public criticism and excessive paperwork. The military model has been integrated into the organizational design of many police agencies including standardized uniforms, roll call and a centralized command structure (Ivie & Garland, 2011). Thus, officers with prior military experience may be more familiar with and accepting of the police organizational structure and stressors associated with that model (Uchida, 1997; Cooper, Davidson & Robinson, 1982). Further, in our study, military officers had significantly more years of police service than those without

military experience, thus the combination of military experience and more police service could contribute to reduced organizational stressors as these individuals have had more time to adapt and acquiesce to the organizational structure.

In general, other measures of psychological distress were similar across military and non-military officers including general perceived stress, hopelessness and anxiety. Scores for both PTSD symptomatology measures and depressive symptomatology did not differ by military experience. This is an interesting finding as research indicates that individuals with prior traumatic event exposure, as would be assumed to have occurred for combat officers would be at an increased risk for symptoms of depression, PTSD, or both (Marmar et al. 2006). However, our results indicate that officers with military experience, combat or otherwise, were not at an increased risk for depression or PTSD compared to officers without military experience. This null finding may have occurred due to the high number of years of experience of police work (non-military = 14.2 years, non-combat = 20.1 years, combat = 17.1 years). All the officers have similar trauma exposure, negating any effect that might otherwise be seen. Research in other police populations would be of interest to determine if this is unique to the BCOPS officers or is also true of other officers with and without military training in general.

In terms of coping measures, combat officers in general reported less use of coping styles than non-combat and non-military officers. Specifically, combat involved officers had significantly lower levels of planning compared to non-combat and non-military officers. Similar differences were found for active coping: combat officers were significantly lower than non-combat and non-military officers. Planning involves developing a plan to confront the stressor, and active coping refers to taking action or exerting efforts to remove or circumvent the stressor (Carver, 1997). This was an unexpected finding, as combat exposure is believed to put into action the training learned in military basic training – that of taking action to circumvent and effectively confront the enemy. It may also be that police with military training, due to their experience, are confident that they can handle potential issues and no longer feel the need to plan to confront a stressor. In contrast, an officer with less experience may still need to actively cope prior to confronting a stressor to feel confident that they can successfully deal with the situation.

Venting, the expression of unpleasant or negative feelings, and humor, making jokes about the situation (Carver, 1997), were used by non-military officers more often. This difference was only significant when compared to non-combat officers. The use of venting one's feelings and making jokes about the situation may be viewed negatively in the military. Therefore, it may not be surprising that these coping strategies are less utilized among those with prior experience in the military.

Although we were able to examine differences by three categories of military experience, the current study would be improved with a larger sample of officers who have both combat and non-combat military experience. It may also be interesting to explore differences based on the number of years of military experience, as an indicator of cumulative exposure, and it would be important to know whether those in the military had experienced psychological distress prior to policing. Strengths of this study include the ability to examine differences not only by prior military experience but also by prior combat and non-combat military experience. Prior studies, while few, have focused on differences between officers with and without any military experience, yet the types and frequency of stressors among combat officers can be different from those who were not directly involved in a war conflict. In addition to general perceived stress, the current study examined differences in three categories of police-specific types of stressors. This is important because significant differences were found in the stress associated with these types of events and the frequency of events reported.

In conclusion, the results from this study suggest that those officers with prior military experience may be better prepared for the stress of police work. Officers with military experience reported fewer police specific stressors including organizational and danger stressors than those without such experience. This was an expected but interesting result, since military combat veterans utilized less effective coping strategies than those without combat or military experience. Additionally, levels of personal psychological distress were not significantly different between military and non-military officers indicating that there may be other factors in either police work or in individual differences that resulted in lower reported stressors among officers with military experience. Future research needs to disentangle this complex association through inclusion of additional psychosocial factors and a prospective study design.

REFERENCES

- Andrisani, P. (1991). *Business, the military and the new military experience*. Washington, D.C.:U.S. Department of Education.
- Arnetz, B. B., Nevedal, D. C., Lumley, M. A., Backman, L., & Lublin A. (2008). Trauma resilience training for police: Psychophysiological and performance effects. *Journal of Police and Criminal Psychology*, 24, 1-9.
- Bartone, P. T. (2007). Test-retest reliability of the Dispositional Resilience Scale-15, A brief hardiness scale. *Psychological Reports*, 101, 943-944.
- Beck, A.T., Weissman, A., Lester, D., & Trexler, L. (1974). The measurement of pessimism: The Hopelessness Scale. *Journal of Consulting and Clinical Psychology*, 42, 861-865.
- Brunet, A., Weiss, D. S., Metzler, T. J., Best, S. R., Neylan, T. C., Rogers, C., ... Marmar, C. R. (2001). The Peritraumatic Distress Inventory: A proposed measure of PTSD criterion A2. *American Journal of Psychiatry*, 158, 1480-1485.
- Bumgarner, M. (1993). Heroes for hire: Hiring military veterans for police officers. *Police Chief*, 60(4), 19-21.
- Carver, C. S. (1997). You want to measure coping but your protocol's too long: Consider the brief COPE. *International Journal of Behavioral Medicine*, 4, 91-100.
- Carver, C. S., Scheier, M. F., & Weintraub, J. K. (1989). Assessing coping strategies: A theoretically based approach. *Journal of Personality and Social Psychology*, 56(2), 267-283.
- Cohen S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior*, 24(4), 385-396.
- Cooper, C. L., Davidson, L., & Robinson, P. (1982). Stress in the police service. *Journal of Occupational Medicine*, 24, 30-36.
- Cutrona, C. E., & Russell, D. W. (1987). The provisions of social relationships and adaptation to stress. In: W. H. Jones & D. Perlman (Eds), *Advances in personal relationships* (pps 37- 67). Greenwich, CT: JAI Press Inc.
- Hartley, T. A. Burchfiel, C. M., Fekedulegn, D., Andrew, M. E., Knox, S. S., & Violanti, J. M. (2011). Association between police officer stress and the metabolic syndrome. *International Journal of Emergency Mental Health*, 13(4), 243-256.
- Hodgins, G. A., Creamer, M. & Bell R. (2001). Risk factors for posttrauma reactions in police officers: A longitudinal study. *Journal of Nervous and Mental Disease*, 189, 541-547.
- Ivie, D., & Garland, B. (2011). Stress and burnout in policing: Does military experience matter? *Policing: An International Journal of Police Strategies and Management*, 34, 49-66.
- Maia, D. B., Marmar, C. R., Metzler, T., Nobrega, A., Berger, W., Mendlowicz, M. V., ...Figueira, I. (2007). Post-traumatic stress symptoms in an elite unite of Brazilian police officers: Prevalence and impact on psychosocial functioning and on physical and mental health. *Journal of Affective Disorders*, 97, 241-245.
- Marmar, C. R., McCaslin, S. E., Metzler, T. J., Best, S., Weiss, D. S., Fagan, J., et al., (2006). Predictors of posttraumatic stress in police and other first responders. *Annals of the New York Academy of Science*, 1071, 1-18.
- Marmar, C. R., Weiss, D. S., & Metzler, T. J. (1998). Peritraumatic dissociation and posttraumatic stress disorder. In J. D. Bremner & C. R. Marmar (Eds.), *Trauma, memory, and dissociation* (pp. 229-252). Washington, DC: American Psychiatric Association.
- McDowell, I. (2006a). The Beck Anxiety Inventory. *Measuring Health: A Guide to Rating Scales and Questionnaires*. 3rd ed. New York: Oxford University Press; pp. 306-313.
- McDowell, I. (2006b). The center for epidemiologic studies depression scale (CES-D). (2006). *Measuring health: A guide to rating scales and questionnaires*. 3rd ed. New York: Oxford University Press; pp. 350-358.
- Patterson, G. T. (2002). Predicting the effects of military service experience on stressful occupational events in police officers. *Policing*, 25(3), 602- 618.
- Radloff, L. S. (1977). The CES-D scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement*, 1(3), 385-401.
- Spielberger, C. D., Westberry, L. G., Grier, K. S., & Greenfield, G. (1981). *The Police Stress Survey: Sources of stress in law enforcement* (Human Resources Institute Monograph Series Three, No. 6). University of South Florida, College of Social and Behavioral Sciences: Tampa, FL.
- Stacey, N. (1991). *Education's role in the workplace: The work force*. Temple University Press: Philadelphia, PA.
- Steed, L. (2001). Further validity and reliability evidence for Beck Hopelessness Scale scores in a nonclinical

sample. *Educational and Psychological Measurement*, 61(2), 303-316.

Taylor, A. & Bennell, C. (2006). Operational and organizational police stress in an Ontario Police Department: A descriptive study. *Canadian Journal of Police and Security Services*, 4, 223-234

Uchida, C. D. (1997). The development of the American police: a historical overview. In Dunham, R.G. & Alpert, G.P. (Eds), *Critical Issues in Policing: Contemporary Readings*, 3rd ed (pps. 19-35). Waveland Press: Prospect Heights, IL.

Violanti, J. M., & Aron, F. (1994). Ranking of police stressors. *Psychological Reports*, 75(2), 824-826.

Weathers, F. W., Litz, B. T., Herman, D. S., Huska, J. A. & Keane, T. M. (1993). The PTSD Checklist (PCL): Reli-

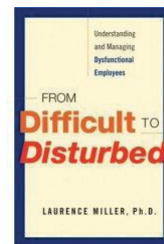
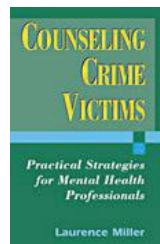
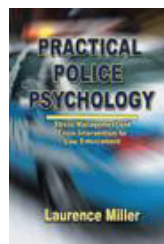
ability, validity, and diagnostic utility. Paper presented at the Annual Convention of the International Society for Traumatic Stress Studies, San Antonio, TX.

Weiss, D. S. (2004). The impact of events scale - revised. In: Wilson JP, Keane TM, editors. *Assessing psychological trauma and PTSD*. 2nd ed (pps. 168-189). Guildford: New York, NY.

Wills, T. A., & Shinar, O. (2000). Measuring perceived and received social support. In: S. Cohen, L. G. Underwood, & B. H. Gottlieb BH, (Eds) (p 106). *Social support measurement and intervention*. Oxford University Press: Oxford.

Wright, B., Mengyan D., & Greenbeck, K. (2011). Correlates of police academy success. *Policing: An International Journal of Police Strategies & Management*, 34 (4), 625-637.

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