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## Religious Coping and Psychological Distress in Military Veteran Cancer Survivors

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### Abstract

Research on the relationship between religious coping and psychological well-being in cancer survivors is limited. Forty-eight veteran cancer survivors completed measures of psychological distress, posttraumatic growth, and positive and negative religious coping. Negative religious coping was associated with greater distress and growth. Positive religious coping was associated with greater growth. Gender, race, and religious affiliation were significant predictors of positive and negative religious coping. Veteran cancer survivors who utilize negative religious coping may benefit from referral to clergy or a mental health professional. Assessment of religious coping may be particularly important for female, non-White, and Christian cancer survivors.

### Keywords

Religious coping; Cancer survivor; Veteran; Psychological distress

### Introduction

Cancer survival rates have steadily increased since 1975 in people aged 65 years and above (NCI 2003). Despite these improvements in survival, a significant proportion (30–40%) of

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older adult cancer survivors report psychological distress in the form of fear of cancer recurrence, anxiety, and depression (Deimling et al. 2006). Traumatic stress symptoms, especially re-experiencing and arousal, are common (Andrykowski et al. 1998; Cordova et al. 2000) with up to 67% of patients endorsing PTSD symptoms in the year following cancer treatment (Kangas et al. 2002; Spencer et al. 1998). These high rates of psychological distress warrant identification of effective coping strategies in cancer survivors.

### Religiosity/Spirituality and Cancer

Religiosity and spirituality (R/S) are important to many cancer survivors (Gall and Cornblat 2002; Vachon 2008). In addition, R/S has been associated with psychological well-being in cancer survivors including higher health-related quality of life (Canada et al. 2008; Edmondson et al. 2008; Wildes et al. 2009), better general mental health (Canada et al. 2008; Purnell et al. 2009), lower levels of depression (Canada et al. 2008; Hamilton et al. 2010), and anxiety (Canada et al. 2008), and fewer traumatic stress symptoms due to cancer (Purnell et al. 2009). Changes in spirituality over time are also associated with psychological well-being. In a sample of middle-aged cancer survivors, increases in faith over time predicted more perceived growth or positive change due to stressful experiences while increases in meaning/peace predicted better emotional function and lower cancer-related distress (Yanez et al. 2009).

Religious activities are also frequently cited as coping responses to cancer (Cigrang et al. 2003; Ross et al. 2008; Zaza et al. 2005). In a study of patients with cancer, chronic pain, and cardiovascular disease, 26.1% of the sample spontaneously provided religious responses when asked how they coped with their medical illness; the cancer patients reported the highest relative percentage of religious coping responses (Cigrang et al. 2003). In a nationally representative sample of patients with a history of cancer, 68.5% of participants reported praying for their health (Ross et al. 2008). This study also found that military veterans reported praying for their health less often than non-veterans, although this effect disappeared after controlling for sociodemographic variables.

Religious coping strategies have been categorized into positive and negative religious coping (Pargament et al. 1998). Positive religious coping (PRC) includes a sense of love, compassion, and partnership with the divine, while negative religious coping (NRC) is characterized by strain and an ominous view of the world (Pargament et al. 1998). Positive religious coping is consistently more common than negative religious coping in cancer patients (Hebert et al. 2009; Sherman et al. 2009; Zwingmann et al. 2006). However, positive religious coping has shown mixed relationships with various measures of psychological well-being (Gall et al. 2011; Hebert et al. 2009; Tarakeshwar et al. 2006; Zwingmann et al. 2006). For example, reliance on a benevolent relationship with or support from God is associated with better emotional and interpersonal functioning in cancer survivors (Agarwal et al. 2010; Gall 2004). Similarly, in advanced cancer patients, positive religious coping was associated with better overall quality of life (Tarakeshwar et al. 2006). However, in women with breast cancer, positive religious coping was not associated with well-being (Hebert et al. 2009) and had mixed relationships with growth (Gall et al. 2011) but was associated with finding benefit in the cancer experience (Urcuyo et al. 2005).

Positive religious coping has also been shown to predict greater transplant concerns posttransplant in multiple myeloma patients and more physical symptoms in patients with advanced cancer (Sherman et al. 2009; Tarakeshwar et al. 2006).

Conversely, negative religious coping has been consistently associated with greater psychological distress including higher levels of depression (Hebert et al. 2009; Sherman et al. 2009) and anxiety (Sherman et al. 2009), and lower levels of life satisfaction and quality of life in people with cancer (Hebert et al. 2009; Manning-Walsh 2005; Tarakeshwar et al. 2006). In a sample of women with breast cancer, negative religious coping was associated with poorer overall mental health, higher levels of depression, and lower life satisfaction after controlling for sociodemographic variables and significant co-variates (Hebert et al. 2009). Similarly, in multiple myeloma patients undergoing transplant evaluation, negative religious coping was associated with poor mental and physical health after controlling for demographic and medical variables (Sherman et al. 2009). Longitudinal studies indicate that use of NRC is also problematic for mental health and physical well-being over time in cancer patients (Hebert et al. 2009; Sherman et al. 2009).

Despite these relationships, negative religious coping has also been associated with higher rates of growth (Pargament et al. 2006). For example, in a sample of breast cancer patients, NRC assessed prior to diagnosis and 6 months after surgery predicted greater growth at 12 months postsurgery (Gall et al. 2011). It is also important to note that the relationship between negative religious coping and psychological and physical function has been shown to remain significant after controlling for general religiousness, suggesting that NRC contributes uniquely to cancer patients' health (Sherman et al. 2005).

### **Military Veteran Cancer Survivors**

In fiscal year 2007, over 500,000 cancer survivors were treated within the Veteran's Health Administration (VHA) (Moye et al. 2010). Overall, military veterans are considered at risk for hematologic, respiratory, and genitourinary cancers associated with military-related exposure to Agent Orange and other herbicides (US Dept. of Veterans Affairs 2011). In addition, the veteran population tends to be older and suffers higher rates of PTSD than the general population (Moye et al. 2010), potentially placing them at greater risk for psychological distress following cancer. These characteristics make veteran cancer survivors a particularly important and relevant population in which to examine psychological well-being following cancer.

Despite significant relationships between R/S and psychological well-being in cancer patients, limited research exists on positive and negative religious coping in cancer survivors. In addition, many studies focus on breast cancer patients and women. Finally, limited research has been conducted on religious coping and psychological distress in veteran cancer survivors despite unique oncologic and mental health characteristics.

### **Hypotheses**

This study examined the relationship between positive and negative religious coping and psychological distress among military veteran cancer survivors. Based on this literature review, we hypothesized that (1) positive religious coping would be associated with lower

levels of psychological distress and higher levels of growth and (2) negative religious coping would be associated with higher levels of psychological distress and growth. We also examined predictors of positive and negative religious coping in this sample. Given the dearth of research on this topic in veteran cancer survivors, this latter analysis is considered exploratory, precluding a formal hypothesis.

## Method

### Participants and Procedures

Forty-eight veterans receiving treatment at a Veterans Affairs Medical Center participated in this study. Participants were recruited for the study through fliers placed in VA medical center waiting rooms and letters sent to individuals in the VA Boston Tumor Registry. Participants who viewed the fliers contacted the project coordinator. Individuals identified through the Tumor Registry were contacted by the project coordinator who provided information about the study and screened for study eligibility. Exclusion criteria included: (1) diagnosis of dementia or an active psychotic disorder (per medical record review), (2) completion of cancer treatment more than 36 months ago, and (3) basal cell carcinoma.

Participants completed an approximately 90-minute in-person structured individual interview with a trained member of the research team. The survey consisted of quantitative measures and open-ended questions. The interviewer read each question to the participant and recorded the participant's responses. For items with a Likert scale response format, participants were given a copy of the Likert scale to reference. Participants were compensated \$30 for their participation in the study. This study was approved by the Institutional Review Boards of the VA Boston Healthcare System and Harvard Medical School.

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### Measures

**Psychological Distress**—The Posttraumatic Check List-Civilian version (PCL-C) (Weathers et al. 1993) is a 17-item measure used to assess symptoms of posttraumatic stress disorder not associated with combat. The measure assesses symptoms of re-experiencing, avoidance, numbing, and arousal. Participants rate each item on a 5-point Likert scale from 1 (“not at all”) to 5 (“extremely”). Item responses are summed to create a total score. The PCL-C has good internal consistency (Cronbach's  $\alpha > .90$ ) and convergent validity and demonstrates diagnostic sensitivity and specificity. The PCL-C has also been used to screen for PTSD due to cancer diagnosis and treatment and has been shown to be an effective screen in cancer patients (Andrykowski et al. 1998; Cordova et al. 1995; Smith et al. 1999). For the purposes of this study, participants indicated the degree to which they experienced each symptom in the past 4 weeks due to their experience with cancer.

Depression was assessed with the Beck Depression Inventory-Fast Screen, a self-report measure that screens for clinical depression and is composed of seven psychological symptoms of depression from the Beck Depression Inventory-II (Beck et al. 1996). The response format includes four graded statements on a 4-point rating scale ranging from 0 to 3. Total scores can range from 0 to 21 with higher scores indicating a greater degree of depression. To address the minimum DSM-IV requirement for the duration of Major Depressive Disorder symptoms, respondents are asked to describe themselves for the “past 2 weeks, including today.” The BDI-FS has adequate internal consistency (Cronbach’s  $\alpha > .85$ ) and high sensitivity rates (>80%) for detecting mood disorders in adolescents and adults seeking medical treatment (Beck et al. 1997; Scheinthal et al. 2001; Steer et al. 1999; Winter et al. 1999).

Worry specific to cancer was assessed with the Cancer Related Worry Scale (Deimling et al. 2006). Participants rate each of the four items on a Likert scale from 0 to 4. Responses are summed to create a total score with higher scores indicating a greater degree of worry. Factor analysis indicated that this measure is distinct from other measures of depression and anxiety. Internal consistency of the scale is adequate (Cronbach’s  $\alpha = .84$ ).

Participants completed the Posttraumatic Growth Inventory (PTGI) (Tedeschi and Calhoun 1996) to assess growth as a result of cancer diagnosis and treatment. Participants rate each of the 21 items on a 5-point scale from 0 (“not at all”) to 4 (“very much”). Item responses are summed to create a total score with higher scores indicating a greater degree of growth due to cancer. The PTGI is a validated instrument for assessing stress-related growth. Internal consistency (Cronbach’s  $\alpha = .90$ ) for the total scale and test-retest reliability ( $r = .71$ ) are adequate.

**Combat-Related Variables**—Military-related PTSD was assessed with the Primary Care-PTSD Screen (Prins et al. 2003). This four-item measure uses a yes/no response format to assess the occurrence of nightmares or intrusive thoughts of the war, avoidance of thoughts or situations that are reminders of the war, feeling on guard, and feeling numb or detached from others in the past month. Responses are summed and higher scores indicate more symptoms of PTSD. A positive screen is defined as a score of 3 or greater (Prins et al. 2003). Participants were also asked whether they had been exposed to combat during their military experience (Yes/No response format).

**Religious Coping**—Religious coping strategies used in response to cancer were assessed with the Brief RCOPE (Pargament et al. 1998). Factor analysis indicated that the scale consists of two 7-item subscales assessing positive religious coping (PRC) and negative religious coping (NRC). Participants rated each of the 14 items on a Likert scale ranging from 0 (“not at all”) to 4 (“very much”). Responses are summed to create two subscale scores with higher scores indicating more frequent use of the coping strategy. Internal consistency is adequate for PRC (Cronbach’s  $\alpha = .90$ ) and NRC (Cronbach’s  $\alpha = .81$ ).

## Statistical Analyses

Descriptive statistics and frequencies were conducted on demographic variables and all survey measures. These analyses indicated skewed responses on the NRC subscale of the

Brief RCOPE. To account for this distribution, the sample was dichotomized into participants who did not endorse any NRC symptoms ( $n = 35$ ) and participants who endorsed any degree of NRC ( $n = 13$ ), consistent with recent research (Phelps et al. 2009). Confounding variables were identified by examining the relationships between sample and disease characteristics and PRC, NRC, PCL-C, BDI-FS, Worry scale, and PTGI. Variables significantly associated with both religious coping and the dependent variable were considered potential confounding variables and controlled in subsequent analysis.

Univariate ANOVAs were conducted to assess group differences in NRC on PCL-C, BDI-FS, Worry scale, and PTGI to allow control of confounding demographic variables. Regression analyses with two blocks were conducted to examine the relationship between PRC and psychological distress. Significant demographic variables were entered in block 1, and PRC was entered in block 2 predicting PCL-C, BDI-FS, Worry scale, and PTGI. The univariate ANOVA and regression analyses were interpreted using the Bonferroni correction for levels of significance ( $P < .0125$ ).

Demographic variables, indicators of cancer severity, and combat-related variables were examined as predictors of religious coping. Demographic variables included gender, race (White vs. non-White), and religious affiliation (Christian vs. non-Christian). Indicators of cancer severity included cancer stage (1–2 vs. 3–4), total number of cancer diagnoses (one vs. more than one), and whether the cancer had metastasized. Combat-related variables included exposure to combat and a positive screen on the Primary Care-PTSD Screen. *T*-tests were used to identify predictors of PRC with PRC as the outcome variable. Chi-square analyses were used to identify predictors of NRC. Multivariate regression analyses were not used for these analyses due to reduced power as a result of the joint distribution of the predictor variables.

## Results

### Sample Characteristics

Participants ranged in age from 44 to 87 years ( $M = 65.46$ ,  $SD = 10.04$ ) and were 87.5% men ( $n = 42$ ). Forty-two percent ( $n = 20$ ) of the sample reported being in a combat area during their military service and 12.5% ( $n = 6$ ) screened positive for military-related PTSD. The sample was primarily Caucasian (83.3%) with 14.6% African American and 2.1% Asian. Participants endorsed relatively high levels of education with 71% of the sample reporting some college education or more, 16.7% graduated from high school, and 12.5% endorsed some high school education. Regarding religious affiliation, the sample was primarily Christian (69%) with 45.8% ( $n = 22$ ) identifying as Catholic and 22.9% ( $n = 11$ ) identifying as Protestant. In addition, 6.3% ( $n = 3$ ) identified as Jewish, 2.1% ( $n = 1$ ) as Muslim, 10.4% ( $n = 5$ ) endorsed “other,” and 12.5% ( $n = 6$ ) endorsed “none.”

Participants were an average of 12.35 months (range = 0–42 months) post cancer treatment. Cancer diagnosis varied across participants and included genitourinary ( $n = 14$ ), digestive ( $n = 14$ ), lung ( $n = 10$ ), blood ( $n = 6$ ), and other ( $n = 4$ ) cancers. At diagnosis, 25% of participants had stage 1 cancer ( $n = 12$ ), according to the criteria of the American Joint Committee on Cancer, and 35.4% ( $n = 17$ ) were diagnosed with stage 2 cancer, 10.4% ( $n =$

5) with stage 3, and 10.4% ( $n = 5$ ) with stage 4 cancer. Data on cancer stage at diagnosis were not available for 18.8% ( $n = 9$ ) of the sample. Approximately one-quarter of the sample (22.9%) had been diagnosed with more than one cancer and 20.8% of the sample ( $n = 10$ ) had metastatic disease. Previous cancer treatments included surgery (34%), chemotherapy (25%), radiation (20%), or combined treatments (20%). A large proportion of participants described their cancer as cured (43.8%,  $n = 21$ ), while 16.7% ( $n = 8$ ) reported being in remission, 22.9% ( $n = 11$ ) described the cancer as active, and 16.7% ( $n = 8$ ) reported being uncertain of their prognosis. Twelve months after study completion, 10% ( $n = 5$ ) of the sample was deceased.

### Religious Coping and Psychological Distress

Table 1 contains descriptive statistics for all measures and correlations between measures. Univariate ANOVAs with negative religious coping as the independent variable and controlling for significant confounding variables indicated that the presence of negative religious coping strategies was associated with higher levels of cancer-related PTSD ( $F(1, 46) = 13.07, P = .001$ ) and depression ( $F(1, 46) = 6.82, P = .012$ ) and marginally associated with cancer-related worry ( $F(1, 46) = 5.42, P = .024$ ). However, negative religious coping was also associated with higher levels of posttraumatic growth ( $F(1, 46) = 9.31, P = .004$ ).

To examine the relationship between positive religious coping and distress, the criterion variables were regressed on confounding demographic variables (block 1) and positive religious coping (block 2). Using the Bonferroni correction for interpreting significance, the overall model and change in  $R^2$  were significant for posttraumatic growth ( $R^2 = .26, P < .001$ ;  $R^2$  change = .20,  $P = .001$ ), and positive religious coping was a significant predictor ( $\beta = .53, P = .001$ ). The change in  $R^2$  was marginally significant for cancer-related worry ( $R^2 = .18, P = .004$ ;  $R^2$  change = .08,  $P = .039$ ) with positive religious coping as a significant predictor ( $\beta = .31, P = .039$ ). Positive religious coping was also a marginally significant predictor of cancer-related PTSD ( $R^2 = .09, P = .023$ ;  $\beta = .33, P = .023$ ).

### Predictors of Positive and Negative Religious Coping

*T*-tests were used to examine predictors of PRC. Men (mean = 10.48) endorsed lower rates of PRC than women (mean = 20.33;  $t(10.40) = -3.58, P < .01$ ). PRC also differed by race ( $t(13.99) = -4.29, P = .001$ ) with non-White participants (mean = 21.50) reporting higher levels of PRC than White participants (mean = 9.75). Finally, Christian participants (mean = 15.15) reported higher levels of PRC than non-Christians (mean = 4.13;  $t(46) = 4.05, P < .001$ ). Disease characteristics and combat-related variables were not significantly related to PRC.

Chi-square analyses examined predictors of NRC. Gender was significantly related to NRC ( $\chi^2(1, N = 48) = 5.44, P < .05$ ) with a greater proportion of women (66.7%) than men (21.4%) endorsing NRC. Race was also related to NRC ( $\chi^2(1, N = 48) = 11.16, P = .001$ ) with a greater proportion of non-White (75%) than White (17.5%) participants endorsing NRC. Finally, religious affiliation was a significant predictor of NRC ( $\chi^2(1, N = 48) = 8.10, P < .01$ ) with a greater proportion of Christians (39.4%) than non-Christians (0%) endorsing

NRC. There were no significant relationships between NRC and disease characteristics and combat-related variables.

## Discussion

Cancer is a highly prevalent illness, with increasing numbers of individuals surviving for the short or long term, during which time they must cope with the physical and psychological sequelae of a cancer diagnosis. This study examined the relationship between positive and negative religious coping and psychological distress in a sample of military veteran cancer survivors. Positive religious coping was associated with greater growth and was marginally associated with measures of psychological distress. Negative religious coping was positively associated with psychological distress across measures and with growth. Finally, gender, race, and religious affiliation were significantly associated with positive and negative religious coping with female, non-White, and Christian participants more likely to utilize positive and negative religious coping to deal with cancer.

These findings emphasize the importance of assessing the role of R/S in coping with cancer survivorship. In particular, negative religious coping or reactions that include strain and conflict in an individual's R/S beliefs are especially problematic. Religious and spiritual assessments are often limited to global indicators, such as religious affiliation and frequency of religious activities. These measures may not adequately identify cancer survivors at risk for the distress associated with negative religious coping, indicating the need for a more detailed clinical assessment of the role of R/S in coping. In addition, cancer survivors who utilize negative religious coping, even to a small degree, may benefit from referral to clergy or mental health professionals to prevent or reduce psychological distress. Conversely, cancer survivors utilizing positive religious coping may benefit from support for these strategies due to their association with growth.

However, it is important to note that positive religious coping was marginally associated with cancer-related PTSD and worry; the current study may have had inadequate power to detect these relationships. The "religious coping mobilization effect" (Pargament et al. 1998, p. 721) in which a stressor mobilizes all religious coping strategies may explain the association between positive and negative religious coping and distress. In this sample, the cancer experience itself or the associated psychological distress may have mobilized both positive and negative religious coping methods. This explanation is consistent with the significant positive relationship between positive and negative religious coping in this and previous studies (Lavery and O'Hea 2010; Pargament 1997). The causal relationship between religious coping and distress cannot be determined from this study. However, consistent with previous research, this study suggests that negative religious coping may be a stronger predictor of distress than positive religious coping (Lavery and O'Hea 2010; Sherman et al. 2005).

Research indicates that many cancer survivors report experiencing growth following cancer (Stanton et al. 2006). In this sample, positive and negative religious coping were associated with greater growth. For negative religious coping, this relationship emerged in addition to associations with measures of psychological distress. The factors that determine which



individuals are more likely to experience growth or distress in the context of negative religious coping remain unclear. Pargament et al. (2006) hypothesize that trauma severity and chronicity, coping resources, and characteristics of the individual's R/S worldview may impact whether the individual experiences distress or growth. Empirical examination of these and other possible mechanisms may promote early identification of at-risk cancer survivors and allow for intervention that prevents distress and promotes growth.

The finding that female, non-White, and Christian participants were more likely to endorse religious coping is consistent with previous research (Pargament 1997; Phelps et al. 2009; Ross et al. 2008). These groups generally endorse higher levels of personal religiousness, indicating that religion may be a more integrated part of their worldview and, therefore, a more accessible resource in the context of a stressful event like cancer (Pargament 1997). In the case of women and racial minorities, these groups tend to have less power and fewer resources in current society which may lead them to turn to religion in times of distress (Pargament 1997).

This study raises questions about the nature and assessment of religious coping in cancer survivors. Rates of endorsement of PRC and NRC were low in this sample. In terms of NRC in particular, a majority of the sample (73%) did not endorse any NRC items. Similar results have emerged in other studies of NRC (Ano and Vasconcelles 2005; Feder et al. 2008; Phelps et al. 2009), suggesting that NRC is an infrequent response to stress across samples. However, demographic characteristics of this sample may have also contributed to these response rates: namely, the sample consisted of military veterans and was primarily male, Caucasian, and highly educated; demographic characteristics which have consistently been associated with less reliance on religion in the context of stressful events (Pargament 1997; Phelps et al. 2009; Ross et al. 2008).

The low rates of PRC and NRC may also be partly attributable to characteristics of the Brief RCOPE. The Brief RCOPE refers directly to God which may connote a Judeo-Christian orientation and organized religion for some people. Consistent with this hypothesis, this study found that Christian participants were more likely to endorse positive and negative religious coping than non-Christian participants. A recent review of measures of spirituality suggested that "the growing number of people who consider themselves spiritual but not religious may be uncomfortable and/or obtain lower scores on measures inclusive of religious language" (Kapuscinski and Masters 2010, p. 195). The Brief RCOPE may not capture the R/S coping responses of individuals for whom God, Christianity, and/or organized religion are not part of their religious or spiritual worldview, explaining low response rates across studies. However, it is important to note that despite low response rates, the Brief RCOPE is consistently associated with positive and negative outcomes. This body of literature indicates that the measure is capturing an important aspect of coping for many individuals. Therefore, a comprehensive assessment of R/S in cancer survivors may require the evaluation of religious coping in addition to other religious and spiritual constructs.

## Limitations and Future Directions

The limitations of this study include limited generalizability due to the small sample size and unique demographic characteristics of the sample (male, Christian, Caucasian, highly educated, veteran status). In addition, the study design was cross-sectional with no comparison groups, precluding statements of causality. Finally, limitations of the measures indicate important areas for future research. As discussed above, the Judeo-Christian language and focus of the Brief RCOPE may not have captured the R/S experience of this sample. Qualitative studies may clarify the concepts of R/S and coping as understood by cancer survivors and aid in identifying terminology that more accurately reflects participants' R/S experiences (Kapuscinski and Masters 2010). In addition, we used a dichotomous measure to assess exposure to combat. More detailed assessment of combat exposure including chronicity and severity of exposure would assist in more accurate assessment of the relationship between combat exposure and religious coping.

## Conclusions

Consistent with previous research, this study found that PRC is associated with growth, while NRC is associated with psychological distress and growth in veteran cancer survivors. Clinically, these findings suggest that evaluation of religious coping, particularly NRC, and appropriate treatment planning is important to the psychological well-being of cancer survivors.

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Table 1

Means and standard deviations and correlations between measures

	Mean	SD	NRC	PRC	PCL-C	Worry	BDI-FS	PTGI
NRC	2.85	6.42	–	.52***	.58***	.49***	.54***	.35*
PRC	11.71	10.08	.52***	–	.33*	.42**	.23	.54***
PCL-C	35.02	18.00	.58***	.33*	–	.80***	.76***	.24
NRC = 0	29.91	2.71						
NRC > 0	48.77	4.45						
Worry	6.15	5.01	.49***	.42**	.80***	–	.61***	.40**
NRC = 0	4.80	.77						
NRC > 0	9.77	1.26						
BDI-FS	4.08	4.60	.54***	.23	.76***	.61***	–	.12
NRC = 0	3.09	.73						
NRC > 0	6.77	1.20						
PTGI	38.40	18.30	.35*	.54***	.24	.40**	.12	–
NRC = 0	33.09	2.74						
NRC > 0	52.69	4.50						

\*  $P < .05$ ;\*\*  $P < .01$ ;\*\*\*  $P < .001$