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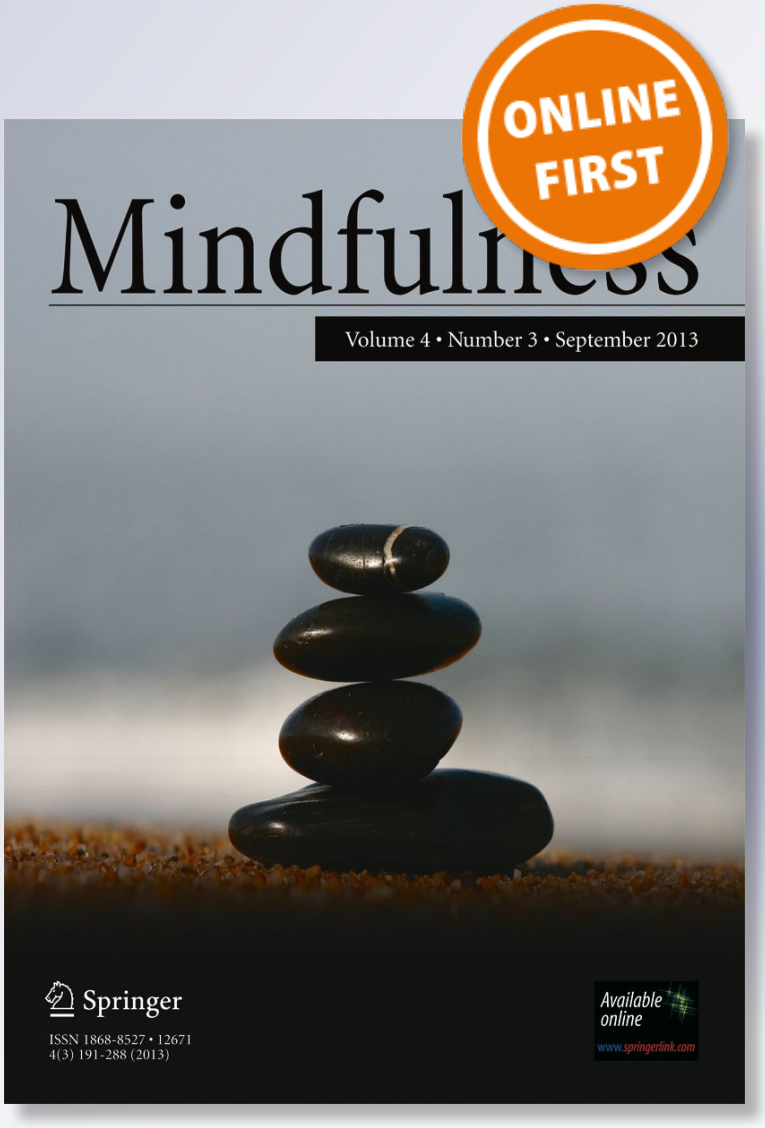

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ORIGINAL PAPER

Self-Compassion and Suicide Risk in Veterans: When the Going Gets Tough, Do the Tough Benefit More from Self-Compassion?

Jessica Kelliher Rabon[1] · Jameson K. Hirsch[2] · Andrea R. Kaniuka[3] · Fuschia Sirois[4] · Byron D. Brooks[1] · Kristin Neff[5]

Abstract

Objectives Veterans are at particular risk for suicide due to psychopathological, emotional, and interpersonal risk factors. However, the presence of individual-level protective factors, such as self-compassion, may reduce risk, becoming more salient at increasing levels of distress and psychopathology, per theory. We examined the relation between self-compassion and suicide risk, and the moderating effects of depression, PTSD symptoms, anger, shame, and thwarted interpersonal needs.

Methods Our sample of US veterans (n = 541) in our cross-sectional study were mostly male (69.1%) with an average age of 49.90 (SD = 16.78), who completed online self-report measures: Suicidal Behaviors Questionnaire-Revised, Multidimensional Health Profile-Psychosocial Functioning Screening Tool, PTSD Checklist-Military Version, Differential Emotions Scale-IV, and the Interpersonal Needs Questionnaire.

Results The linkage between self-compassion and suicidal behavior in our veteran sample was moderated by distress-evoking risk factors, including depression, anger, shame, and thwarted interpersonal needs, such that, as level of risk severity increases, the inverse association between self-compassion and suicidal behavior is strengthened.

Conclusions Our findings highlight an emergent protective process that may prevent suicide in times of distress. Therapeutically bolstering the ability for self-compassion may provide a proactive coping strategy that can be brought to bear in times of crisis, reducing suicide risk for veterans.

Keywords Self-Compassion · Suicide · Veterans · Depression · Anger · Shame

Suicide is a significant public health concern, and the 10th leading cause of death in the USA (Centers for Disease Control and Prevention [CDC] 2015); over 42,000 individuals die of suicide each year. However, risk for suicide is approximately 1.5 times greater among military veterans than the general population (American Association for Suicidology [AAS] 2014; Kemp and Bossarte 2012), and veteran suicides account for 22% of all suicide deaths in the USA, perhaps due to unique stressors faced by military personnel (Gibbons et al. 2012; Kemp and Bossarte 2012). Further, suicide is the second leading cause of death for military personnel, with approximately 22 suicide deaths per 100,000 veterans (Department of Defense 2010; Kemp and Bossarte 2012), compared with the general population rate of 13.4 per 100,000 (CDC 2015). The alarming rates of suicide for veterans highlight the need for identification of malleable protective factors, including positive psychological variables, to better inform the development of targeted interventions to reduce suicide risk.

One such protective factor is self-compassion, conceptualized as being kind rather than judgmental or cold to oneself in the face of suffering, being mindfully accepting of suffering rather than becoming carried away and "over-identified" with the pain, and recognizing the common humanity and mutual experience of suffering rather than feeling isolated by it (Neff 2003a, b). Further, self-compassion can be considered either a dispositional trait or a skill that can be cultivated (Leary et al.

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2007). Self-compassion is beneficially related to mental and physical health, including greater engagement in positive health behaviors, higher levels of life satisfaction, and lower levels of depression, anxiety, and stress (Dunne et al. 2016; Leary et al. 2007; Neff 2003b; Sirois et al. 2015b). Among veterans, self-compassion is related to less worry and impulsivity (Mantzios 2014), possibly due to engagement in proactive coping, which, in turn, results in a more realistic assessment of the anxiety-provoking situation (Neff 2003b). As well, self-compassion is related to decreased trauma-related guilt, functional disability, and symptoms of PTSD among veteran samples (Dahm et al. 2015; Held and Owens 2015; Hiraoka et al. 2015).

Importantly, much of the previous research on self-compassion has examined its potential buffering effects, with evidence suggesting that self-compassion has particular usefulness in the face of negative life stressors (Allen and Leary 2010; Leary et al. 2007; Neff 2003b). Unlike most protective factors (e.g., optimism, positive affect), which are often absent or reduced in efficacy during times of distress (Pressman and Cohen 2005; Shepperd et al. 2015), self-compassion may most effectively exert its assuaging influence in times of distress. This may be due, in part, to the beneficial contributions of self-compassion to coping; for instance, in a sample of persons with chronic illness, self-compassion was related to less stress resulting from increased engagement in adaptive coping (e.g., positive reframing, acceptance) and decreased engagement in maladaptive coping (Sirois et al. 2015a). As veterans experience a number of unique stressors related to suicidal thoughts and behaviors, including a heightened risk for psychopathology (e.g., PTSD, depression) (Conner et al. 2012; Pompili et al. 2013), negative emotions upon reintegrating into civilian life (Kim et al. 2011), and interpersonal difficulties after returning from combat (Selby et al. 2010), self-compassion may be particularly useful for reducing suicidal behavior among this vulnerable population (Bryan et al. 2015a).

To begin, veterans are at increased risk for psychopathology including post-traumatic stress disorder (PTSD) and depression, both of which uniquely contribute to suicide risk (Bryan et al. 2013a; Pompili et al. 2013). More than 20% of veterans meet the criteria for PTSD (Bryan et al. 2013c), a psychiatric disorder resulting from exposure to trauma and characterized by increased emotional arousal, intrusive thoughts, and avoidance, among other symptoms, and associated with significant morbidity and mortality (Pompili et al. 2013), including up to four times greater risk for suicide (Pietrzak et al. 2011). Depression is also common among veterans, with estimates reaching 20% (Bryan et al. 2013c), and is one of the most significant predictors of suicide risk in veterans (Conner et al. 2012).

Why might the protective linkage between self-compassion and suicidal behavior be strengthened, in the context of psychopathology? First, self-compassion is associated with fewer symptoms of PTSD and depression among veterans (Kearney et al. 2013; Neff 2003a; Raes 2010) and, in clinical treatment with individuals diagnosed with PTSD, is associated with reduced feelings of self-judgment, isolation, and over-identification, and enhanced self-kindness (Hoffart et al. 2015). As well, mindfulness, a component of self-compassion which involves taking an approach-oriented attitude toward distressing thoughts and feelings, rather than engaging in avoidance, may be particularly helpful for veterans with PTSD, an avoidance-based disorder (Dahm et al. 2015; Kearney et al. 2013). Notably, among Iraq and Afghanistan war combat veterans, self-compassion predicted fewer baseline PTSD symptoms and 12-month PTSD symptom severity (Hiraoka et al. 2015). Regarding depression, evaluating oneself in an intentional, caring, and mindful way, as is characteristic of self-compassion, may ease the negative cognitive cycle that maintains depressive symptoms (Joeng and Turner 2015). In the presence of psychopathological distress, self-compassion may become more salient as a protective factor than when no stressors are present, given that self-compassion is a skillful response to suffering.

Distinct from psychopathology, yet related to stressors faced by military personnel, is the experience of negative emotions, which may uniquely contribute to suicide risk. Among returning services members, heightened levels of anger are a frequently reported emotional concern (Renshaw and Kiddie 2012). Anger is associated with increased engagement in suicidal behavior and death by suicide, even after controlling for the presence of psychopathology (i.e., depression, PTSD) (Hawkins and Cougle 2013; Ramírez and Andreu 2006). An additional emotion frequently experienced by veterans is shame, which is conceptualized as a negative evaluation of the self in which the individual feels inferior, helpless, or vulnerable. Shame is also indicative of a state of social rejection that threatens the need to belong which, due to its inwardly directed focus on a perceived negative self, may elicit maladaptive rumination (Kim et al. 2011). Of relevance to our sample, feelings of shame and guilt are strong predictors of suicide risk among military personnel (Bryan et al. 2015b). Such findings highlight the association of negative emotions and suicidal behavior and indicate potential points of intervention where self-compassion might be beneficial.

During the experience of heightened negative emotions, the protective relation between self-compassion and suicidal behavior may be strengthened. Although previous literature suggests that negative emotions are associated with self-critical thinking and with difficulties in self-soothing and emotional regulation (Arimitsu and Hofmann 2015; Gilbert 2005), it is during such times when the need to self-soothe is greater and when self-compassion is theorized to be at its most salient. Via the act of relating to oneself in an intentional, caring, and mindful manner when suffering is experienced, self-

compassion provides self-soothing, assists in regulating emotions, and may reduce the tendency for dysfunctional interpretations of negative events, which often trigger high levels of negative emotionality, including anger and shame (Johnson and O'Brien 2013). For example, in Johnson and O'Brien's (2013) study, shame and rumination significantly mediated the linkage between self-compassion and depressive symptoms in a collegiate sample; as well, students who engaged in a self-compassion intervention reported decreased levels of shame and negative affect.

In addition to intrapersonal factors, interpersonal factors may also contribute to suicidal behavior among veterans. The interpersonal theory of suicide (IPTS) posits that feeling like a burden to others (i.e., perceived burdensomeness) and experiencing social disconnection and loneliness (i.e., thwarted belongingness) result in a greater suicide risk (Joiner 2005; Van Orden et al. 2010). The IPTS has been supported in a variety of samples including military personnel and veterans (Bryan et al. 2013b). In preliminary studies, self-compassion has been linked to less thwarted belongingness and perceived burdensomeness, in samples of American Indian/Alaska Native persons and veterans; further, in the veteran sample, self-compassion moderated the mediating effect of perceived burdensomeness in the association between insomnia and suicide (Tanner et al. 2018; Tielke 2016).

Trait self-compassion might increase in utility when suffering, due to the experience of perceived burdensomeness and thwarted belongingness, is present. Feelings of isolation and being a burden contribute to feelings of "suffering alone" and may increase self-critique and consequent negative emotions (Boersma et al. 2015). The common humanity component of self-compassion, therefore, may become increasingly salient in times of distress, helping veterans recognize that their experience of suffering is part of a larger human experience (Neff 2003b). Moreover, when interpersonal needs are thwarted and a veteran may feel ostracized or like a burden, the self-kindness component of self-compassion may become of particular benefit, counteracting harsh self-critique (Neff 2003a, b).

Although emerging evidence indicates that self-compassion is linked to positive outcomes among veterans, including decreased guilt and PTSD symptoms (Dahm et al. 2015; Held and Owens 2015; Hiraoka et al. 2015), and to decreased suicidal behavior in college students (Hasking et al. 2018; Kelliher Rabon et al. 2018), the protective role of self-compassion in reducing suicide risk has yet to be investigated in veterans. Moreover, this study is one of the first to investigate whether self-compassion has more salience and, thus, more clinical utility, in times of heightened distress, particularly given the fact that veterans often face increased levels of psychosocial stressors. Therefore, the aim of our study was to examine the association between self-compassion and suicidal behavior in veterans and the moderating effects of three broad classes of risk factors: psychopathology (i.e., PTSD, depression), emotional factors (i.e., anger, shame), and thwarted interpersonal needs. We hypothesized that self-compassion would be inversely related to suicidal behavior and all risk factors identified in the study. Further, we hypothesized that each risk factor would moderate the self-compassion-suicide association; specifically, we posited that the inverse relation between self-compassion and suicidal behavior would be stronger at higher levels of psychopathology, negative emotions, and thwarted interpersonal needs.

Method

Participants

Participants were 541 veterans ($n = 374$; 69.1% male) between the ages of 20 and 98 ($M = 49.90$; $SD = 16.78$). Inclusion criteria included self-reported identification as a veteran, being at least 18 years of age and English speaking, with access to the Internet to complete online surveys, whereas exclusion criteria consisted of not meeting these requirements. Most participants self-identified as White/Caucasian (461; 85.2%), 36 (6.7%) identified as multiracial, 33 (6.1%) as Hispanic/Latino, 8 (1.5%) as Black/African American, 5 (0.9%) as American Indian/Alaska Native, 1 (0.2%) as Asian, 6 (1.1%) as another race, and 24 (4.4%) did not report a race. Participants reported being from all branches of the military including 206 (38.1%) from the Army, 91 (16.8%) Navy, 87 (16.1%) Air Force, 40 (7.5%) Marine Corps, 14 (2.6%) National Guard, 9 (1.6%) Army Reserves, 5 (0.9%) Coast Guard, and 89 (16.4%) multiple branches. Over one-third of respondents ($n = 212$; 39.2%) reported serving in Operation Enduring Freedom/Operation Iraqi Freedom (OEF/OIF), and 369 (68.2%) veterans reported serving in at least one combat zone. Further, all participants in the sample had served at some point since December 1941, with more than half serving since September 2001 ($n = 279$; 51.6%).

Procedure

In this Institutional Review Board (IRB)–approved study, participants were recruited through online advertisements and invitations distributed to national veteran organizations (e.g., chapters of the Veterans of Foreign Wars) and veteran-relevant social media groups, including military-focused Facebook pages. Respondents were not pre-selected or part of a database but, rather, were recruited via open invitation. Any US veteran, from any era of service, was eligible for the study. At the beginning of survey administration, participants provided electronic informed consent, including self-reported acknowledgment of their veteran status and ability to complete surveys in English, of their own accord. All data were gathered

electronically through SurveyMonkey, and participants were compensated with a raffle entry to win an Amazon gift card.

Measures

Demographic characteristics including age, sex, race/ethnicity, branch of service, era of service, service in Operation Enduring Freedom/Operation Iraqi Freedom (OEF/OIF), and service in at least one combat zone were assessed, in addition to the variables of interest. Of note, we did not assess diagnostic categories but, rather, focused on self-report and subclinical symptomology, which occur with more prevalence than diagnoses and which are also robustly related to psychopathological outcome trajectories (Yarvis and Schiess 2008). When pertinent, we provide clinical cutoff scores, for reference.

Self-Compassion Self-compassion was assessed using the Self-Compassion Scale–Short Form (SCS-SF), a 12-item scale that assesses the main components of self-compassion: increased self-kindness and reduced self-judgment, increased common humanity and reduced isolation, and increased mindfulness and reduced over-identification (Raes et al. 2011). Sample items include "I try to be understanding and patient towards the aspects of my personality I don't like" and "I try to see my failings as part of the human condition." A total self-compassion score is calculated by reverse-scoring the negative items and computing a total mean; higher scores indicate greater levels of self-compassion. The SCS-SF has a very strong correlation with the 26-item version of the SCS ($r \geq 0.97$), and although the SCS-SF has yet to be examined in veteran samples, the long version of the scale has adequate ($\alpha = .75$; Held and Owens 2015) to excellent ($\alpha = .95$; Dahm et al. 2015) internal consistency in military samples. Internal consistency in our sample was good ($\alpha = .89$).

Suicidal Behavior Suicidal thoughts and behavior were assessed using the Suicidal Behaviors Questionnaire-Revised (SBQ-R; Osman et al. 2001), which has 4 items assessing lifetime suicidal behavior ("Have you ever thought about or attempted to kill yourself?"), suicidal behavior in the past year ("How often have you thought about killing yourself in the past year?"), communication of intent ("Have you ever told someone that you were going to commit suicide, or that you might do it?"), and likelihood of future suicide attempt ("How likely is it that you will attempt suicide someday?"). Items are scored using a Likert scale, varying between 5 and 7 response choices across different items, and are summed for a total score (range = 3–18). Among the general adult population, a cutoff score of 7 on the SBQ-R is used to distinguish between suicidal and non-suicidal individuals (Osman et al. 2001). Among our sample, the average SBQ-R score was 8.06 (SD = 2.69), indicating a clinically significant suicide risk. Approximately 30% ($n = 138$) of our sample thought about killing themselves sometimes, often, or very often in the past year, and 12% ($n = 56$) endorsed a past suicide attempt. The SBQ-R has adequate ($\alpha = .76$; Currier et al. 2015) to good ($\alpha = .84$; Rudd et al. 2011) internal consistency in veteran samples. Internal consistency in the present sample was good ($\alpha = .81$).

Depressive Symptoms Depressive symptoms were assessed using the Multidimensional Health Profile-Psychosocial Functioning Screening Tool (MHP-P; Ruehlman et al. 1998). The MHP-P is comprised of a total of 58 items that cover the areas of life stress, coping skills, social resources, and mental health. Sample items include "How depressed have you felt?" and "How much have you lost interest in things?" The depression subscale of the mental health scale includes three items rated on a Likert scale from 1 ("not at all") to 5 ("very") to indicate how the respondent has felt over the past 2 weeks. Higher scores indicate greater depressive symptoms. Despite having only three items, the MHP depression subscale was significantly, positively correlated with scores on the Center for Epidemiologic Studies Depression Scale–Revised (CESD-R) (.61) (Ruehlman et al. 1998). In a previous sample utilizing trauma-exposed individuals, internal consistency was good ($\alpha = .85$) for the depression subscale (Williams et al. 2011), as it was in our sample ($\alpha = .85$).

Post-traumatic Stress Disorder Post-traumatic stress disorder symptoms were assessed using the PTSD Checklist-Military Version (PCL-M) for DSM-IV (Weathers et al. 1991), which has 17 items measuring intrusive, avoidance, numbing, and hyperarousal symptoms. Sample items include "Repeated, disturbing dreams of a stressful military experience" and "Feeling very upset when something reminded you of a stressful military experience." Each item is rated on a Likert scale from 1 ("not at all") to 5 ("extremely") to indicate the degree to which the symptom has bothered the respondent over the past month. PTSD symptom severity scores are determined by summing the respondent's answers to all 17 items, with higher scores indicating more severe symptomatology. A cutoff score of 33 on the PCL-5 is used to distinguish individuals with clinically significant levels of PTSD symptoms. Among our sample, 61.4% ($n = 272$) of participants qualified for a provisional diagnosis of PTSD. The PCL-M has excellent reliability in military samples ($\alpha = .97$; Yarvis et al. 2012), and in the present sample, internal consistency was excellent ($\alpha = .97$).

Anger and Shame Symptoms of anger and shame were assessed using the Differential Emotions Scale-IV (DES-IV; Izard 1993). The DES-IV is a 36-item self-report scale that assesses 12 discrete emotion subscales (3 items per scale); however, only the anger and shame subscales were used in our study. Each subscale measures the frequency of

experiencing these emotional states on a 5-point scale ranging from 1 ("Rarely or Never") to 5 ("Very often"). Sample items include "Feel like you did something wrong" for shame and "Feel mad at somebody" for anger. Previous studies indicate adequate internal consistency (Izard et al. 1993), and internal consistency was good to excellent in the present study (anger: α = .89; shame: α = .83).

Interpersonal Needs Thwarted interpersonal needs were assessed via the Interpersonal Needs Questionnaire (INQ; Van Orden et al. 2012). The INQ is a 15-item self-report measure that assesses perceived burdensomeness (6 items; "These days, the people in my life would be better off if I were gone") and thwarted belongingness (9 items; "These days, I feel disconnected from other people"). Participants rate each item on a 7-point scale ranging from 1 ("Not at all true for me") to 7 ("Very true for me"). Previous studies with military personnel indicate good (thwarted belongingness: α = .85) to excellent (perceived burdensomeness: α = .93) internal consistency (Bryan et al. 2010). Internal consistency in our sample was excellent for the perceived burdensomeness (α = .96) and thwarted belongingness (α = .93) subscales.

Data Analyses

Prior to data analysis, we examined our data for outliers, utilizing the Cook's distance technique; although there were extreme scores (i.e., some respondents reported high levels of suicide risk), there were no statistical outliers. Further, using plot analysis, we determined that our unstandardized residuals were homoscedastic, indicating random rather than biased responses. Pearson's product-moment correlation coefficients were used to determine the associations between and independence of variables. No associations exceeded the recommended cutoff for multicollinearity (r > .80) (Katz 2006).

Consistent with Hayes (2013), PROCESS Model 1 was used to conduct six moderation analyses, examining the independent moderating effects of depressive symptoms, PTSD symptoms, anger, shame, perceived burdensomeness, and thwarted belongingness, on the relation between self-compassion and suicide risk. "Model 1" tests the assertion that a single moderator affects the relation between an independent variable (i.e., self-compassion) and dependent variable (i.e., suicidal behaviors). Preacher and Hayes' (2008) technique uses bootstrap resampling to estimate asymmetric confidence intervals of conditional indirect effects at varying values of the moderator and, therefore, avoids assuming normally distributed data. Further, this method does not rely on statistically significant direct effects between independent and dependent variables and has reduced risk of type I and type II errors, including family-wise errors. All models used 100,000 bootstrapped samples, and the Johnson-Neyman technique was utilized to determine boundaries of significance for our hypothesized interactions across moderator values (i.e., point in regression at which moderator elicits significant slope). Due to previous literature indicating differences among the variables of interest across age, sex, race/ethnicity (Conner et al. 2012; Lockard et al. 2014; Pfeiffer et al. 2014), branch of service (Eaton et al. 2006), and dates of service (Fanning and Pietrzak 2013; Pietrzak et al. 2011), these demographic variables were covaried in all analyses. Missing data, estimated ranging between 21 and 25%, was addressed during PROCESS analyses, using listwise deletion of cases and resulting in differing numbers of respondents across analyses.

Results

In support of our hypotheses, all study variables were associated in the predicted directions (see Table 1). Self-compassion had a moderate negative association with the outcome of suicidal behavior, and large negative associations with the proposed moderating variables of depressive symptoms, PTSD symptoms, anger, shame, thwarted belongingness, and perceived burdensomeness. These moderators had moderate-to-large positive associations with suicidal behavior.

When examining psychopathological factors as moderators of the relation between self-compassion and suicidal behavior, the interaction term between self-compassion and depressive symptoms explained a significant increase in the variance in suicidal behavior (unadjusted ΔR^2 = .02, $F(1, 411)$ = 10.88, p = .001, N = 420), such that at higher levels of depressive symptoms (above M = 9.28), the beneficial impact of self-compassion on suicidal behavior was enhanced, supporting hypotheses (see Table 2). All interaction effects are illustrated in Fig. 1. PTSD symptoms did not significantly moderate this relation (unadjusted ΔR^2 = .01, $F(1, 394)$ = 2.72, p = .10, N = 403) (see Table 2). However, this interaction might be viewed as clinically significant, and per the results of the Johnson-Neyman technique, there is an indication that the moderating effect becomes significant at higher levels of PTSD (above M = 30.07).

When examining emotional factors, the interactions between anger and self-compassion (unadjusted ΔR^2 = .01, $F(1, 417)$ = 5.15, p = .02, N = 426) and between shame and self-compassion (unadjusted ΔR^2 = .02, $F(1, 416)$ = 11.35, p = .001, N = 425) each independently explained a significant increase in the variance explained in suicidal behavior (see Table 2). Consistent with hypotheses, the Johnson-Neyman technique indicated that the beneficial effect of self-compassion on suicidal behavior was more salient at higher levels of both anger (above M = 5.01) and shame (above M = 3.95).

When examining interpersonal factors, both the interaction between self-compassion and perceived burdensomeness (unadjusted ΔR^2 = .01, $F(1, 408)$ = 4.81, p = .03, N = 417) and

Table 1 Means, standard deviation, and bivariate associations of study variables

	Mean [SD]	2	3	4	5	6	7	8
1. Self-compassion	34.70 [10.21]	− .384**	− .706**	− .661**	− .711**	− .706**	− .685**	− .630**
2. Suicidal behavior	8.06 [2.69]	–	.475**	.451**	.380**	.359**	.486**	.542**
3. Depression	8.47 [3.53]	–	–	.773**	.639**	.620**	.768**	.687**
4. PTSD	44.72 [19.82]	–	–	–	.700**	.633**	.711**	.652**
5. Anger	8.86 [3.31]	–	–	–	–	.658**	.605**	.570**
6. Shame	7.59 [3.22]	–	–	–	–	–	.627**	.675**
7. Thwarted belongingness	30.23 [14.63]	–	–	–	–	–	–	.736**
8. Perceived burdensomeness	14.21 [10.11]	–	–	–	–	–	–	–

Self-compassion = Self-Compassion Scale–Short Form; suicidal behaviors = Suicidal Behaviors Questionnaire-Revised; depression = Multidimensional Health Profile-Psychosocial Functioning Subscale; PTSD = PTSD Checklist-Military Version for DSM-IV; anger, shame = Differential Emotions Scale-IV; thwarted belongingness and perceived burdensomeness = Interpersonal Needs Questionnaire

**$p < .01$

between self-compassion and thwarted belongingness (unadjusted $\Delta R^2 = .03$, $F(1, 402) = 17.61$, $p < .001$, $N = 411$) explained significant increases in the variance explained in suicidal behavior (see Table 2). Moreover, the positive impact of self-compassion on suicidal behavior became more prominent at higher levels of perceived burdensomeness (above $M = 15.38$) and thwarted belongingness (above $M = 30.50$), per the Johnson-Neyman technique.

Discussion

At the bivariate level, we hypothesized that self-compassion would be inversely related to suicidal behavior and all risk factors identified in our study, and consistent with previous literature (Bryan et al. 2013a, 2015a; Kim et al. 2011; Renshaw and Kiddie 2012; Van Orden et al. 2012), our findings were supported. Such linkages lend support to a growing body of literature acknowledging the beneficial association of self-compassion to an array of mental and physical health outcomes (Dunne et al. 2016; Leary et al. 2007; Neff 2003b; Sirois et al. 2015a). Importantly, our study extends these effects to suicidal behavior among veterans, which may arise more frequently in veterans due to traumatic experiences.

Further, we hypothesized that psychopathology, negative emotions, and thwarted interpersonal needs would moderate the linkage between self-compassion and suicide, and that the relation between self-compassion and suicidal behavior would be stronger at higher levels of risk. Our hypotheses were partially supported, with all risk factors moderating the self-compassion-suicidal behavior linkage except PTSD symptoms, which exhibited a trend toward clinical significance.

In terms of psychopathology, it appears that when individuals experiencing significant depressive symptoms such as feelings of sadness, hopelessness, and worthlessness, self-compassion may be of particular utility. Appraising oneself in intentional, caring, and mindful ways may mitigate the negative cognitive cycle that maintains depression and, in turn, may reduce suicidal behavior. Contrary to hypotheses, the link between self-compassion and suicidal ideation did not change significantly as a function of the level of PTSD symptoms, although a review of results indicates significance at moderate-to-high levels of PTSD symptomology. PTSD is characterized by symptoms of intrusion, hyperarousal, and avoidance (APA 2013), and although in our study self-compassion and PTSD were inversely related at the bivariate level, previous literature is mixed regarding self-compassion's effect on PTSD. Some research has suggested that self-compassion is related to each of the symptom clusters of PTSD (Hiraoka et al. 2015); however, other research indicates that self-compassion is related only to the *DSM-IV* avoidance cluster of PTSD symptoms, but not to the intrusion and hyperarousal clusters (Maheux and Price 2015; Thompson and Waltz 2008). Because we assessed PTSD via the total score of the *PCLM for DSM-IV*, it is possible that we were unable to detect a specific subeffect; for instance, self-compassion may act beneficially on the avoidance component of PTSD (e.g., via willingness to engage painful thoughts and emotions) (Thompson and Waltz 2008), but may have less utility in reducing hyperarousal and intrusion. Future research should examine the relation of self-compassion, and its subcomponents, to the individual clusters of PTSD, to expand and substantiate our findings, with a focus toward understanding potential mechanisms of action between the two variables and the development of targeted suicide interventions.

Regarding emotional factors, self-compassion had a negative association with shame and anger, and these factors appeared to moderate the link between self-compassion and shame. At the core of many negative emotions is engagement in self-critical thinking (Arimitsu and Hofmann 2015), isolation (Hawkley et al. 2007), and rumination (Moberly and Watkins 2008), and

Table 2 Suicidal behavior predicted from self-compassion and moderating variables

Predictor	β	SE	95% CI	t
Depressive symptom model				
Self-compassion	.07*	.03	[.004, .13]	2.09
Depressive symptoms	.71***	.13	[.47, .96]	5.71
Depressive symptoms × self-compassion	− .01**	.003	[− .02, − .004]	− 3.30
PTSD symptom model				
Self-compassion	− .003	.03	[− .07, .06]	− .09
PTSD symptoms	.09***	.02	[.04, .13]	3.54
PTSD symptoms × self-compassion	− .001	.001	[− .002, .0002]	− 1.65
Anger model				
Self-compassion	.0001	.03	[−.07, .07]	.001
Anger	.44**	.13	[.18, .69]	3.37
Anger × self-compassion	− .01*	.004	[− .02, − .001]	− 2.27
Shame model				
Self-compassion	.01	.03	[− .05, .08]	.45
Shame	.56***	.13	[.30, .82]	4.17
Shame × self-compassion	− .01**	.004	[− .02, − .01]	− 3.37
Perceived burdensomeness model				
Self-compassion	.02	.02	[− .03, .06]	.67
Perceived burdensomeness	.22***	.04	[.14, .30]	5.32
Perceived burdensomeness × self-compassion	-.003*	.001	[− .01, − .0004]	− 2.19
Thwarted belongingness model				
Self-compassion	.07*	.03	[.02, .13]	2.58
Thwarted belongingness	.20***	.03	[.14, .26]	6.59
Thwarted belongingness × self-compassion	− .003***	.001	[− .01, − .002]	− 4.20

Self-compassion = Self-Compassion Scale–Short Form; suicidal behaviors = Suicidal Behaviors Questionnaire-Revised; depression = Multidimensional Health Profile-Psychosocial Functioning Subscale; PTSD = PTSD Checklist-Military Version for DSM-IV; anger, shame = Differential Emotions Scale-IV; thwarted belongingness and perceived burdensomeness = Interpersonal Needs Questionnaire

*$p < .05$, **$p < .01$, ***$p < .001$

self-compassion has been shown to reduce these negative emotions (Leary et al. 2007). Being kind to oneself in the face of disturbing emotions, remembering that such emotions are part of the shared human experience, and taking a more mindful, balanced approach to negative emotions is likely to render them less overwhelming (Arimitsu and Hofmann 2015). As noted previously, we did not find a moderating effect of PTSD on the link between self-compassion and suicide; however, the factor of shame is a hallmark characteristic of the experience of trauma, PTSD, and moral injury (Litz et al. 2009). For these characteristics, at least, self-compassion may have particular utility in aiding military personnel and veterans by guiding them toward kind recognition and acceptance of their negative emotions, and by helping them to realize that they are not alone in their suffering (Arimitsu and Hofmann 2015), thereby reducing suicide risk.

Thwarted interpersonal needs and perceived burdensomeness were also significant moderators of the association between self-compassion and suicide risk, per Joiner's IPTS (Joiner 2005; Van Orden et al. 2010), suggesting the inverse relation between self-compassion and suicide risk is strengthened when these risk factors are present. The concepts of perceived burdensomeness (e.g., to family, country) and thwarted belongingness (e.g., feeling like an outsider) may be particularly salient for veterans when integrating back into civilian life (Selby et al. 2010). Conceptually, thwarted interpersonal needs are in direct opposition to self-compassion; for instance, feelings of self-loathing and of being a burden to others, as well as feeling unwanted or unloved, reflect an absence of self-kindness and sense of common humanity (Van Orden et al. 2010). As perceived burdensomeness and thwarted interpersonal needs increase in intensity, being able to recognize one's self as a part of a larger group (e.g., veterans, heroes), being able to view one's self with kindness, and approaching one's distress with mindfulness—even in the face of discomfort and distress—may be of critical importance to reduce suicide risk (Neff 2003a, b).

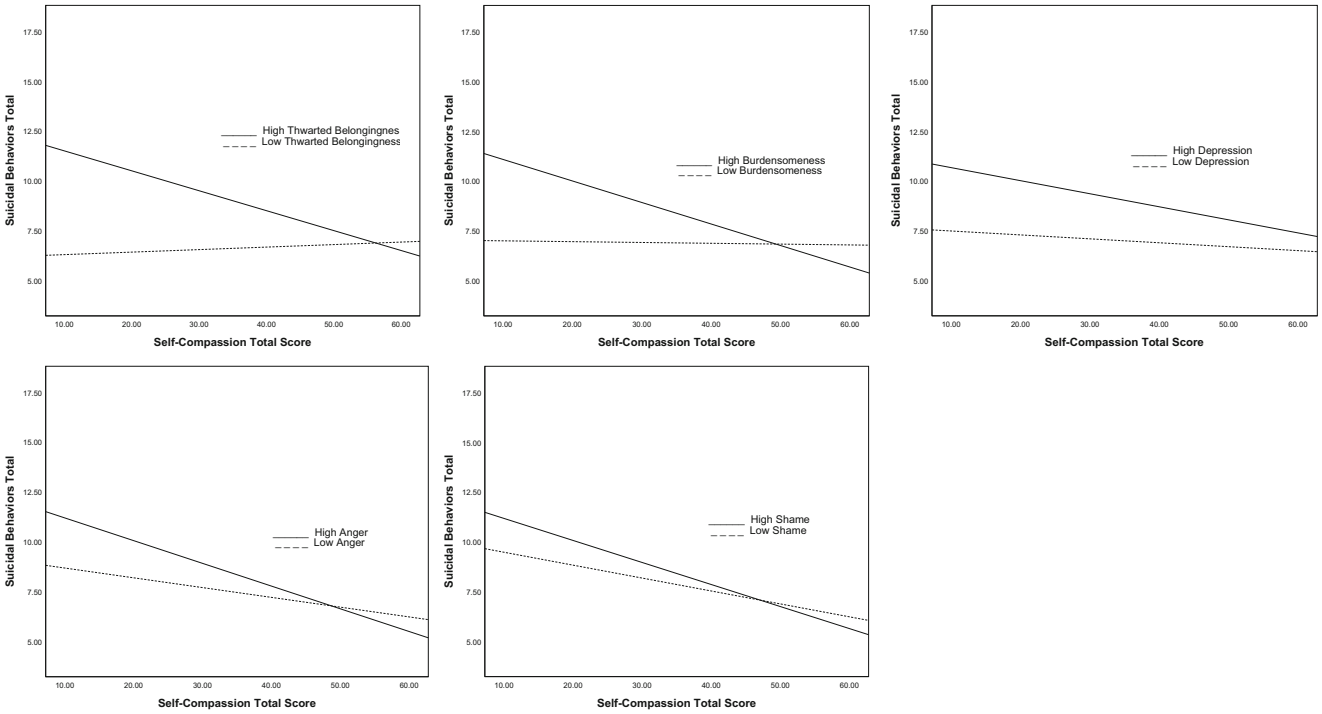

Fig. 1 Moderators of the self-compassion suicide relation. Self-compassion = Self-Compassion Scale–Short Form; suicidal behaviors = Suicidal Behaviors Questionnaire-Revised; depression = Multidimensional Health Profile-Psychosocial Functioning Subscale; anger, shame = Differential Emotions Scale-IV; thwarted belongingness and perceived burdensomeness = Interpersonal Needs Questionnaire

Limitations and Future Directions

Our results must be viewed within the context of limitations. First, relying on the use of self-report measures is less than ideal, as it is subject to both response bias and common method bias. In future studies, mixed methodology, including informant reports, qualitative investigation (e.g., open-ended questions), and utilization of implicit measures of suicidal ideation, may help reduce the potential for such bias (Podsakoff et al. 2003). Regarding assessment of PTSD symptoms, our version of the PCL-M did not require indication of a criterion-A trauma and may, thus, be confounded with general distress unrelated to trauma. Further, although the PCL-M specifically asks about "stressful military experiences," it does not assess civilian or non-military trauma that may also contribute to suicide risk. Therefore, in future research with both civilian and military samples, it will be critical to utilize measures that directly assess trauma sequelae and which are inclusive of both civilian and military trauma.

Additionally, the use of cross-sectional data precludes examination of causal relationships; however, our analyses, including ordering of variables, were grounded in previous theoretical and empirical findings. Temporality of our measures must also be addressed. Although the SBQ-R is validated for use with veterans and had good internal consistency in our study, the time frames measured by the SBQ-R, including lifetime and previous-year suicidal behavior, may have impacted our findings, as the overall score on the SBQ-R does not distinguish among these different time points. However, past suicidal behavior is one of the strongest predictors of future suicidal behavior (Beautrais 2001; Horwitz et al. 2015), meaning that past suicidal behavior captured by the SBQ-R, despite timeframe, may indicate risk for future suicidal behavior. Prospective, longitudinal research, exploring both risk and protective factors for veteran suicide, is needed to substantiate causality and examine the protective role of self-compassion across various manifestations of suicidal behavior, including ideation, planning, attempts, and death by suicide.

Given that our sample of veterans was a convenience sample recruited online, it may not be representative of the veteran population, which tends to have a greater proportion of males and older individuals (National Center for Veterans Analysis and Statistics 2016). To address this limitation, we controlled for age and sex, in addition to other demographic variables; however, future research should utilize additional recruitment and assessment methods (e.g., in-person, in VAMC settings) to be inclusive of those who may not have participated in our study, such as older or frailer persons, or persons without Internet access. As well, although the use of a veteran sample was intentional, as this population is at high risk for emotional distress and suicide (Kemp and Bossarte 2012), it limits generalizability to other populations. Future research should examine these relations in other samples, including vulnerable

military groups (e.g., females, LGBTQ) and civilian trauma samples.

Finally, it must be noted that the variance explained by our models (R^2) was modest; yet, despite this, our variables were significantly associated at both the bivariate and multivariate levels. Perhaps due to our attempts to predict an individual behavior (i.e., suicide risk) or the simplicity of our models (i.e., too few variables included), explanatory power was diminished. However, the clinical significance of our findings is clear that self-compassion is a significant contributor to lower levels of suicide risk, an important clinical goal. In future research, exploration of additional risk (e.g., hopelessness; substance abuse; gun stimuli and firearm accessibility) and protective factors (e.g., gratitude; optimism) not assessed in our study will be needed (Benjamin et al. 2018), both independently and in conjunction with self-compassion, to enhance predictability and prevention of suicide risk.

Author Contributions JR conducted data analyses for the research and was the primary author. JH designed and executed the study, collaborated in analyses, and contributed to the writing of the manuscript. AK collaborated in analyses and writing of the manuscript. FS consulted on the design of the study and collaborated in analyses and writing of the manuscript. BB collaborated in analyses and writing of the manuscript. KN consulted on the study design and analyses and contributed to the writing of the manuscript.

Data Availability Statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.

Compliance with Ethical Standards

Conflict of Interest The authors declare that they have no conflicts of interest.

Ethical Approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the IRB of East Tennessee State University and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards.

Informed Consent Informed consent was obtained from all individual participants included in the study.

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