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# Anger and Posttraumatic Stress Disorder Symptom Severity in a Trauma-Exposed Military Population: Differences by Trauma Context and Gender

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**Abstract:**

Studies have found a stronger association between anger and posttraumatic stress disorder (PTSD) in people with military-related traumas than in people with non-military traumas. Two hypotheses have been proposed to explain this difference: 1) military populations are more prone to anger than non-military populations, and 2) military traumas create more anger than non-military traumas. To test these hypotheses, we examined the association between anger and PTSD severity among never-deployed military service members with civilian traumas ( $n = 258$ ) and service members with deployment-related traumas ( $n = 697$ ) using linear regression. We further examined these associations by gender. Bivariate associations between anger and PTSD severity were similar for civilian and deployment-related events, however gender modified this association. For men the association for deployment events was stronger than for civilian events ( $\beta = 0.17, r = .52$  vs.  $\beta = 0.12, r = .37$ ), while the reverse was true for women (deployment:  $\beta = 0.17, r = .42$  vs. civilian:  $\beta = 0.23, r = .64$ ). Among men, findings support the hypothesis that military traumas produce stronger associations between PTSD and anger and are inconsistent with hypothesized population differences. However, in women, there is not a clear fit with either hypothesis.

*Keywords:* PTSD, Anger, Military, Gender, Trauma

A growing body of research has found that anger is associated with posttraumatic stress disorder (PTSD) symptom severity in veterans (Elbogen, Wagner, et al., 2010; Novaco & Chemtob, 2002; Taft, Creech, & Kachadourian, 2012; Worthen, 2011) and among non-military adults who experienced trauma (Orth, Cahill, Foa, & Maercker, 2008). In their 2006 meta-analysis of 39 original studies, Orth and Wieland (2006) examined the correlation between anger and PTSD in both civilian and military populations. Nineteen of the studies they examined studied military war experience, 7 studied criminal victimization, 5 studied civilian war experience, 4 studied technological disasters, 2 studied health traumas, and 2 studied samples with mixed events. On average, 30% of participants were women. The studies used a variety of measures to assess anger and PTSD symptom severity. Orth and Wieland reported that the type of traumatic event moderated the association between PTSD and anger. In populations with traumas related to military experience, the association between anger and PTSD was stronger (average correlation coefficient  $r = .56$ ) than in civilian populations with traumas related to non-military experiences (average  $r$  for different types of events ranged from .30 for criminal victimization to 0.43 for civilian war experience).

Orth and Wieland raised the question of whether the observed differences in the association between anger and PTSD in populations with military and non-military traumas were due to pre-trauma characteristics of those who join military service or due to differences in the nature of military-related traumatic events compared to non-military traumas. We label these hypotheses respectively *Differences in Population* and *Differences in Trauma*.

The *Differences in Population* hypothesis would require unequal distribution of factors associated with an increased anger response to PTSD between military and non-military populations. It is reasonable to consider that the known differences between military and non-

military populations in terms of demographics, lower socioeconomic status and education, and higher past traumas could be explanations for observed differences, however the data are somewhat limited (Elbogen, Fuller, et al., 2010; United States Government Accountability Office, 2005). Recent research has documented a higher prevalence of Intermittent Explosive Disorder (IED) in an Army sample (11.2%) than in a matched civilian sample (1.7%) (Kessler et al., 2014), and it is possible that a higher baseline level of anger could lead to a stronger association between anger and PTSD after a traumatic event, although this has not been established. A recent longitudinal study of Dutch soldiers found that trait anger before deployment did predict PTSD symptom severity shortly after deployment, however the study population had very low levels of PTSD and below-average trait anger both before and after deployment (Lommen, Engelhard, van de Schoot, & van den Hout, 2014). Thus, while that study offers some evidence that pre-trauma anger can increase post-trauma PTSD symptom severity, it also offers evidence that the baseline level of anger can be lower in military populations than civilian populations.

The *Differences in Trauma* hypothesis, on the other hand, emphasizes either the uniqueness of traumas sustained during combat (e.g. killing, witnessing violent deaths) or a difference in the underlying physiology of military service members during deployment to a war zone. The second possibility is elaborated in the information processing explanatory model of anger and PTSD presented by Taft et al. (2012). The information processing model builds upon Chemtob et al.'s (1997) regulatory model of posttraumatic anger, and links heightened anger responses to trauma to adaptive war zone cognitive processing (e.g. increased anger-related arousal, actions, and cognitions that occur when continually under threat of enemy attack).

In the present study, we enrolled participants currently serving in the US Reserve and National Guard. This population included a subset of individuals who had not yet been deployed as of the first two waves of the study but who had experienced traumas as civilians. Within these data, therefore, we have an opportunity to test the two hypotheses put forward by Orth and Wieland by examining whether in an all-military population, the association between anger and PTSD is consistent whether the traumatic events that gave rise to the PTSD occurred during a deployment or while living as a civilian. If the association were found to be consistent regardless of whether the trauma was military related or not, this would provide evidence to support the *Differences in Population* hypothesis. However, if the association between anger and PTSD were found to be stronger when the trauma is deployment-related than when the trauma is civilian-related, we would have evidence to support the *Differences in Trauma* hypothesis. In addition, we wanted to examine whether there were differences in these associations by gender in an all-military population. Prior research on anger and PTSD in military populations has primarily been conducted with male, often treatment-seeking populations and there is little to no information on the association between anger and PTSD in women service members (Worthen, 2011). As women now make up more than 16% of military service members (The Women's Memorial, 2011), understanding any possible gender differences in PTSD and anger is important.

## **Method**

### **Study Population**

The study population for this study has been described in detail elsewhere (Worthen et al., 2014). In brief, those who were invited to participate in this cohort study came from a stratified random sample obtained through the Defense Manpower Data Center (DMDC) designed to be

representative of National Guard and Reserve soldiers serving in the military as of June 2009. A total of 2,003 service personnel were interviewed at baseline, with an overall cooperation rate of 68.2%, defined as the number of participants who consented regardless of eligibility divided by the number of working numbers we successfully contacted. The overall response rate was 34.1%, defined as the number of participants who completed a survey or consented but were ineligible, divided by the number of working numbers minus those that were disqualified. Consent to participate in the study began in January 2010 and ended July 2010. Participants were compensated for their time with \$25 for an approximately 50 minute interview. A second wave of data collection beginning in January 2011 and ending in November 2011 attempted to reach 1,996 of the wave 1 participants (7 of the original participants declined further participation at the end of the first interview). The cooperation rate for wave 2 was 91% and the response rate was 74%. Participants who were interviewed at baseline were eligible to be interviewed in the second wave regardless of whether they had retired or separated from the Reserve or National Guard between waves 1 and 2. Interviews in the second wave averaged 37 minutes and participants were paid a \$25 stipend for participating in the survey. For the present study, data on gender and race was obtained from the first wave of data; all other variables were obtained from the second wave of data.

## **Measures**

**Traumatic events.** All participants were asked whether they had experienced any traumatic events in their lifetime and whether that event was related to a deployment. These events were compiled from items in the Deployment Risk and Resilience Inventory (DRRI) and a list of Criterion A events developed by the Centers for Disease Control and Prevention



(Centers for Disease Control and Prevention (CDC), 1989; King, King, Vogt, Knight, & Samper, 2006). In addition to this list of events, participants were given an opportunity to describe any other traumatic event that they identified as their worst trauma. We assessed lifetime traumatic events during the first wave of the study and events occurring between waves 1 and 2 during the second wave.

**Posttraumatic Stress Disorder (PTSD).** To assess PTSD symptom severity, we used questions from the PTSD Checklist-C (PCL-C) (Keen, Kutter, Niles, & Krinsley, 2008; Weathers, Litz, Herman, Huska, & Keane, 1993). The PCL-C has been widely used in military populations and was more appropriate for this study than the military version of the scale because we sought to capture civilian as well as military traumas. The PCL has been found to have high internal consistency, good test-retest reliability, and be highly correlated with other PTSD scales (Keen et al., 2008; Weathers et al., 1993). While the PCL is structured to solicit symptoms in the past month, we asked participants to answer with respect to symptoms they experienced within the last 12 months, which allowed us to better map our screening to the DSM-IV definition of PTSD.

Participants were administered this PTSD scale if they reported any of the traumatic experiences described above as a civilian or during a deployment. They were administered the scale with respect to what they identified as the “worst” trauma as a civilian and the “worst” trauma related to their most recent deployment. Thus, respondents had the opportunity to be administered the PTSD scale twice, creating separate scores for civilian-related PTSD symptoms and deployment-related PTSD symptoms. PTSD symptom severity was calculated using a continuous score of symptoms in criteria B, C, and D (Keen et al., 2008). The Cronbach’s alpha for this sample was 0.94 for civilian-related PTSD and 0.97 for deployment-related PTSD.

**Anger.** Anger was measured using a four-item scale developed from questions in the Dimensions of Anger (DAR) scale (Forbes et al., 2004). The four items assessed the frequency, intensity, antagonism, and impairment involved with the respondent's experience of anger in the past 12 months. Respondents rated how much they disagreed or agreed with each statement on a 5-point Likert scale, ranging from strongly disagree to strongly agree. Anger severity was calculated using a continuous score created by summing the responses to the four items in the scale. The Cronbach's alpha for the scale was good at 0.78 with item-test correlations ranging from 0.76 – 0.80.

### **Statistical Analyses**

We first used linear regression models to evaluate the association between PTSD and anger for two traumatic event groups: 1) among those who experienced only civilian traumas and had never deployed and 2) among those who reported deployment-related traumas. Next, for each traumatic event group, we also stratified the linear regression models to assess possible effect modification by gender. Third, to account for possible confounding for the PTSD-anger associations, we adjusted the four regression models for age, education, marital status, pay grade and race. We report the regression coefficient ( $\beta$ ), the correlation coefficient ( $r$ ) and 95% confidence intervals for each regression model. Finally, we tested the coefficients for homogeneity. All analyses were conducted in Stata version 12 (StataCorp, 2011). Confidence intervals for  $r$  were calculated using the *corrcii* command and hypothesis testing was done in Mata as described by Cox (2008).

## **Results**

The characteristics of the sample are reported in Table 1. The sample was predominantly white (80.6%) and male (80.1%). Out of participants who completed the second wave interview, 258/1293 (20%) experienced a civilian trauma and had never deployed and 697/1293 (54%) reported a deployment-related traumatic event. The mean civilian-related PTSD symptom severity score was 25.1 (95% CI 24.5 – 25.7, range 16 to 81, SD 11.3). The mean deployment-related PTSD symptom severity score was 26.0 (95% CI 25.0 – 26.9, range 0 to 85, SD 12.7). The mean anger severity score was 8.15 (95% CI 7.9 – 8.4, range 4 to 20, SD 4.16).

In bivariate linear regression, the association between PTSD severity and anger was similar for deployment-related traumatic events ( $\beta = 0.18$ ,  $r = 0.51$ ,  $p < 0.001$ ) and civilian traumatic events ( $\beta = 0.16$ ,  $r = 0.49$ ,  $p < 0.001$ ) (Table 2). Analyses stratified by gender found heterogeneity in the associations between PTSD symptoms severity and anger by gender, confirmed through hypothesis testing ( $p=0.026$ ) (Table 2). In multivariable linear regressions controlling for age, education, marital status, pay grade and race, these differences were strengthened ( $p=0.018$ ). Among men, there was a stronger association between PTSD severity and anger for deployment-related events ( $\beta = 0.16$ ,  $r = 0.50$ ,  $p < 0.001$ ) than for civilian events ( $\beta = 0.09$ ,  $r = 0.29$ ,  $p < 0.001$ ) ( $p$  value for difference  $< 0.001$ ). In contrast, among women there was a stronger association between PTSD and anger for civilian events ( $\beta = 0.23$ ,  $r = 0.64$ ,  $p < 0.001$ ) than for deployment-related events ( $\beta = 0.18$ ,  $r = 0.41$ ,  $p < 0.001$ ) but these associations were not statistically different (Table 3). Women and men had similar associations between anger and PTSD severity for deployment-related PTSD, but the associations between anger and PTSD severity for civilian-related PTSD were statistically different from one another ( $p < 0.001$ ).

We examined the distribution of anger and PTSD symptom severity variables to address the concern that the differences in the correlation among men and women were due to non-overlap in the distribution of these variables. However, we found there was overlap in the distributions of these variables for men and women (e.g., mean anger severity for men was 8.25 and for women was 7.75; the range for both genders was 4 - 20), and when we restricted analyses to the areas with the most overlap across traumatic event type and gender subgroups, results were similar to final results reported here.

## Discussion

In this all-military population, the association between PTSD and anger was similar for civilian and deployment related traumas, initially suggesting support for the *Differences in Population* hypothesis. However, when we stratified by gender, differences in the association between PTSD and anger became apparent, though in opposite directions for men and women. For men, the association between PTSD and anger was stronger for deployment-related events than for civilian events. The association for civilian events (adjusted  $r = 0.35$ ) was smaller than the association for deployment-related events (adjusted  $r = 0.51$ ). These results in men are similar to correlations reported by Orth and Wieland in their meta-analysis, and lend support to the *Differences in Trauma* hypothesis (Orth & Wieland, 2006).

Among women, however, the association between PTSD and anger was strongest for civilian traumas (adjusted  $r = 0.68$ ), and this correlation was larger than any correlation reported in the 39 studies examined by Orth and Wieland for any type of trauma (Orth & Wieland, 2006). In contrast, the association between PTSD stemming from deployment-related events and anger was very similar to the association found for men (adjusted  $r = 0.49$ ). These findings raise

questions about the population of women that join the military and about the types of traumas that women in the military experience both as civilians and during deployments. In particular, these findings do not support the *Differences in Population* hypothesis, as there are differences between the association between PTSD and anger by trauma type. While the *Differences in Trauma* hypothesis proposes that wartime traumas have a stronger association between PTSD and anger, the results in women are the opposite, establishing a stronger association between PTSD and anger for civilian traumas. However, it is unclear whether the women in this sample experienced traumas related to combat (e.g. killing or witnessing the violent death of a friend) or whether their deployment-related traumas were traumas that might be more similar to traumas experienced as a civilian (e.g. rape). Further research is needed to untangle the importance of the context of the trauma (deployment, civilian) from the content of the trauma (e.g. killing, rape, etc.) in the association between PTSD and anger.

Previous research has not identified gender as an important variable to consider in evaluating the association between PTSD and anger (Andrews, Brewin, Rose, & Kirk, 2000). Orth and Wieland evaluated the role of gender in their meta-analysis and found that the proportion of female participants in a study did not significantly predict the association between PTSD and anger, however a lack of gender stratified results in the papers being summarized likely reduced their ability to consider the role of gender (Orth & Wieland, 2006). Our stratified results suggest gender is an important modifier of the association between PTSD and anger.

To our knowledge, no prior research with military populations on the association between anger and PTSD has considered gender as an effect modifier. While in some samples of mixed gender, gender has been included as a control covariate, these data suggest that gender should not be controlled, but rather examined as a modifier. Studies with current service members and

recent veterans often include a sizable group of women. Women now make up 16% of service members (The Women's Memorial, 2011) and, since January 2013, are permitted to serve in combat roles (Roulo, 2013). Future research evaluating the interrelation between PTSD and anger should evaluate modification by gender and provide stratified results so that comparisons can be made across study populations.

One potential explanation for the differences in results by gender is that women and men experience different types of traumas as civilians and during deployment. This deserves further investigation. However, in previous research with non-military women, no difference has been found in the association between PTSD and anger when comparing women whose index traumatic event was rape and women whose index traumatic event was a non-sexual assault (Riggs, Dancu, Gershuny, Greenberg, & Foa, 1992). Other possible explanations for this finding in women are that while women who enter the military are more likely to have an anger response to PTSD symptoms, that something about deployment lessens this effect, even when further traumas are experienced during deployment. For example, the climate during deployment may make women's expression of anger more threatening and thus women may learn to dampen their anger response. Findings from a recent Army study of mental disorders highlighted that gender differences in these disorders in the Army population were unlike gender differences in the civilian population, and suggested future research should seek to understand these differences (Kessler et al., 2014). Such longitudinal research should examine trajectories of women's anger and PTSD symptom severity related to pre-deployment traumas and deployment traumas.

If differences in the association between anger and PTSD in men and women are documented in more study populations, future research should try to understand these underlying

differences. Furthermore, physiological differences in men and women's anger response should be examined.

## References

- Andrews, B., Brewin, C. R., Rose, S., & Kirk, M. (2000). Predicting PTSD symptoms in victims of violent crime: the role of shame, anger, and childhood abuse. *J Abnorm Psychol*, *109*(1), 69-73.
- Centers for Disease Control and Prevention (CDC). (1989). Diagnostic interview schedule (DIS) *Health Status of Vietnam Veterans. Supplement C: Medical and Psychological Procedure Manuals and Forms* (pp. 405-499). Atlanta, GA: Centers for Disease Control and Prevention.
- Chemtob, C. M., Novaco, R. W., Hamada, R. S., Gross, D. M., & Smith, G. (1997). Anger regulation deficits in combat-related posttraumatic stress disorder. *J Trauma Stress*, *10*(1), 17-36.
- Cox, Nicholas J. (2008). Speaking Stata: Correlation with confidence, or Fisher's z revisited. *The Stata Journal*, *8*(3), 413-439.
- Elbogen, E. B., Fuller, S., Johnson, S. C., Brooks, S., Kinneer, P., Calhoun, P. S., & Beckham, J. C. (2010). Improving risk assessment of violence among military veterans: an evidence-based approach for clinical decision-making. *Clin Psychol Rev.*, *30*(6), 595-607.
- Elbogen, E. B., Wagner, H. R., Fuller, S. R., Calhoun, P. S., Kinneer, P. M., & Beckham, J. C. (2010). Correlates of anger and hostility in Iraq and Afghanistan war veterans. *Am J Psychiatry*, *167*(9), 1051-1058.
- Forbes, D., Hawthorne, G., Elliott, P., McHugh, T., Biddle, D., Creamer, M., & Novaco, R. W. (2004). A concise measure of anger in combat-related posttraumatic stress disorder. *J Trauma Stress*, *17*(3), 249-256.



- Keen, S. M., Kutter, C. J., Niles, B. L., & Krinsley, K. E. (2008). Psychometric properties of PTSD Checklist in sample of male veterans. *J Rehabil Res Dev*, 45(3), 465-474.
- Kessler, R. C., Heeringa, S. G., Stein, M. B., Colpe, L. J., Fullerton, C. S., Hwang, I., . . . Ursano, R. J. (2014). Thirty-Day Prevalence of DSM-IV Mental Disorders Among Nondeployed Soldiers in the US Army: Results from the Army Study to Assess Risk and Resilience in Servicemembers (Army STARRS). *JAMA Psychiatry*, 5(10), 28.
- King, Lynda A., King, Daniel W., Vogt, Dawne S., Knight, Jeffrey, & Samper, Rita E. (2006). Deployment Risk and Resilience Inventory: A Collection of Measures for Studying Deployment-Related Experiences of Military Personnel and Veterans. *Military Psychology*, 18(2), 89-120.
- Lommen, M. J., Engelhard, I. M., van de Schoot, R., & van den Hout, M. A. (2014). Anger: cause or consequence of posttraumatic stress? A prospective study of dutch soldiers. *J Trauma Stress.*, 27(2), 200-207.
- Novaco, R. W., & Chemtob, C. M. (2002). Anger and combat-related posttraumatic stress disorder. *J Trauma Stress*, 15(2), 123-132.
- Orth, U., Cahill, S. P., Foa, E. B., & Maercker, A. (2008). Anger and posttraumatic stress disorder symptoms in crime victims: a longitudinal analysis. *J Consult Clin Psychol*, 76(2), 208-218.
- Orth, U., & Wieland, E. (2006). Anger, hostility, and posttraumatic stress disorder in trauma-exposed adults: a meta-analysis. *J Consult Clin Psychol*, 74(4), 698-706.
- Riggs, David S., Dancu, Constance V., Gershuny, Beth S., Greenberg, Deborah, & Foa, Edna B. (1992). Anger and Post-Traumatic Stress Disorder in Female Crime Victims. *Journal of Traumatic Stress*, 5(4), 613-625.

- Roulo, Claudette. (2013). Defense Department Expands Women's Combat Role, *American Forces Press Service*. Retrieved from <http://www.defense.gov/news/newsarticle.aspx?id=119098>
- StataCorp. (2011). Stata. College Station, Texas.
- Taft, C. T., Creech, S. K., & Kachadourian, L. (2012). Assessment and treatment of posttraumatic anger and aggression: a review. *Journal of Rehabilitation Research and Development, 49*(5), 777-788.
- The Women's Memorial. (2011). Statistics on Women in the Military. Retrieved February 7, 2013, from <http://www.womensmemorial.org/PDFs/StatsonWIM.pdf>
- United States Government Accountability Office. (2005). Military Personnel: Reporting Additional Servicemember Demographics Could Enhance Congressional Oversight. Washington, DC.
- Weathers, F., Litz, B., Herman, D., Huska, J., & Keane, T. . (1993). *The PTSD Checklist (PCL): Reliability, Validity, and Diagnostic Utility*. Paper presented at the Annual Convention of the International Society for Traumatic Stress Studies, San Antonio, TX.
- Worthen, Miranda. (2011). The Relations Between Traumatic Exposures, Posttraumatic Stress Disorder, and Anger in Male and Female Veterans. *Journal of Feminist Family Therapy, 23*(3-4), 188-201.
- Worthen, M., Rathod, S., Cohen, G., Sampson, L., Ursano, R., Gifford, R., Fullerton, C., Galea, S., Ahern, J. (2014). Anger Problems and Posttraumatic Stress Disorder in Male and Female National Guard and Reserve Service Members. *Journal of Psychiatric Research*. <http://dx.doi.org/10.1016/j.jpsychires.2014.04.004>

**Table 1**

## Characteristics of Study Participants

Characteristic	No. (%)
Total	1,293 (100)
Gender	
Male	1,036 (80.1)
Female	257 (19.9)
Age	
18 – 24 years	206 (16.1)
25 – 34 years	437 (34.3)
35 – 44 years	348 (27.3)
45 years or older	285 (22.3)
Race	
White	937 (80.6)
Non-White	225 (19.4)
Education	
High School or Less	171 (13.2)
Some College	377 (29.2)
College or More	745 (57.6)
Rank	
Enlisted	857 (73.6)
Officer or other	307 (26.4)

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Marital Status

Currently married      739 (57.2)

Not currently married      554 (42.8)

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Table 2

Correlation between anger and PTSD symptom severity by event type.

Event Type	Total			Men			n	$\beta$
	n	$\beta$ (95% CI)	$r$ (95% CI)	n	$\beta$ (95% CI)	$r$ (95% CI)		
Civilian Trauma	258	0.16 (0.13 – 0.20)	0.49 (0.39 – 0.57)	177	0.12 (0.08 – 0.17)	0.37 (0.23 – 0.49)	81	0
Military Trauma	697	0.18 (0.16 – 0.20)	0.51 (0.45 – 0.56)	604	0.18 (0.15 – 0.20)	0.52 (0.46 – 0.57)	93	0

Table 3

Adjusted<sup>a</sup> correlation between anger and PTSD symptom severity by event type.

Event Type	Total			Men			n
	n	Adj. $\beta$ (95% CI)	Adj. $r$ (95% CI)	n	Adj. $\beta$ (95% CI)	Adj. $r$ (95% CI)	
Civilian Trauma	214	0.15 (0.11 – 0.20)	0.46 (0.34 – 0.56)	146	0.09 (0.03 – 0.14)	0.29 (0.13 – 0.43)	68
Military Trauma	549	0.16 (0.14 – 0.19)	0.49 (0.42 – 0.55)	479	0.16 (0.13 – 0.19)	0.50 (0.43 – 0.56)	70

<sup>a</sup> Correlation adjusted for age, education, marital status, pay grade and race.