Posttraumatic Stress Disorder and Job Burnout Among Jail Officers

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Abstract

Objective: To explore posttraumatic stress disorder (PTSD) symptom prevalence and health characteristics among jail correctional officers, a generally understudied population of public safety workers.

Method: A Conservation of Resources (COR) inspired framework explored relationships to PTSD symptoms among jail officers (N=320) employed in Midwest U.S. jails.

Results: More than half (53.4%) of jail officers screened positively for PTSD. Hierarchical regression analysis indicate burnout was a significant predictor of symptoms of PTSD ($B = .25$, $p < .001$). Self-efficacy ($B = −.42$, $p < .01$), emotional labor ($B = .20$, $p < .01$), and an anxiety- or depression-related diagnosis ($B = .92$, $p < .001$) remained significant predictors of PTSD-related symptoms in the final step.

Conclusion: Our findings highlight the potentially high prevalence and impact of PTSD among jail officers, and offer implications for public safety workplace health interventions.

Officers employed in jails, short-term correctional facilities with high resident turnover, work in conditions with high exposure to critical incidents and workplace stressors. Jail officers are at high risk for fatal and non-fatal inmate-to-staff and inmate-to-inmate violent incidents including criminality, gang activity, contraband, manipulation, and rape that contribute to sustained periods of alertness or hyper-vigilance.[1] Common organizational stressors include inadequate training, low staffing, overtime, poor leadership, and excessive punitive discipline.[1] While posttraumatic stress disorder (PTSD) has been highlighted among prison officers,[2] little research has been undertaken among this more narrow population of jail correctional officers as a consequence of their particular work setting. Profound dysfunction across cognitive, functional, occupational, and physical impairment

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domains has been linked to PTSD.[3] There are identified associations between emotional labor and adverse health outcomes including job stress, burnout, and workplace violence.[4] Burnout describes chronic emotional and interpersonal stressors on the job, and is defined by the three dimensions of exhaustion, cynicism, and inefficacy.[5] The occupational effects and co-morbidities of PTSD among jail officers are uncertain, especially when controlling for demographic differences. Theoretical models explaining the contextual, psychological and interpersonal interactions of worker characteristics related to correctional worker PTSD are also underdeveloped.

The Conservation of Resources (COR) theory suggests that stress occurs when key resources are threatened with loss, become lost, or not gained after a significant event.[6] The resources described by COR include conditions (e.g. emotional support and self-efficacy) that people value. This theory proposes that loss of resources can have a stronger impact on the person than resources gained, and the exhaustion of resources may contribute to desperation (i.e. burnout). Individuals seek resources within the context of objective elements of life events or a series of events that will influence any outcome. In this study, we suggest a COR inspired framework to explore the relationships of context of resources (e.g. demographic and mental health characteristics), existing resources (e.g. emotional labor [material], self-efficacy [psychological]), and resource desperation (e.g. burnout); and how they relate to PTSD among jail correctional officers. Specifically, in this study we sought to determine the prevalence of PTSD among jail correctional officers and explore the following hypotheses: 1) After controlling for demographic characteristics (i.e., age, ethnicity, gender, marital status, and education), indicators of mental health will share a significant inverse relationship with symptoms of PTSD. 2) Indicators of emotion regulation and self-efficacy will share a significant inverse relationship with symptoms of PTSD above and beyond both demographic and mental health indicators. 3) Burnout will share a significant positive relationship with symptoms of PTSD above and beyond demographic, mental health indicators, emotion regulation indicators, and self-efficacy.

Method

Design

In partnership with the Saint Louis University (SLU) Health Criminology Research Consortium, the SLU Transformative Justice Initiative seeks to develop evidence-informed solutions to improve health promotion and health protection in justice systems. This study is a portion of a larger, Total Worker Health® participatory health and safety needs assessment of Midwest U.S. rural and urban jails.[7] Ethical approval was obtained prior to data collection and informed consent was obtained from each participant. This study was approved by the Institutional Review Board at Saint Louis University.

Participants and Procedure

Two rural and 2 urban jail facilities employing a total of 401 jail officers were recruited to participate in this study. Participants were at least 18 years old and employed as a correctional officer or jail-based sheriff's deputy at one of the participating facilities. A total

of 320 jail officers returned self-administered surveys with a response rate of approximately 80%. Officers received a $20 gift card as remuneration for their participation in the study.

Measures

Dependent variable.

PTSD Checklist-2 (PCL-2): Symptoms of PTSD were measured by the abbreviated version of the PTSD Checklist (PCL-C) that was originally developed with PTSD symptoms from the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR). In the PCL-2, two items from the original 17 are used to indicate a positive screening for PTSD. [8] The questions are, specifically *Are you bothered by repeated, disturbing memories in the past month?* and *Are you bothered by feeling upset when reminded of past stress?* Using the response scale 1 (not at all) to 5 (extremely), a sum of the two items was created for each participant. If the sum of the 2 items were greater than or equal to 4, the participant screened positive for PTSD. The 2-item version was found to have high sensitivity (α =.97) and has been strongly correlated to the full PCL (.77 - .84 based on baseline, 6, and 12 month follow-ups) and accurately classified PTSD patients 83-85% of the time.[8] Internal consistency for the two-item measure was adequate (α =.91).

Independent variables.

Psychological well-being: Suggested by Ryff,[9] psychological well-being includes six factors (positive relationships, personal mastery, autonomy, feeling of purpose and meaning in life, and personal growth and development) measured by 7 items. The factors theoretically contribute to contentment and happiness and psychological well-being is achieved by balancing between positive and negative affect. Example items include: *I have a sense of direction and purpose in life* and *I enjoy making plans for the future and working to make them a reality.* Using the response scale 1 (strongly disagree) to 6 (strongly agree), average composite scores were created for each participant. Reliability for psychological well-being was adequate (α =.68).

Anxiety/depression: Subjects were asked to check *"diagnosed with"* if the following statement applied to them, "*Has a doctor or other healthcare provider ever told you that you have the following condition [anxiety/depression]."*

Emotional Labor: Describes the demands of work to display emotions that are socially desirable especially during service provision. Three of the 15 items from the Emotional Labour Scale (ELS).[10] were applied in this study including: *On an average day at work, how frequently do you… Resist expressing your true feelings? Pretend to have emotions that you don't really have? Hide your true feelings about a situation?* Using the response scale 1 (never) to 5 (always), scores on each of the three items were averaged to create one composite score for each participant (α =.80).

Emotional support: Describes perceived feelings of being cared for and valued as a person; and having confident relationships. Measured by PROMIS® Emotional Support v2.0,[11] examples of the 4 items include, *Has someone who makes him/her feel appreciated* and *Has someone to give him/her good advice about a crisis.* Responses were scaled from 1

(never) to 5 (always) and a total score was calculated by averaging all items. Emotional support displayed high internal consistency (α =.91).

<u>Self-Efficacy - Generalized self-efficacy scale:</u> Refers to an optimistic self-belief that one can perform a novel or difficult task, or cope with adversity within various domains of human functioning.[12] Example items: *Always manages to solve difficult problems if tries hard enough, Knows how to handle unforeseen situations due to resourcefulness,* and *Can remain calm when facing difficulties due to coping abilities.* A 4-point scale response scale (not at all true (1), hardly true (2), moderately true (3), exactly true (4)) was used. All 10 responses items were summed to yield the final composite score with a range from 10 to 40. Internal consistency was relatively high (α =.85).

<u>Burnout:</u> Measured by the *Prison Social Climate Survey* job burnout,[13] six items such as, *How often do you experience: A feeling that you have become harsh toward people since you took this job, A feeling of worry that this job is hardening you emotionally,* and *A feeling of accomplishment after working closely with inmates.* Response options ranged from 1 (never) to 7 (all the time) and the average of all 6 items was computed prior to analysis. Internal consistency of the burnout measure was relatively high (α = .85).

All analyses were conducted in version 3.5 of the R environment.[14] After reviewing descriptive statistics, a correlation matrix was populated for all study variables. Reviewing the study correlation matrix (Table 2), many bivariate relationships were significant. Harman's single-factor test was utilized to assess the influence of common method variance via confirmatory factor analysis by loading all study items on one factor. The resulting variance explained (31.6%) fell well under various guidelines reported of >50% variance explained.[15]

After addressing the issue of missing data, further described in,[16] a hierarchical regression was conducted to test hypotheses 1-3. The number of imputations was set at $m = 5$, following Bodner's rule[17] that the fraction of missing information (FMI) for any parameter is less than the percentage of missing cases. Iterations of imputed data were pooled and used for each model step. Additionally, the relative fit of each model step was compared utilizing the Wald statistic.[18]

Demographic variables were entered in the first block (i.e., gender, age, education, ethnicity, marital status, and military experience). Indicators of mental health were entered in the second block (i.e., psychological well-being and an anxiety- or depression-related diagnosis). Next, indicators of successful emotion regulation and self-efficacy were entered in the third block (i.e., emotional labor, emotional support, and self-efficacy). Finally, burnout was entered into the final block. Overall model significance was reviewed at each step as well as chi-square tests for nested models and R^2 to understand the incremental contribution of variables added at each step to the overall model. Hierarchical regression was preferred over structural equation modeling as the focus of the study is on the incremental contribution of various indicators after controlling for preceding variables. Additionally, given the focus on corrections-related employees, the sample size would not produce stable estimates given the number of parameters in the model.[19]

Results

Descriptive statistics are presented in Table 1 and indicate that 53.4% of the total sample screened positively for PTSD. Considering gender, 59.6% of females and 46.4% of males screened positively for PTSD. Participants' age was distributed from early employment to nearing retirement age. The majority of participants were female (52%), of African American, black or other ethnicity (78%); and frontline correctional officers/deputies (79%). Years employed in the department of corrections varied from less than 1 year to over 15 years. Means and standard deviations were calculated for all continuous measures (Table 2). All bivariate relationships were in the expected direction.

The results of hierarchical regression analysis are shown in Table 3. In the first step of the model that included contextual descriptors, gender ($B = .30$, $p < .05$) was significantly related to PTSD symptoms while age, education, ethnicity, marital status, and military experience was not. Demographic variables included in this first step accounted for 5% of the variance in symptoms of PTSD. The next step also included contextual descriptors by introducing two indicators of mental health. Psychological well-being and ($B = -.17$, $p < .05$) and an anxiety- or depression-related diagnosis ($B = 1.36$, $p < .001$) were significantly related to symptoms of PTSD after controlling for variance attributed to demographic characteristics. These mental health predictors accounted for an additional 16% of the variance in the outcome. Reviewing the significant relationships, as psychological well-being increased, symptoms of PTSD decreased and having an anxiety- or depression-related diagnosis was related to an increase in symptoms of PTSD. In the third step, resources including emotional labor ($B = .30$, $p < .001$) and self-efficacy ($B = -.42$, $p < .05$) were both significant predictors of PTSD symptoms, accounting for an additional 9.4% of the variance in the outcome. Emotional support was not related, partially supporting the hypothesis. Emotional labor was positively related to symptoms of PTSD while self-efficacy was negatively related to symptoms of PTSD. Burnout was added to the final step of the hierarchical regression to analyze desperation according to COR. Supporting hypothesis 3, burnout was a significant predictor of symptoms of PTSD ($B = .25$, $p < .001$), accounting for an additional 6.5% of variance in the outcome, after controlling for the variance attributed to all preceding variables. An increase in burnout resulted in an increase in symptoms of PTSD. As expected, self-efficacy ($B = -.42$, $p < .01$), emotional labor ($B = .20$, $p < .01$), and an anxiety- or depression-related diagnosis ($B = .92$, $p < .001$) remained significant predictors of PTSD-related symptoms in the final step.

Discussion

The aims of this study were to describe the prevalence of PTSD and examine the relationship of COR key resources (anxiety, depression, emotional labor, self-efficacy, burnout, and demographic characteristics) with PTSD among jail correctional officers. The prevalence of PTSD screened in this cohort (53.4%) was far higher than a recent study of prison officers where 19% met PTSD diagnosis criteria and average scores indicated a high rate of stress.[20] Other public safety workers such as police officers have shown rates of posttraumatic stress symptomatology as high as 35.3%.[20] In comparing the prevalence in this population to the National Comorbidity Survey Replication (NCS-R) conducted in

2001-2003 it set the lifetime rate of PTSD among adults in the U.S. to be 6.8%, with an increased prevalence among women 9.8% than men 3.6%.[21] In 2008 Gulf War veteran's rates were established at 13.8%.[22] While our measure (PCL-2) is considered a screening tool, the rate is dramatically higher than other population estimates for PTSD and opens discussion about corrections work stress.

Most of the jail officers in this study (85%, n=272) were under a residency requirement to live within the city limits, an urban setting with crime "hot spots" where violent crime rates rank highest in the U.S. In general, 14.8% of the population who live in crime "hot spots" can be diagnosed with PTSD and/or depression.[23] Considering the combination of living in or near a crime "hot spot" (direct and indirect trauma exposure) with high trauma risk employment may pose multiplicative effects on individual toxic stress.

The COR framework provided a useful guide for examining the context, resources, and stress outcomes of jail officer work. Having a mental health diagnosis such as anxiety or depression was related to symptoms of PTSD. Experience of high emotional labor (low resources) led to increases in symptoms of PTSD; whereas increases in self-efficacy (higher resources) led to decreases in PTSD. Surprisingly, emotional support was not a significant predictor of PTSD, possibly due to this resource gain unable to overcome resource losses according to COR. However, due to the very high prevalence of PTSD screened in this cohort, we anticipate that resources were generally low and placed jail officers more highly vulnerable to work stressors and desperation/exhaustion as explained by burnout.

Interestingly, psychological well-being and gender did not remain significant with the inclusion of emotion regulation-related variables and self-efficacy. Ethnicity was a significant predictor of PTSD symptoms in the final step ($B = .46$, $p < .01$). This finding suggests that jail officers of minority status (e.g. African American, Black) were more prone to PTSD symptoms than individuals of White or European descent.

Informing Trauma Interventions

Workplace screening for PTSD may inform training in stress management resources, social support initiatives, post-critical event follow-up, and early intervention.[24] This study informed the development and implementation of tailored interventions at institutions that hosted the study. These included stress management education and resources; control tactics and conflict resolution training; and implementation of long-term, systematic inservices.[7] Utilization of trauma-informed care (TIC) may better address trauma stressors as compared to trauma debriefing interventions that have not shown efficacy.[24, 25] Primary care and occupational health screening for PTSD using a brief 2-item measure such as the PCL-2 may provide quick insight to inform trauma health interventions. Programming that naturally integrates trauma informed processes, trauma prevention, and early detection may reduce the risk of trauma, severity, and recovery of trauma experiences.

The Occupational Safety and Health Administration (OSHA) in the U.S. lacks standards applicable to trauma exposure or critical incident stressors such as witnessing or experiencing life threatening injuries, situations or tragedies.[26] Routine screening for PTSD has been recommended in workplaces that experience frequent potentially traumatic

situations in order to inform workplace health interventions. OSHA requires workplaces to be free from hazards that are likely to cause death or serious harm. More is needed to protect workers who are employed by workplaces known to have life threatening situations and tragedies that workers are required to respond. This study implemented the use of a simple screener to study the prevalence of PTSD among jail officers and to examine its sociodemographic correlates.

Limitations

There are several limitations that must be considered for the interpretation of study results. This study employed a cross-sectional design limiting its generalizability to the larger correctional officer population and no causal inferences can be made. Additionally, the cross-sectional nature of this study does not allow for our interpretation of the results to be causal in nature. In response to this gap in jail workplace research, we have implemented an ongoing prospective, etiological study of jail officer health that may also be a better fit for the COR theory.[27] The PCL-2 measure was an efficient screening tool for this project, however, it may miss information assessed by the full PCL measure[8] and therefore under- or overestimate PTSD.

Missing data could not be ignored for this sample and multiple imputation by chained equations provided a robust method for measuring missing data at random. During the informed consent process, jail officers were educated on their risks as a research participant and that their individual data would remain confidential. However, even with a high rate of survey return, we learned that individual demographic characteristics were missing the most often from surveys and this is a common risk with self-reported data. Additional contextual aspects of workplace culture, features of the workplace, location of the jails, and internal policies and procedures may also impact the incidence of PTSD and these were not explored within this study.

In conclusion, the results from this study indicate that PTSD screened among jail correctional officers was high and significantly related to burnout. Future study is needed to identify tailored interventions that address PTSD prevention and early intervention among this group of public safety workers.

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Table 1.

Demographic Characteristics of Jail Correctional Workers and Self-Report PTSD symptoms

		Total N		PTSD	4 PTSD	
		N	%	M(*SD*)	N	%
Total Sample (n=320)						
				4.20(*2.34*)	171	53.4
Gender (n=317)						
	Female	166	52.37	4.52(*2.41*)	99	59.64
	Male	151	47.63	3.81(*2.16*)	70	46.36
Age (n=314)						
	18-30	50	15.92	4.12(*2.35*)	27	54.00
	31-40	76	24.20	4.26(*2.31*)	44	57.89
	41-50	94	29.94	4.71(*2.56*)	56	59.57
	51-60	73	23.25	3.63(1.*93*)	32	43.84
	>60	21	6.69	3.86(*2.17*)	10	47.62
Ethnicity (n=320)						
	ABO	251	78.43	4.33(*2.43*)	138	55.98
	EW	69	21.56	3.72(*1.84*)	34	49.28
Job Category (n=320)						
Jail Deputy/Correctional Officer		253	79.06	4.22(*2.33*)	136	53.75
	Supervisor	63	19.69	4.08(*2.36*)	33	52.38
	Unspecified	4	1.25	4.75(3.40)	2	50.00
Years employed (n=320)						
	<1	30	9.38	3.20(*1.92*)	10	33.33
	1-5	89	27.81	3.94(*2.16*)	44	49.44
	6-10	69	21.56	4.64(*2.42*)	44	63.77
	11-15	57	17.81	4.62(*2.50*)	34	59.65
	>15	75	23.44	4.18(*2.40*)	39	52.00
Education (n=319)						
	High school	69	21.63	4.10(*2.02*)	40	57.97
	Some college	133	41.69	3.96(*2.24*)	63	47.37
	College degree	94	29.47	4.48(*2.62*)	52	55.32
	Graduate degree	23	7.21	4.60(*2.62*)	15	65.22
Military Experience (n=311)						
	No	261	83.92	4.26(*2.36*)	145	55.56
	Yes	50	16.08	4.04(*2.28*)	23	46.00

Note: African Am., Black, & Other = *ABO,* European Descent/White = *EW.*

Table 2.

Mean, Standard Deviations, and Zero-Order Correlations

	M(SD)	**1**	**2**	**3**	**4**	**5**	**6**	**7**
1. *PTSD symptoms*	4.20(*2.34*)	*.91*	−.04	−.12[*]	.34[***]	−.15[**]	−.23[***]	.46[***]
2. *Age*	43.33(*11.40*)	−.04	–	.09	−.22[***]	.02	.08	−.16[**]
3. *Psychological Well-being*	4.86(*.78*)	−.11[*]	.10	*.68*	−.10	.37[***]	.33[***]	−.20[***]
4. *Emotional Labor*	2.59(*1.02*)	.34[***]	−.22[***]	−.11	*.80*	−.16[**]	−.13[*]	.37[***]
5. *Emotional Support*	15.86(*4.05*)	−.16[**]	.02	.37[***]	−.17[**]	*.91*	.27[***]	−.21[***]
6. *Self-Efficacy*	3.32(*.40*)	−.22[***]	.09	.33[***]	−.13[*]	.27[***]	*.85*	−.12[*]
7. *Burnout*	3.06(*1.45*)	.47[***]	−.16[**]	−.20[***]	.37[***]	−.21[***]	−.11	*.85*

Note: Lower diagonal: bivariate relationships of imputed data for all continuous variables. Upper diagonal: bivariate relationships of observed data with pairwise deletion. Means and sd calculated for observed data. Observed α on diagonal where appropriate.

[*]
$p < .05$,

[**]
$p < .01$,

[***]
$p < .001$

Table 3.

Multiple Imputed (m=5) Hierarchical Regression

DV: PTSD symptoms

	Step 1			Step 2			Step 3			Step 4		
	B(SE)	CI	VIF	B(SE)	CI	VIF	B(SE)	CI	VIF	B(SE)	CI	VIF
(Intercept)	1.78(.20)***	1.39 – 2.17		1.62(.18)***	1.26 – 1.99		1.50(.17)***	1.15 – 1.84		1.66(.17)***	1.33 – 2.00	
Gender (*Female*)[a]	0.30(.15)*	0.01 – 0.59	1.11	0.20(.14)	-0.07 – 0.47	1.13	0.25(.13)*	0.00 – 0.51	1.13	0.07(.13)	-0.18 – 0.32	1.78
Age	-0.01(.01)	-0.02 – 0.01	1.06	-0.01(.01)	-0.02 – 0.01	1.07	-0.01(.01)	-0.01 – 0.01	1.08	0.00(.01)	-0.01 – 0.01	1.10
Education[b]			1.01			1.01			1.02			1.02
Some College	-0.08(.17)	-0.42 – 0.27		-0.12(.16)	-0.43 – 0.20		-0.02(.15)	-0.32 – 0.29		-0.09(.15)	-0.38 – 0.19	
College Degree	0.18(.19)	-0.19 – 0.54		-0.01(.17)	-0.35 – 0.33		0.08(.17)	-0.25 – 0.40		0.05(.16)	-0.26 – 0.35	
Graduate Degree	0.26(.28)	-0.30 – 0.82		0.24(.26)	-0.27 – 0.75		0.27(.25)	-0.22 – 0.76		0.16(.24)	-0.30 – 0.63	
Ethnicity (*ABO*)[c]	0.29(.17)	-0.05 – 0.63	1.12	0.44(.16)**	0.13 – 0.76	1.13	0.49(.15)**	0.19 – 0.79	1.14	0.46(.15)**	0.18 – 0.75	1.14
Marital Status (*Not Partnered*)[d]	-0.20(.13)	-0.46 – 0.06	1.03	-0.18(.12)	-0.42 – 0.06	1.03	-0.16(.12)	-0.39 – 0.07	1.04	-0.10(.11)	-0.32 – 0.12	1.05
Military Experience (*Yes*)[e]	-0.02(.19)	-0.40 – 0.35	1.09	-0.16(.17)	-0.51 – 0.18	1.09	-0.11(.17)	-0.43 – 0.22	1.10	-0.12(.16)	-0.43 – 0.20	1.10
Psych Well-being				-0.17(.08)*	-0.33 – -0.01	1.01	-0.04(.08)	-0.21 – 0.12	1.13	0.03(.08)	-0.13 – 0.19	1.15
Anxiety/Depression				1.36(.18)***	1.00 – 1.72	1.03	1.10(.18)***	0.75 – 1.46	1.06	0.92(.17)***	0.57 – 1.26	1.08
Emotional Labor							0.30(.06)***	0.19 – 0.42	1.09	0.20(.06)**	0.08 – 0.32	1.15
Emotional Support							-0.02(.02)	-0.05 – 0.02	1.12	-0.01(.02)	-0.04 – 0.02	1.13
Self-Efficacy							-0.42(.17)*	-0.75 – -0.10	1.10	-0.42(.16)**	-0.74 – -0.11	1.10
Burnout										0.25(.04)***	0.16 – 0.33	1.20
R^2 (ΔR^2)	.050			.210(.160)			.304(.094)			.369(.065)		
χ^2				29.68***			12.59***			30.47***		

Note. Continuous predictors are mean-centered.

[a] Gender reference = *Male*.

[b] Education reference= *High school.*

[c] Ethnicity reference = *EW.*

[d] Marital Status reference = *Partnered.*

[e] Military Experience reference = *No.* B = pooled unstandardized coefficients. *SE* = pooled standard errors. *VIF* = average generalized variance inflation factor (GVIF$^{1/(2*df)}$), CI = 95% confidence interval.

*
$p < .05,$

**
$p < .01,$

***
$p < .001.$ χ^2 calculated with Wald statistic. $N = 320.$