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Comparing Two Distinct Military Samples on Traumatic Events, Positive Coping Styles and Post Traumatic Growth

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Abstract

This study collected complete data traumatic event-related information, positive coping styles, and post traumatic growth variables from two different United States (US) military veteran samples: non-combat military veterans (n = 54) and combat military veterans (n = 84). Although both samples represent military veterans, only one sample experienced actual combat, i.e., active fighting in a war against an enemy. All data were collected via online survey. Demographically, both samples were predominately White male, with a four-year college degree being the highest education level frequency. The average participant age was 29 years and there was no significant mean age difference between the samples. In addition, there were no significant sample differences in the total number of traumatic events experienced or time since the most powerful traumatic event was experienced. The purposes of this study were to: (1) test if four positive coping strategies were related to Post Traumatic Growh (PTG), and (2) to determine if there were differences in the use of these four coping strategies or experienced PTG for non-combat versus combat military veterans. The four positive coping styles were measured, instrumental support, emotional support, religion, and acceptance. For the combined sample, two coping styles, instrumental support and religion were each significant positively related to post traumatic growth (PTG). Significant sample differences were found on instrumental support and religion such that the non-combat veterans perceived higher mean levels on both coping styles versus the combat veterans. No sample difference was found for PTG. Future research directions and study limitations are discussed.

Keywords: positive coping styles, military veterans, post traumatic growth, traumatic event

1. Introduction

1.1 Importance of the Problem

The 2020 National Veteran Suicide Prevention Annual Report (United States Department of Veterans Affairs, 2020), noted the average number of Veteran suicides per day was 17.6 in 2018. Clearly support resources are critical for suicide prevention, and other health-related issues. Strong support networks (e.g., family, Veteran Service Organizations, community, health care providers), as well as specific coping styles, can help veterans better manage past experienced trauma and lead to Post Traumatic Growth (United States Department of Veterans Affairs, 2020). Post traumatic growth (PTG) has been defined as "meaningful psychological changes that an individual may experience from struggling with stressful and traumatic life events" (Tsai, El-Gabalawy, Sledge, Southwick & Pietrzak, 2015, p. 165). After initially working with a 21-item measure of PTG, Cann et al. (2010) successfully developed a 10-item short form of the Posttraumatic Growth Inventory (PTGI) which includes two items from each of the five subscales of the original 21-item PTG. The five dimensions are: Relating to Others, New Possibilities, Personal Strength, Religion, and Appreciation of Life. PTG has been studied with different samples experiencing a wide range of stresses and traumas, e.g., war veterans (Pietrak et al., 2010); battered women (Bitton, 2014); and individuals with medical conditions (Garnefski, Kraaij, Schroevers, & Somsen, 2008). Comparing samples of 153 military veterans (combined non-combat and combat experienced) versus 99 civilians, Blau and Miller (2019) found that the coping scale of positive reframing (Carver, 1997) was significantly positively related to PTG for both samples. Carver's (1997) coping scale of alternative work was only positively related to PTG for the military veteran sample, while the coping scale of self-distraction was only positively related to the civilian sample. While prior research has compared combat versus non-combat military veterans (Galor & Hentschel, 2013), this study focused on Post Traumatic Growth

(PTG). There has been less research to date comparing positive coping styles and PTG separating out non-combat versus combat military veterans dealing with TEs. That was the purpose of this study.

1.2 Describe Relevant Scholarship

Schneider, Palmer, Romero and O'Regan (2015, p. 157) defined a traumatic event (TE) as as "any accidental man-made disaster (e.g., Chernobyl nuclear power plant disaster), natural disaster (e.g., flood, tornado) or deliberate man-made disaster (e.g., war)." The number of TEs an individual has faced over time as well as the time since the most powerful/impactful TE are also important factors to consider (Falkenstein, C'DeBaca, Belon, & Castillo, 2017). Coping styles can affect how an individual adjusts to a TE or stress, and one general distinction between types of coping is problem-focused coping versus emotion-focused coping (Carver, Scheier, & Weintraub, 1989). Both involve seeking social support from others (Carver el al., 1989), but problem-solving coping focuses more on altering the source of the stress, while emotion-focused coping tries to reduce the emotional distress associated with the situation (e.g., TE). Many stressful situations/TEs could be expected to utilize both types of general coping, however early research (Folkman & Lazaus, 1980) suggested that problem-focused coping is more prevalent when individuals feel that something constructive can be done, while emotion-focused coping is more often found when individuals feel that the stressor/TE must be suffered/endured.

Examples of problem-focused coping strategies are instrumental support and religion (Carver, 1997). Seeking instrumental support involves getting advice, assistance or information from someone, while religion can involve praying and/or meditating. Examples of emotion-focused coping strategies are feeling-based support and acceptance. Getting emotional support can involve getting sympathy or understanding from someone, while acceptance can mean not trying to suppress (block out) the stressor/TE (Carver et al., 1989). Carver et al. (1989) argued that one must first accept the reality of a TE/stressful situation before dealing with it. To date litte empirical research exists comparing the use of these four specific coping strategies, i.e., instrumental support, religion, emotion support and acceptance, in helping to facilitate PTG using distinct military samples.

1.3 Research Questions and Correlational/T-test Independent Samples Research Design

Given the lack of prior research specifically comparing combat versus non-combat military veterans on these positive coping styles, this study asked the following research questions (RQ): (1) do the four positive coping strategies of instrumental support, emotional support, religion, and acceptance, relate to PTG? and (2) are there any significant differences in the use of these four coping strategies or experienced PTG for non-combat versus combat military veterans? The first research question will be tested using correlation analyses, and the second research question by independent sample t-tests.

2. Method

2.1 Participants and Procedure

In the Spring of 2019, a pre-tested Qualtrics survey link was sent out asking participants if they had experienced a past traumatic event (TE), and if so to answer items related to how they experienced/dealt with this TE. Asking respondents to recall a prior TE generally involves minimal risk (Ferrier-Auerbach, Erbes, & Polusny, 2009). Furthermore, respondents were told that they could skip an item if it was too upsetting to answer. There were two samples of military veteran respondents, those with combat experience and those without. Respondents came from several different sources. One source was the Mid-Atlantic United States (U.S.) University student chapter Veterans' Association. A second source was different contacts the second author had as a combat-experienced military veteran with different U.S.-based veteran-oriented organizations. These organization were primarily smaller non-profits organized to support veterans and their families. The survey was anonymous and took approximately 15 minutes to fill out. Once respondents submitted this first Qualtrics survey, they were automatically taken to a separate second very brief Qualtrics survey. This survey asked for an email address so respondents could be randomly selected for either $50, $20, or $10 multiple gift card drawings. The first item in the initial survey was a voluntary consent item, and respondents were instructed not to take the survey if they were under 18 years old. University Institutional Review Board approval was given for this project. Over a period of approximately three months, there were 320 respondents to the first survey, and 269 to the second survey. Unfortunately, 68 (21%) of the respondents to the first survey had over 90% missing data and were discarded, leaving a sample of 252 respondents. Ninety-nine of thes 252 respondents (39%) were civilians (no military experience), and could not be included in this study. Of the 153 remaining (252 – 99) military respondents, 138 (89%) provided complete data for this study. All variables mentioned below were asked in the first Qualtrics online survey.

2.2 Measures

Non-combat military veteran versus combat-experienced military veteran. Respondents were asked, "which category best described them, where: 1 = non-combat military veteran; and 2 = combat-experienced military veteran. The sample sizes were: 1 = non-combat military veteran, n = 54; and 2 = combat-experienced military veteran, n = 84.

Demographic variables. Five one-item demographic variables were asked: *gender,* where 1 = male, 2 = female; *race*, where 1 = African American, 2 = American Indian, 3 = Asian, 4 = Hispanic, 5 = Multi-racial, 6 = Pacific Islander, 7 = White; *age*, indicated in years; *highest education level*, where 1 = high school diploma, to 6 = doctorate, medical, dental or law degree; and *occupational breakdown* "if you are currently working either part-time (less than 35 hours/week) or full-time (at least 35 hours/week), what occupation best describes your current position?" More specific variable response scales are reported in Table 1 (Demographics) of the Results section.

Most powerful prior traumatic event (TE). A 14 item TE measure was used, asking respondents to pick "the one most powerful traumatic event you have faced either in the line of duty/doing your job, or in a non-work situation. This is the event that you feel had the greatest impact on you." Given the focus on comparing military combat versus non-combat veterans, this 14-item scale, utilized items from more general TE scales (Boyraz, Waits, Felix, & Wynes, 2016; Pietrzak & Cook, 2013; Tsai et al., 2015), but asked additional TE items focusing on specific military-related situations. A separate "other" item category allowed the respondent to fill in their own most powerful TE if it was not on the list. This result of this measure, separated by non-combat military vetean (n = 54) versus combat military veteran samples (n = 84), are reported in Table 2 of the Results section.

Traumatic event variables. Two items were measured. The first asked respondents "if you have experienced more than one trauma from the above list of 14 categories, please indicate how many trauma events you have experienced." The response scale was from 1 = 2 to 6 = more than 6. Responses to this item were added to the initial "most powerful TE" answer to create a "total number of traumatic events" variable used in subsequent data analyses. The second item asked, "how long ago did you face the one most powerful traumatic event you identified above" (in the survey). Response categories ranged from 1 = less than 6 months ago, to 14 = over 50 years ago. These response categories are fully detailed in the Results section.

Coping variables. Four positive coping styles were measured: instrumental support, emotional support, religion and acceptance. The frame of reference provided was "please answer these items thinking about the one most powerful traumatic event you experienced." Two two-item coping scales from Carver's (1997) Brief COPE measure were used: instrumental support, emotional support, religion, and acceptance. A sample item for instrumental support was "I've been getting help from others about what to do." A sample item for emotional support was "I've been getting comfort and understanding from others when needed." A sample item for religion was "I've been praying or meditating." A sample item for acceptance was "I've been accepting the reality of what happened." Items were answered on a 7-pont scale, where 1 = strongly disagree to 7 = strongly agree. Coefficient alphas for these scales in this study were: instrumental support = .86; emotional support = .92; religion = .90; and acceptance = .83. These alphas compare very favorably to those cited in Carver (1997), instrumental support = .64; emotional support = .71; religion = .82; and acceptance = .57.

Post Traumatic Growth (PTG). This variable was measured using the 10-item short-form Post Traumatic Growth Inventory (PGTI) developed by Cann et al. (2010). This 10-item short-form version was derived from the longer 21-item PGTI, and has been shown to be as valid and reliable as the longer 21-item version (Cann et al, 2010). In their study of resiliency among 3,157 US military veterans, Tsai et al. (2015) successfully used the short-form PTG. The 10-item measure contains two items for five factors: *Relating to Others*, e.g., "I learned a great deal about how wonderful people are'; *New Possibilities*, e.g., "I established a new path with my life;" *Personal Strength*, e.g., "I know better that I can handle difficulties;" *Religion*, e.g., "I have a better understanding of spiritual matters;" and *Appreciation of Life*, e.g., "I have a greater appreciation for the value of my own life." Respondents were asked to "think about the one most powerful traumatic event or crisis you experienced" when answering these items. Item responses were made using a 6-point response scale, where 1 = I did not experience this change as a result of my crisis; 2 = I experienced this change to a very small degree as a result of my crisis; 3 = I experienced this change to a small degree as a result of my crisis; 4 = I experienced this change to a moderate degree as a result of my crisis; 5 = I experienced this change to a great degree as a result of my crisis; and 6 = I experienced this change to a very great degree as a result of my crisis. The scale reliability using this sample was .91, which compares favorably with the alpha of .89 reported by Cann et al. (2010).

2.3 Data Analyses

All data were analyzed using SPSS-PC version 24 (SPSS, 2018). Frequency breakdowns and percentages are reported for the most powerful TE and demographic variables, comparing the two samples. Means, standard deviations and correlations between continuous variables were calculated using the combined samples. Correlational analyses were used to test the first research question. There were no missing data (complete data sample N = 138). Independent sample t-tests were used to test for significant mean differences on the continuous variables for the second research question. A significance level of $p < .05$ (two-tailed) was used as the cutoff for statistical significance (Stevens, 1996).

3. Results

3.1 Demographic Variable Breakdown and Most Powerful TE by Sample

Table 1. Demographic variables—non-combat military veteran versus military combat veteran samples

Variable	Non-combat Military Veteran Sample (n = 54)	Combat Military Veteran Sample (n = 84)
Gender		
Male	n = 39 (72%)	n = 76 (90%)
Female	n = 14 (26%)	n = 8 (10%)
Did not identify	n = 1 (2%)	
Race		
African American	n = 6 (11%)	n = 5 (6%)
American Indian	n = 0	n = 0
Asian	n = 2 (4%)	n = 4 (5%)
Hispanic	n = 3 (6%)	n = 4 (5%)
Multi-racial	n = 5 (9%)	n = 7 (8%)
Pacific Islander	n = 0	n = 0
White	n = 38 (70%)	n = 64 (76%)
Did not identify	n = 0	
Age (collapsed into categories for space)		
19–25	n = 10 (19%)	n = 3 (4%)
26–32	n = 12 (22%)	n = 15 (18%)
33–39	n = 6 (11%)	n = 25 (30%)
40–46	n = 7 (13%)	n = 5 (6%)
47–53	n = 4 (7%)	n = 13 (15%)
54–60	n = 3 (6%)	n = 3 (4%)
61–67	n = 3 (6%)	n = 2 (2%)
68–74	n = 8 (15%)	n = 13 (15%)
75 or more	n = 1 (2%)	n = 5 (6%)
Highest Education Level		
High School Diploma	n = 2 (4%)	n = 1 (1%)
Some College	n = 13 (24%)	n = 7 (8%)
Associate Degree	n = 5 (8%)	n = 9 (11%)
Four Year Degree	n = 17 (31%)	n = 32 (38%)
Masters Degree	n = 12 (23%)	n = 25 (30%)
Doctorate, Medical, Dental or Law Degree	n = 5 (10%)	n = 10 (12%)
Current Occupation – largest categories (not 100% of full samples)		
Police Officer	n = 2 (5%)	n = 3 (4%)
Physical Health-related (e.g., nurse)	n = 2 (3%)	n = 6 (7%)
Mental Health-related (e.g., therapist)	n = 2 (3%)	n = 4 (5%)
Education-related (e.g., teacher)	n = 10 (19%)	n = 4 (5%)
Financial Services (e.g., banking)	n = 1 (2%)	n = 1 (1%)
Government/Public Administration	n = 2 (3%)	n = 5 (6%)
Hospitality-related	n = 1 (2%)	n = 1 (1%)
Manufacturing-related	n = 0	n = 5 (6%)
Construction-related (e.g., engineer)	n = 2 (5%)	n = 3 (4%)
Entertainment (e.g., sports, media)	n = 2 (3%)	n = 0
Other – (biggest listings)	n = 20 (39%)	n = 39 (46%)
Retired	n = 10 (19%)	n = 18 (21%)
Not working	n = 6 (13%)	n = 14 (17%)
Active-duty military	n = 0	n = 4 (5%)
Army/National Guard Reserves	n = 2 (3%)	n = 3 (4%)
Graduate Student	n = 2(3%)	n = 0

Results are broken down comparing non-combat military veteran versus combat military veteran samples. Looking at the most powerful TE (Table 2), for the non-combat veteran sample the highest frequency specific TE was "non-work: experiencing personal domestic violence/sexual assault/physical abuse," n = 9 (17%), while for the combat veteran sample it was was "seeing a comrade/fellow soldier killed/severely wounded," n = 31 (37%).

Table 2. Most powerful type of traumatic event by non-combat military veteran versus military combat veteran samples

Most Powerful Traumatic Event Faced	Non-combat Military Veteran Sample (n = 54)	Combat Military Veteran Sample (n = 84)
Killing/severely wounding enemy soldiers	n = 0	n = 8 (10%)
Killing/severely wounding civilians	n = 0	n = 2 (2%)
Seeing a comrade/fellow soldier killed/severely wounded	n = 5 (9%)	n = 31 (37%)
Being severely wounded/injured in combat	n = 0	n = 6 (7%)
Killing/severely wounding someone committing a crime	n = 0	n = 0
Seeing a work colleague killed/severely wounded	n = 2 (4%)	n = 4 (5%)
Seeing a civilian(s) killed/severely injured during a crime scene, fire or accident	n = 7 (13%)	n = 5 (6%)
Suffering a serious personal work-related injury/accident (being unable to work)	n = 1 (2%)	n = 1 (1%)
Seeing a work colleague suffer a serious work-related injury/accident (being unable to work)	n = 0	n = 0
Non-work: violent death of a family member (e.g., spouse, parent, child)/close friend, including suicide and drug overdose	n = 5 (9)%	n = 3 (4%)
Non-work: non-violent death (e.g., illness, accident, natural disaster) of a family member/close friend	n = 6 (11%)	n = 4 (5%)
Non-work: serious personal illness/injury/accident	n = 5 (9%)	n = 4 (5%)
Non-work: experiencing personal domestic violence/sexual assault/physical abuse	n = 9 (17%)	n = 0
Non-work: witnessing domestic violence/sexual assault/physical abuse	n = 2 (4%)	n = 1 (1%)
Other – list (biggest listings)	n = 12 (22%)	n = 15 (18%)
Sexual assault in military or non-military	n = 3 (6%)	n = 3 (4%)
Work harassment/abuse/discrimination	n = 2 (4%)	n = 2 (2%)
Survivors' guilt	n = 0	n = 3 (%)
Work-related stress (e.g., armed forces mortuary; spectator heart attack; robbed)	n = 0	n = 0
Personal injury, e.g., not in combat	n = 2 (4%)	n = 0
Witnessing a tragedy (e.g., veteran suicide; family member severe injury)	n = 0	n = 0
Living in alcoholic household	n = 0	n = 0
Working with children experiencing trauma	n = 1 (2%)	n = 0
Spouse-related stress (e.g., divorce, car accident)	n = 0	n = 0
Family-related stress (e.g., homelessness; domestic verbal abuse)	n = 2 (4%)	n = 0

Table 1 reports the demographic breakdown. Both military samples were male-dominated, and predominantly racially White. Age was reported in years but is collapsed into categories to save space in the table. The age group 26–32, n = 12 (22%) was the highest frequency for the non-combat military sample; and 33–39, n = 25, (30%) was the highest frequency category for the combat military sample. For both samples, a four-year degree was the highest education level frequency category. For current occupational category, being retired or education-related were tied for the highest for the non-combat military sample, n = 10 (19%) each, while being retired was the highest for the combat military, n = 18 (21%).

3.2 Means, Standard Deviations and Correlations for Continuous Variables, and Testing if the Four Coping Strategies Relate to Post Traumatic Growth

Table 3 shows the sample means, standard deviations and correlations for continuous variables for the full sample. Based on the 7-point response scale, there are generally moderate levels for three coping styles—instrumental support ($M = 4.14$), emotional support ($M = 4.52$) and religion ($M = 4.05$). There is a higher level for the acceptance coping style ($M = 5.68$). Inspection of the correlations between these four coping scales shows that they are generally lower, with the exception of the stronger correlation of r (136) = .70, between instrumental support and emotional support. As Carver et al. (1989) noted earlier, both types of coping involve seeking out social support, however, instrumental is more problem-focused (e.g., getting assistance), while emotioanal is emotion-focused (e.g., getting sympathy). Thus, they are considered to be related but conceptually distinct. Carver et al. (1989, p. 273) found a correlation of r (976) = .69 between these two support dimensions in

their study, which is very similar to the correlation found in this study. Such results indicate that both types of coping are sufficiently independent and can be used separately (Stevens, 1996). Subsequent research has used both scales (Carver, 1997). There is a moderate level of PTG (M = 3.49). Looking at the correlations of the independent variables with PTG, only instrumental support r (136) = .30, p < .01, and religion r (136) = .35, p < .01, but not emotional support or acceptance, are significantly related to PTG. These two correlational reults show that there is partial support for the first research question.

Table 3. Means, standard deviations, and correlations for continuous variables for combined samples

Measure	M	SD	1	2	3	4	5	6	7	8
1. Age[a]	28.67	16.72	(---)							
2. Total Number of Traumatic Events[b]	3.15	2.07	-.20**	(---)						
3. Time Since Most Powerful Traumatic Event[c]	5.99	3.23	.62**	-.12	(---)					
4. Instrumental Support[d]	4.14	2.05	.18*	.05	.01	(---)				
5. Emotional Support[d]	4.52	1.90	.11	-.13	-.04	.70**	(---)			
6. Religion[d]	4.05	2.14	.28**	.01	.03	.33**	.18*	(---)		
7. Acceptance[d]	5.68	1.20	-.05	-.03	-.13	-.06	-.02	.19*	(---)	
8. Post Traumatic Growth[e]	3.49	1.36	.14	.08	.15	.30**	.11	.35**	-.06	(---)

Note. (n = 138), * p < .05; ** p < .01 (two-tailed).

[a] Age, measured in years.

[b] Total Number of Traumatic Events, 1 = 1, 2 = 2, 3 = 3, 4= 4, 5 = 5, 6 = 6, 7 = more than 6.

[c] Time Since Most Powerful Traumatic Event, where 1 = less than 6 months ago, 2 = 6 months to 1 year, 3 = 1 to 2 years, 4 = 3 to 5 years, 5 = 6 to 10 years, 6 = 11 to 15 years, 7 = 16 to 20 years, 8 = 21 to 25 years, 9 = 26 to 30 years, 10 = 31 to 35 years, 11 = 36 to 40 years 12 = 41 to 45 years, 13 = 46 to 50 years, 14 = over 50 years.

[d] Instrumental Support, Emotional Support, Religion, Acceptance, 1 = strongly disagree to 7 = strongly agree.

[e] Post Traumatic Growth, 1 = I did not experience this change as a result of my crisis to 6 = I experienced this change to a very great degree as a result of my crisis.

3.3 Are There Significant Differences in the Use of These Four Coping Strategies or Experienced PTG for Non-Combat versus Combat Military Veterans?

Table 4. Independent sample T-tests of means on continuous variables

Variables[a]	Age		Total Number Traumatic Events		Time Since Most Powerful TE		Instrumental Support		Emotional Support		Religion		Acceptance		Post Traumatic Growth	
	t = -.82		t = -1.03		t = -1.61		**t = 2.30***		t = 1.58		**t = 2.01***		t = 1.34		t = -1.52	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
Cell Means	27.57	29.38	2.93	3.30	5.44	6.35	**4.64[c]**	**3.83[d]**	4.84	4.32	**4.50[c]**	**3.76[d]**	5.85	5.57	3.26	3.63
Standard Deviations	17.67	16.15	2.07	2.07	3.11	3.23	1.79	2.16	1.71	2.00	1.99	2.20	1.08	1.27	1.48	1.26

(1) Non-combat Veterans (n = 54)

(2) Combat Veterans (n = 84)

Note.* p < .05; (two-tailed)

[a]Variables: *Age*, measured in years; *Total Number of Traumatic Events*, 1 = 1 to 7 = more than 6; *Time Since Most Powerful Traumatic Event (TE)*, where 1 = less than 6 months ago, 2 = 6 months to 1 year, 3 = 1 to 2 years, 4 = 3 to 5 years, 5 = 6 to 10 years, 6 = 11 to 15 years, 7 = 16 to 20 years, 8 = 21 to 25 years, 9 = 26 to 30 years, 10 = 31 to 35 years, 11 = 36 to 40 years 12 = 41 to 45 years, 13 = 46 to 50 years, 14 = over 50 years; *Instrumental Support, Emotional Support, Religion, Acceptance*, 7-point response scale, 1 = strongly disagree to 7 = strongly agree; *Post Traumatic Growth,* 1 = I did not experience this change as a result of my crisis to 6 = I experienced this change to a very great degree as a result of my crisis

[b]Within each outcome, **bolded** cell means that do not share the same superscript [c versus d] are significantly different at the p < 0.05 level (two-tailed)

Using independent sample t-tests, this study explored whether there were differences in the four positive coping styles and PTG between non-combat versus combat veterans to test the second research question. All results are shown in Table 4. Before reporting these results, we first tested if there were significant differences on age, total number of traumatic events (TEs), and time since most powerful TE. As shown in Table 4 there were no significant differences on these three variables between non-combat versus combat veterans. When testing the four positive coping styles, there were two significant mean differences. Non-combat veterans were higher on instrumental support ($M = 4.64$) than combat veterans ($M = 3.83$), with a t-test result of $t(136) = 2.30$, $p < .05$, and non-combat veterans were also higher on religion ($M = 4.50$) than combat veterans ($M = 3.76$), with a t-test result of $t(136) = 2.01$, $p < .05$. There were no significant differences for emotional support, acceptance, or PTG. Thus, there is partial support for the second research question.

4. Discussion

To our knowledge this is the first empical study testing the relationships of these four specific positive coping styles in dealing with a traumatic event, and post traumatic growth (PTG) using two distinct US military veteran samples: non-combat military veterans and combat military veterans. Despite being distinct samples, there were no significant sample differences for age, in the total number of traumatic events experienced, or time since the most powerful traumatic event was experienced. Partial support was found for both research questions. For the first research question using the combined sample, two of the four positive coping styles, instrumental support and religion, were each significant positively related to post traumatic growth (PTG). For the second research question, significant sample differences were found on instrumental support and religion such that the non-combat veterans perceived higher mean levels versus the combat veterans.

Although no sample differences were found for means on PTG, it is important to discuss the combined findings of instrumental support and religion both being significantly positively related to PTG and combat veterans being significantly lower than non-combat veterans on instrumental support and religion. Referring back to Table 1, most powerful type of Traumatic Event, 37% ($n = 31$) of the sampled combat veterans reported "seeing a comrade/fellow soldier killed/severly wounded." In addition, the second highest reported frequency 10% ($n = 8$) was "killing/severly wounding enemy soldiers." Both events can be extremely traumatizing and prior research has focused on Moral Injury (MI), being defined as "involving distress over having transgressed or violated core moral boundaries, accompanied by feelings of guilt, shame, self-condemnation, loss of trus, loss of meaning and spiritual struggles" (Koenig, Youssef, & Pearce, 2019, p. 1). Furthermore, MI (Koenig et al., 2019) can lead to Post Traumatic Stress Disorder (PSTD), and increase the risk of suicide. Thus, one finding implication is that combat veterans in particular, because of the trauma experienced, receive not only important therapeutic understanding (e.g., emotional support), but also instrumental support (e.g., realistic information from fellow combat-tested veterans) to help them deal with the TEs they have witnessed (Southwick, Sippel, Krystal, Charney, Mayes, & Pietrzak, 2016). Beyond fellow soldiers, as noted by Southwick et al. (2016), instrumental support can come from one's community to help foster resilience.

As a specific example, the second author has worked with veterans within a community circle, monthly, for over six years. The veterans and the entire circle are offered prompts for discussion. An example prompt that has initiated stories is "tell us about a time you have been/felt betrayed? Over the six years, all veteran participants have told of a traumatic event that they had never told anyone before. The TE's were as long ago as 50 years. Those TEs that evoked significant emotions including guilt and shame can be catorgized as moral injury or moral wounds (Koenig et al., 2019). The TE stories are told within a group of 12 to 20 people. The circle typically includes six veterans, and the remainder are civilians. In these circles the civilians are called "strong-hearts." The term strong-hearts is used to acknowledge their compassion and character to hear veterans' stories.

The "spiritual struggles" of MI noted by Koenig et al. (2019) can be partially eased by having religion as a positive coping mechanism. Religion is not meant to focus on only one specific religion and its rituals (e.g., Catholocism, Judiasm) but more on the spiritual values uniting all religions (e.g., desire for peace, expressions of kindness, respect for all humans), actively practiced through perhaps prayer and/or meditation, or other means. Such spiritual beliefs can help combat veterans deal with the violence of TEs during war (Wabule & Tarusarira, 2019). Another study implication would be to allow combat soldiers time away from fighting to pray/meditate with fellow soldiers for healing spiritual value expression as a specific coping mechanism. Morgan, Desmaris and Neupert (2017) found that religious attendance helped Post 9/11 military veterans deal with a traumatic or distressing event. To further illustrate this, in their review of spirituality/religion and moral injury, Bremault-Phillips, Pike, Scarcella and Cherwick (2019) noted that spirituality/religion can be a protective factor against moral injury among military personnel and veterans.

It is deserving of comment that neither positive coping style of emotional support or acceptance were significantly positively related to PTG. As noted above, for combat veterans the impactful TEs were war-related, while the highest frequency impacful TE experienced by non-combat veterans in Table 1 was "non-work: experiencing personal domestic violence/sexual assault/physical abuse." This suggests that neither emotional support nor acceptance were "strong enough" coping styles individually to help victims experience significant positive growth, and that measuring additional coping approaches were needed (Regev & Nuttman-Shwartz, 2019).

4.1 Study Limitations

As with all studies, this research has limitations. One is the threat to internal validity, i.e., other explanations for the results found (Stevens, 1996). Several prominent factors which jeopardize internal validity include: history; subject selection bias; and instrumentation (Stevens, 1996). For history, given the great variation in time since the most powerful TE a participant faced, how one coped with this most powerful TE could have changed over time. We could not record any change. Concerning subject selection bias, participants self-selected into taking the online survey, based on their prior experience with some type of TE. This includes acknowledging that the second author contacted specific different U.S.-based veteran-oriented organizations for their study participation. However, tht authors had no control over which respondents decided to take the survey when they approached different organizational sources, e.g., University student chapter Veterans' association; grief-focused groups. We also believe that the cash gift card incentive "damaged" the complete data collection process because we found respondents who after filling out only the first few items, went to the bottom of the survey to click on the separate second survey for gift drawing eligibility, i.e., 21% (n = 68) of the respondents to the first survey had over 90% missing data. This high percentage missing data was discarded.

Instrumentation or measurement is important to note. Only four coping styles were measured, i.e., instrumental support, emotional support, religion and acceptance, and they are conceptualized as more "positive" (Carver et el., 1989). Having additional coping styles, including a mix of positive and negative such as behavioral disengagement, substance abuse, self-blame (Carver, 1997) could have led to additional "richer" findings. Method bias is a concern because only self-report measures were used. When entering all of the items into a principal compents analysis (PCA), the one-factor test found seven factors, each with an eigenvalue of over 1. Twenty-five percent of the total variance was accounted for by the first factor. If this first factor represents self-report method bias, it is not a major limitation (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Spector (2006) has argued that self-report method bias does not inflate study results to a significant degree. Finally, using a cross-sectional design does not allow for making a strong causal inference of coping style affecting PTG.

4.2 Future Directions

The United States Department of Veterans Affairs (2020) has presented a full public health model, using clinically-based (e.g., evidence-bsed psychotherapies) and commmunity-based (e.g., Veterans integrated Service Networks) resources, focusing on both the short term and long term to help all US Veterans, since as this study's results show, non-combat veterans also experience trauma. Beyond instrumental support and religion, what are other coping approaches that may help veterans experience significant positive growth? In his Brief COPE measure (Carver, 1997) presents two-item scales for measuring other positive coping styles, including: humor, planning, and positive reframing. These positive coping styles need to be tested in future military veteran research to examine their influence on PTG, as well as comparing such coping style use by combat versus non-combat veterans.

4.3 Conclusion

Comprehensive health services, e.g, medically-related, mentally-related, and home-related, continue to be needed for our current Veterans, their families, and retirees (United States Department of Veterans Affairs, 2020). This study explored the role that four "mentally-related" positive coping styles play in influencing veterans' Post Traumatic Growth (PTG). Results were encouraging in that two of the styles, instrumental support and religion, were each positively related to PTG, and that non-combat veterans perceived higher levels on both of these coping styles versus combat veterans. Beyond continuing to give all veterans more access to health services, these study findings also draw further attention to the importance of distinguishing combat versus non-combat military veterans when doing trauma-related research (Blau & Miller, 2021).

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