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Effect of Religiosity and Combat Exposure on Combat Veteran Posttraumatic Growth

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Introduction

Positive psychology has been used to explain positive coping and personal transformation after undergoing a traumatic event (Aspinwall, & Tedeschi, 2010). Such changes, including meaning-making and positive outlook in relationships, are termed posttraumatic growth (Calhoun, & Tedeschi, 2004; Tedeschi and Calhoun, 1996).

Over the last two decades, posttraumatic growth has been found among individuals with a history of childhood sexual abuse (Fritch, Mishkind, Reger, & Gahm, 2010); female victims of sexual assault (Grubaugh & Resick, 2007); victims of violence (Kunst, 2010) or terrorism (Val & Linley, 2006); survivors of cancer (Schroevers, Helgeson, Sanderman, & Ranchor, 2010), motor vehicle accidents (Shakespeare-Finch, & Armstrong, 2010), or natural disaster (Kilmer & Gil-Rivas, 2010); patients with HIV/AIDS (Sawyer, Ayers, & Field, 2010), life-threatening illness (Hefferon, Grealy, & Mutrie, 2009), or severe burns (Rosenbach & Renneberg, 2008); and prisoners of war (Feder et al., 2008). Several studies have investigated posttraumatic growth among veterans, but a paucity of research has studied posttraumatic growth among service members who served in Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF) (Benetato, 2011; Pietrzak et al., 2010), and little attention has been paid to the role of religiosity in posttraumatic growth among combat veterans (Badgett, 2009).

Religion is prominent in American culture and human experience. Moreira-Almeida, Neto, and Koenig (2006) found religious practices and behaviors were related to psychological well-being, including "life satisfaction, happiness, positive affect, and higher morale" (p. 245). Religious beliefs can provide a framework to understand and cope with traumatic experiences (Overcash & Calhoun, 1996). However, religious beliefs can also be a barrier to psychological health by using maladaptive thinking and coping strategies that can lead to increased distress rather than better psychological functioning.

Objectives

The purpose of this study is to investigate two research questions:

- I. Do pre-deployment religiosity among combat military service members and level of combat exposure predict posttraumatic growth?
- II. And, do the level of combat exposure and *changes* in religiosity predict posttraumatic growth in combat military service members?

Methods

The sample, obtained from an archival data set (Orton, 2012), was a group of male National Guard infantry deployed to the war in Iraq from 2007 to 2008 (N=75). Participants were given pre- and post-deployment measures one month before and six months after returning from the Iraq war. Four regression equations were used to predict posttraumatic growth. The predictor variables were religious behavior (DUREL scale), religious coping (Brief RCOPE scale), spiritual well-being (Brief Spiritual Well-being scale), and combat exposure (CES). The two criterion variables were measured by the Posttraumatic Growth Inventory (PTGI) and the PTGI Plus (three additional spiritual change items).

Participants

- Three Army National Guard Infantry platoons deployed to the Iraq War
- 221 participants completed assessments one-month prior to deployment
- Only 75 participants completed post-deployment assessments due to Army administrators misplacing the deidentified master list
- All the participants were male with a mean age of 27
- 43% of participants were single, 32% were married, 8% were divorced
- 77% completed high school/GED, 3% bachelors, 4% postgraduate
- Religious affiliations: 31% endorsed "none," 21% Christian Orthodox, 20% Protestant, 15% Catholic, 1% Jewish, and 12% other
- Ethnicity: 75% European American, 7% Native American, 4% Hispanic/Latino, 3% Asian American, 1% African American, 1% Pacific Islander

Measures

Eight predictor variables were derived from four measures:

- 1) The Duke University Religious Index (DUREL) is a five-item measure that assesses organized religious activity (e.g., frequency of attending religious services), non-organized religious activity (e.g., frequency of praying, meditating, or studying religious text) and intrinsic religiosity (i.e., internalization of one's religious practices and beliefs) (Koenig, Parkerson, & Meador, 1997). Prior research found the Cronbach alpha to be **0.91** for all five items, and this current study also calculated a **0.91** alpha.
- 2) The Brief Religious Coping scale (Brief RCOPE) is a 14-item measure designed to integrate religious dimensions that measure levels of stress, coping, and health (Pargament, Smith, Koenig, & Perez, 1998). Type of coping strategy is dichotomized into two categories: negative religious coping (e.g., feeling anger at God) and positive religious coping (e.g., religious forgiveness). The Brief RCOPE median coefficient alphas across 30 studies ranged from **0.81** to **0.92** for negative and positive religious coping respectively. This current study calculated alphas ranging from **0.84** to **0.96** respectively.
- 3) The Brief Spiritual Well-Being Scale (Brief SWBS) is a 6-item measure derived from the 20-item Spiritual Well-Being instrument (Bufford, 2011; Paloutzian & Ellison, 1982). Spiritual well-being is derived by measuring vertical (i.e., well-being in relationship to God) and horizontal directions (i.e., life's purpose and satisfaction), and the two directions are combined for a total spiritual well-being score. Prior research calculated Cronbach's alpha to be **0.91**, yet this current study found a **0.61** alpha.
- 4) The Combat Exposure Scale (CES) measures subjective accounts of the frequency and intensity of combat encounters (Keane et al., 1989). The CES has seven-questions with five-point ordinal values that measure frequency of certain types of combat exposure, ranging from light (0-8) to heavy (33-41) Prior research calculated the Cronbach's alpha to be **0.85**, and the current study found a **0.76** alpha.

Two criterion variables were derived from the Posttraumatic Growth Inventory (PTGI) and the PTGI Plus, which include three additional items to the spiritual change factor.

- PTGI loads on the following five factors (Tedeschi and Calhoun, 1996): relating to others, new possibilities, personal strength, spiritual change, appreciation of life.
- Item responses are rated on five-point ordinal scales, ranging from No Change to Very Great Change in positive growth following the traumatic event. Prior research calculated Cronbach's alpha to be **0.90**, and the current study found a **0.96** alpha.

Results

- Only the DUREL Intrinsic variable approached a normal distribution with a skewness of 0.11. A score of 9 on the DUREL Intrinsic scale indicates that participants on average were *unsure* about the role of their religious views (e.g., In my life, I experience the presence of the Divine); 17.3% of the sample scored a 15 that suggests intrinsic religiosity was *definitely not true* in their life.
- The Brief Positive RCOPE variable was moderately negatively skewed (0.70), due to 29.3% of the sample obtaining the minimum score of 7, suggesting no positive religious coping.
- The Brief Negative RCOPE was highly negatively skewed (1.83) due to 54.7% of the sample endorsing *not at all* on having a negative religious coping strategy.
- The DUREL Act and Brief SWB Horizontal variables had high positive skewness (-1.11 and -1.50 respectively).
- The combat exposure mean score was 13 (SD = 4.8) with high positive skew, due to 62.7% of the participants scoring 13 and below.

Descriptive Statistics for the Study Variables

	N	Pre-Dep. M (SD)	Post-Dep. M (SD)	Range			Rel. Change M (SD)**
				Potential	Actual*	Skewness**	
B. Pos. RCOPE	75	13.5 (6.6)	11.5 (6.1)	7-28	7-28	.70	-2.0 (4.7)
B. Neg. RCOPE	75	9.2 (3.5)	8.8 (3.6)	7-28	7-22	1.83	-4 (3.4)
DUREL Act.	75	9.1 (2.5)	9.4 (2.5)	2-12	3-12	-1.11	-3 (2.0)
DUREL Int.	75	9.1 (3.9)	10.3 (4.4)	3-15	3-15	.11	-1.2 (2.9)
B. SWB Hor.	75	11.4 (2.5)	13.5 (3.4)	3-18	3-17	-1.50	1.9 (2.7)
B. SWB Vert.	75	10 (3.6)	10.7 (4.6)	3-18	3-18	-.56	3 (6.7)
CES	75	--	13 (4.8)	7-35	7-35	1.5	--
PTGI	73	--	34.2 (25.9)	0-105	0-91	.28	--
PTGI Plus	73	--	36.7 (28.2)	0-120	0-99	.28	--

Note. *The actual range and skewness was calculated for the pre-deployment means and standard deviations only. ** The religiosity change scores were calculated by subtracting post-deployment from pre-deployment measures.

Regression Analysis

Four simultaneous multiple regression analyses were performed. The first set of eight predictor variables included seven religiosity scores from the pre-deployment measures that were derived from the DUREL, the Brief RCOPE, the Brief SWB scales, and the total combat exposure score. However, multicollinearity excluded using the Brief SWB total score in the regression models, resulting in seven independent variables. This first predictor variable set was entered into two regression models, and continuous scores from the PTGI and the PTGI Plus were entered as separate criterion variables in the respective regression equation.

The second set of predictor variable scores was derived by subtracting the post from the pre-deployment religiosity measures to create seven religious change scores. The total combat score from the CES and the religious change scores were entered into two regression equations that used the same criterion variables from the first set of regressions: PTGI and PTGI Plus.

All four multiple regression analyses found no significant results:

- 1) Religiosity variables were not related to PTG, $F_{(7, 65)} = 1.89, p = .09$
- 2) Using the same predictor variables in the first regression with PTGI Plus as the criterion variable, no significant relationship emerged, $F_{(7, 65)} = 1.95, p = .08$
- 3) Religious change scores were not related to PTG, $F_{(7, 62)} = .67, p = .70$
- 4) Using the same predictor variables in the third regression with PTGI Plus as the criterion variable, no significant relationship emerged $F_{(7, 62)} = .71, p = .66$.

Discussion

For this group of combat soldiers, religiosity and severity of combat exposure did not predict posttraumatic growth. In addition, no support was found for the hypothesis that changes in combat soldier religiosity and severity level of combat exposure would predict posttraumatic growth.

Only one prior study could be found that investigated the relationship between spirituality, combat exposure, and posttraumatic growth (Badgett, 2009). Among Vietnam War veterans, Badgett found that combat exposure and spirituality predicted higher posttraumatic growth. The present results do not support for Badgett's findings that combat exposure and religiosity leads to posttraumatic growth. It is possible that the positive growth Badgett found was driven by context (i.e., Vietnam War vs. Iraq War) and length of time between processing combat experiences and time of assessment (i.e., almost 40 years vs. 6 months). In addition, changes in combat circumstances (especially the possibility of multiple serial deployments) or social and cultural changes during the intervening years may affect the relationship between religiosity, combat exposure, and posttraumatic growth.

The low amount of combat exposure in this sample of National Guard combat soldiers, likely did not provide the necessary conditions of stress to activate cognitive reevaluation or religious changes that could lead to positive growth. Prior studies indicate that a positive or curvilinear relationship often occur in response to a stressor (e.g., healthcare stress, posttraumatic stress) with the greatest gains found in the moderate range (McLean et al., 2011; Kunst, 2010). In studies that found a curvilinear relationship, low and high levels of stress were related to lower posttraumatic growth, while moderate levels of stress yielded higher posttraumatic growth (Pietrzak et al., 2010). Therefore, it is possible that this study's low level of combat exposure was insufficient to initiate positive growth processes.

Another possible confound to this current study is the high rate of non-religious participants which could lower positive engagement (i.e., reluctance to answer religiosity questions) on religious assessment measures and perhaps not be representative of National Guard personnel overall. In this sample of National Guard infantry, 31% endorsed not having a religious orientation, whereas one study found only 21% of the military personnel affiliated as Atheist or endorsed not being religious (Segal & Segal, 2004). In addition, it is possible that National Guard personnel, who choose to spend their weekends drilling, tend to be less religious, and individuals who are more religious may not want to compromise their religious values by missing religious activity on weekends.

Finally, it is possible that these results may have been due to the study's low statistical power (N=75). A larger sample size might have increased the power to improve sensitivity in finding significant relationships between combat exposure, religiosity, and posttraumatic growth.

The interaction of religious variables between combat exposure and posttraumatic growth warrants further investigation. Studying religious factors among combat service members could provide more understanding on the relationship between religiosity, resiliency, and meaning making. For example, positive religious coping styles can lead to positive adjustment (Ross, Handal, Clark, & Vander Wal, 2009).

Selected References

- Aspinwall, L., & Tedeschi, R. (2010). The value of positive psychology for health psychology: Progress and pitfalls in examining the relation of positive phenomena to health. *Annals of Behavioral Medicine: A publication of the Society of Behavioral Medicine*, 39(1), 4-15.
- Badgett, K. (2009). The moderating effects of spirituality: An exploration of combat exposure, symptom experience, guilt, and posttraumatic growth. *Dissertation Abstracts International*, 69.
- Benetato, B. B. (2011). Posttraumatic growth among Operation Enduring Freedom and Operation Iraqi Freedom amputees. *Journal of Nursing Scholarship*, 43(4), 412-420. doi:10.1111/j.1547-5069.2011.01421.x
- Calhoun, L. G., & Tedeschi, R. G. (2004). The foundations of posttraumatic growth: New considerations. *Psychological Inquiry*, 15(1), 93-102.
- Moreira-Almeida, A., Neto, F., & Koenig, H. (2006). Religiousness and mental health: A review. *Revista Brasileira De Psiquiatria* (São Paulo, Brazil: 1999), 28(3), 242-250.
- Overcash, W. S., & Calhoun, L. G. (1996). Coping with crises: An examination of the impact of traumatic events on religious beliefs. *Journal of Genetic Psychology*, 157(4), 455.

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