

Suicidal Ideation and Suicide Risk: Differential Associations of Affective and Depressive Symptoms in Veterans Seeking Treatment for Posttraumatic Stress Disorder



ORIGINAL RESEARCH

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ABSTRACT

Compared to their civilian counterparts, veterans report elevated rates of suicidal thoughts and behaviors and are more likely to die by suicide. There are many contributing risk factors to suicide including posttraumatic stress disorder (PTSD) and depression symptoms. The current study examined the associations of distinct depression symptoms (i.e., affective, somatic), suicide risk—as determined by archival data from veterans' electronic health record, and self-reported suicidal ideation among veterans presenting for PTSD treatment ($N = 128$; 79.7% male; $M_{age} = 41.06$). Results indicated affective depressive symptoms were associated with suicidal ideation and somatic depressive symptoms trended towards statistical significance to increase the odds of suicide risk, after accounting for suicidal ideation. Results suggest somatic depressive symptoms may be a unique risk factor of suicide risk above and beyond self-reported suicidal ideation among veterans reporting PTSD symptoms.

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Suicide is among the leading causes of mortality in the general population of the United States and military veterans report suicidal thoughts and behaviors (STB; i.e., plan, attempts) and death by suicide at elevated rates compared to their civilian counterparts (i.e., 33.9 per 100,000 versus 16.7 per 100,000, respectively; [Department of Veterans Affairs Office of Mental Health and Suicide Prevention, 2023](#)). Moreover, adjusted rates of death by suicide over the past few decades indicate veteran suicide is increasing ([Department of Veterans Affairs Office of Mental Health and Suicide Prevention, 2023](#)). As such, identifying risk factors of STB in this population is critical. Prior research has examined a number of factors which may increase suicide risk ([Franklin et al., 2017](#)), including distal (e.g., previous suicidal behaviors [suicide plans, attempts]) and proximal (e.g., psychopathology such as depression, suicidal ideation and posttraumatic stress disorder [PTSD] symptoms) factors ([Conner et al., 2014](#); [Nichter et al., 2019](#); [Schafer et al., 2022](#); [Tegegne et al., 2022](#)).

Proximal (i.e., cognitive) factors such as suicidal ideation have been found to be associated with suicide risk and distal (i.e., behavioral) factors such as previously engaging in prior suicidal or self-injurious behaviors have been indicated to be significantly associated with suicide risk (i.e., increasing risk of dying by suicide in the future; [Klonsky, May & Saffer, 2016](#); [Ribeiro et al., 2016](#)). Along these lines, previous suicide attempts significantly increases the likelihood of an additional attempt by 70-fold ([Sanchez-Gistau et al., 2012](#)) and increases risk of death by 40-fold ([Harris & Barraclough, 1997](#)). This may be especially true for veterans given the elevated rates of suicide within this population ([Theis et al., 2021](#)). While extensive research has examined the association between self-reported suicidal ideation and suicide risk among veterans ([Holliday et al., 2020](#)), recent research has explored determining suicide risk (e.g., suicide-related variables that have been associated with increased risk of suicide, such as suicidal ideation and behaviors [i.e., suicide plan, intent or attempts]) via electronic health record data review of previous suicidal behaviors. For instance, a study conducted by Saulnier and colleagues (2025) indicated previous suicidal behaviors (i.e., suicide plan, seeking lethal means) and previous psychiatric hospitalizations among veterans was associated with future death by suicide within a month and year of the conducted suicide risk assessment. Additional research found additional factors such as the presence of a quality safety plan ([Green et al., 2018](#)) and adverse social determinants (e.g., lack of access to care; [Blosnich et al., 2020](#)) obtained via veteran electronic health record data to be associated with suicide risk. Consideration of these distal factors in STB may yield clinical utility in predicting suicide risk. However, consideration of additional proximal factors

(i.e., self-reported psychological symptoms) combined with review of electronic medical records of previous suicidal behaviors may improve the ability to accurately elevated suicide risk ([Nock et al., 2022](#)).

Extensive literature suggests PTSD and depression symptoms are highly comorbid and are independently and conjointly associated with increased suicide risk ([Athey & Overholser, 2018](#); [Nichter et al., 2021](#); [Panagioti et al., 2012](#)). Veterans presenting with comorbid PTSD and depression symptoms who reported elevated levels of current suicidal ideation were more likely to previously attempt suicide and are at greater risk of death by suicide compared to veterans with PTSD or depression only ([Bullman et al., 2019](#); [Nichter et al., 2019](#)). While previous research suggests high comorbidity between PTSD and depression may be due to the overlap between diagnostic symptoms (e.g., irritability, anhedonia, sleep disturbance, lack of concentration; [Afzali et al., 2017](#); [Franklin & Zimmerman, 2001](#)), it is also possible PTSD and depression are distinct phenomena which may interact to exacerbate suicide risk. For instance, McKinney and colleagues (2017) found PTSD symptoms were indirectly related to suicide risk via the serial effects of depression and anger. Additional evidence suggests the association between PTSD symptoms and suicide risk may be indirectly influenced by serial effects of depression and suicidal cognitions ([Rugo et al., 2020](#)). Taken together, examining the mechanisms of depression which may influence suicide risk among veterans reporting PTSD symptoms is critical.

By the standards of the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, Text Revision (DSM-5-TR; [American Psychiatric Association, 2022](#)), depression is a unidimensional construct of severity consisting of primary (i.e., depressed mood and anhedonia) and secondary (i.e., weight changes, sleep disturbance psychomotor disturbance, fatigue, diminished concentration, feelings of worthlessness and suicidality) symptoms. While research suggests symptoms of depression may often interact and have bidirectional influences (e.g., sleep disturbance influencing sadness; [Sun et al., 2018](#); [Vanderlind et al., 2014](#)), depression can be heterogeneous and may be best conceptualized as a two-factor model. Along these lines, evidence suggests depression may be divided into two distinct subtypes: affective (i.e., “cognitive-emotional” [e.g., anhedonia, low mood, worthlessness/guilt and suicidality]) and somatic (i.e., sleep disturbance, appetite/weight changes, psychomotor disturbance, diminished concentration, and fatigue; [Elhai et al., 2012](#); [Richardson & Richards, 2008](#)). Previous work has found a robust association between affective symptoms (e.g., hopelessness, anhedonia), PTSD symptoms and STB across various populations ([Bonanni et al., 2019](#); [Ribeiro et al.,](#)

2018) including veterans (Pfeiffer et al., 2014). Moreover, somatic symptoms (symptoms commonly associated with depression e.g., chronic pain, sleep disturbance) have been shown to be uniquely linked to STB (Fang et al., 2018; Torres et al., 2021; Woznica et al., 2015) and are pervasive among veterans reporting PTSD and depression symptoms (Ketcheson et al., 2018; Sikharulidze et al., 2017). While research has linked affective and somatic (with or without) depression symptoms to PTSD and STB, literature is nascent distinguishing the unique impact of either subtype on veteran suicide risk.

Past evidence suggests mixed findings regarding which subtype of depression may influence the association between PTSD and STB, perhaps due to differential sample populations (i.e., civilians, first responders, veterans), varying demographics (e.g., age, race) and methodology of measuring STB. For instance, results from a network analysis conducted by Ponder et al. (2022) among a sample of first responders indicated PTSD-related emotional numbing (i.e., negative alterations in cognitions and mood) did not significantly differ from affective depression (i.e., anhedonia, hopelessness, feeling like a failure). However, advanced statistical modeling indicated PTSD-related emotional numbing had downstream effects of predicting affective depression and only affective depression directly influenced STB (Ponder et al., 2022). Similarly, findings from other studies suggested affective depression symptoms mediate the association between PTSD symptoms and STB in first responders (Whitworth et al., 2023) and suicidal ideation in African American women (Carr et al., 2013). Consistent with previous literature, Kuzmina et al. (2023) found similar results among veterans seeking PTSD treatment: affective depression and not somatic, mediated the association between PTSD symptoms and STB. Moreover, while not examining STB among individuals reporting PTSD symptoms, results from another study examining trauma exposure (i.e., childhood maltreatment) among a community sample of Canadian men indicated somatic depression to account for the variance in STB even while controlling for affective depression (Rice et al., 2019). In the context of current literature, affective depression may play a significant role in suicide risk among trauma-exposed individuals.

PURPOSE STATEMENT

This study aimed to extend current literature by examining the association of subtypes of depression (i.e., affective and somatic) and suicide risk (i.e., endorsement of variables known to increase risk of suicide, previous inpatient hospitalization and/or history of suicidal behaviors [e.g., attempts, plan, method]) among veterans presenting for PTSD treatment via self-report and review of electronic

medical records. To our knowledge, the only study that examined the association of subtypes of depression and STB among veterans did not account for bidirectional effects between affective and somatic depression (Kuzmina et al., 2023). Moreover, these studies solely relied on self-report measures of suicidality (Carr et al., 2013; Kuzmina et al., 2023; Rice et al., 2019; Whitworth et al., 2023) and did not examine additional objective suicide related factors associated with increased suicide risk, such as a history of psychiatric inpatient hospitalizations, past suicidal behaviors (i.e., attempts) or presence of a safety plan (Large et al., 2021; Nock et al., 2022; Nuij et al., 2021). Moreover, given research highlighting an association between suicidal ideation and depression symptoms among veterans (Nichter et al., 2021), the current study aimed to extend literature by accounting for suicidal ideation to examine the distinct associations between subtypes of depression and suicide risk. We hypothesized the following: compared to somatic depressive symptoms, H_1 : affective depressive symptoms would be significantly associated with suicidal ideation and suicide risk, and H_2 : affective depressive symptoms would be significantly associated with suicide risk while accounting for suicidal ideation.

METHOD

The institutional review board of the local university and VA Research and Development Committee approved this exempt study as part of ongoing program evaluation, examining measures gathered through standard clinical practice. Obtained from a larger chart review investigation (Albanese et al., 2022), the current study utilized a convenience sample of archival data from 128 veterans (i.e., person who has served in the United States military, naval or air service and was discharged or released under conditions other than dishonorable) who consecutively presented for treatment in a PTSD Clinical Team (PCT) outpatient specialty clinic at a southeastern VA medical center. Prior to beginning treatment, veterans completed an intake assessment which included a diagnostic clinical interview and self-report measures of PTSD and depression symptoms (including current suicidal ideation; see below). Suicide risk was categorized using archival data collected from the electronic medical record (i.e., Computerized Patient Record System [CPRS]; see description below).

PARTICIPANTS

The mean age of participants ($N = 128$; 79.7% male) in the current study was 41.06 ($SD = 12.97$, range = 23–82) and self-identified as Caucasian (55.7%), African American (35.2%), Hispanic (4.1%), Asian American (1.6%), Native American (1.6%) and ‘other’ (e.g., bi-racial 1.6%).

MEASURES

Affective and somatic depression symptoms were assessed via the Patient Health Questionnaire-9 (PHQ-9; [Kroenke et al., 2001](#)). Participants rated depression symptoms on a Likert scale ranging from 0 (not at all) to 3 (nearly every day). Summed scores range from 0 to 24; higher scores indicate greater severity of depression symptoms. In-line with prior research ([Kuzmina et al., 2023](#); [Rice et al., 2019](#); [Whitworth et al., 2023](#)), a latent variable for affective depression was created by summing scores from items 1, 2 and 6 ($\alpha = 0.81$) while a latent variable for somatic depression was created by summing scores from items 3, 4, 5, 7 and 8 ($\alpha = 0.78$). Scores of affective depression ranged from 0 to 9 while somatic depression ranged from 0 to 15.

Suicide risk was assessed with a latent composite risk variable developed by this research group for a previous study ([Albanese et al., 2022](#)). Albanese et al. (2022) computed suicide risk via extracting medical record data collected from veteran's medical records (i.e., CPRS) by searching the following terms: "suicide attempt", "suicide behavior", "safety plan", "inpatient" as well as examining each record for information detailing suicide risk such as Veterans Crisis Line contacts, presence of a safety plan, previous suicide risk assessments, previous suicidal behaviors and previous inpatient psychiatric hospitalizations. The current study dichotomized the suicide risk variable: 0 = no risk or low risk and 1 = some risk or high risk (i.e., safety plan, previous suicidal behaviors [including previous suicide attempt] and/or inpatient psychiatric hospitalizations).

Suicidal ideation was assessed via a single-item from the PHQ-9 ([Kroenke et al., 2001](#)). Participants rated suicidal ideation (i.e., "over the past two weeks, how often have you been bothered by thoughts that you would be better off dead or of hurting yourself in some way?") on a Likert scale from 0 (not at all) to 3 (nearly every day). Higher scores indicated greater suicidal ideation. Previous research has indicated examining suicidal ideation via a single-item from the PHQ-9 may have psychometric limitations and should be used in conjunction with other measures of suicide risk ([Na et al., 2018](#)).

DATA ANALYTIC PLAN

The current study utilized a cross-sectional design to examine subtypes of depression, suicidal ideation and suicide risk among veterans presenting for PTSD treatment. All statistical analyses were conducted in SPSS v30. Analyses were conducted utilizing listwise deletion to account for missing data ($n = 7$) among study variables; the final sample size was 121 treatment-seeking veterans. Data was normally distributed except for suicide risk as preliminary analyses indicated a moderately positive skew; however, planned analyses (i.e., linear regressions) are robust enough to account for data non-normality ([Schmidt & Finan, 2018](#)).

A bivariate correlation analysis was conducted to examine associations between subtypes of depression (i.e., affective and somatic), suicide risk and suicidal ideation. Post hoc multicollinearity diagnostics using variance inflation factors (VIF) and tolerance values were calculated due to study variables being highly intercorrelated ([O'Brien, 2007](#); [Senaviratna & Cooray, 2019](#)). Results suggested minimal multicollinearity concerns as all tolerance values exceeded .20 (minimum tolerance = .56) and VIF was below 5 (maximum VIF = 1.79). Next, a series of linear and multivariate logistic regressions were conducted to examine the associations between subtypes of depression, suicide risk and suicidal ideation. Finally, a post-hoc bivariate correlation analysis between specific items from the somatic symptom scale on the PHQ-9 (items 3, 4, 5, 7 and 8) and suicide risk was conducted.

RESULTS

DESCRIPTIVES

Descriptive statistics for all study variables are presented in [Table 1](#). Average affective depression scores were 5.42 ($SD = 2.53$) and average somatic depression scores were 9.88 ($SD = 3.44$). Higher suicide risk was indicated for 32.8% ($n = 42$) of the current sample.

CORRELATION ANALYSES

[Table 1](#) presents bivariate correlations between subtypes of depression (i.e., affective and somatic), suicidal ideation and suicide risk. Suicidal ideation was significantly positively associated with affective depression ($r = .46$, $p < .01$) and somatic depression ($r = .27$, $p < .01$) while somatic depression (and not affective depression) was significantly positively associated with suicide risk ($r = .21$, $p < .05$).

VARIABLE	1	2	3	4
1. PHQ-9: Affective	–	.60**	.15	.46**
2. PHQ-9: Somatic		–	.21*	.27**
3. PHQ-9: SI			–	.34**
4. Suicide Risk				–
<i>M</i>	5.42	9.88	0.55	–
<i>SD</i>	2.54	3.44	0.87	–

Table 1 Bivariate Correlations, Means and Standard Deviations of Subtypes of Depression, Suicidal Ideation, and Suicide Risk.

Note. * $p < .05$ (two-tailed); ** $p < .01$ (two-tailed); PHQ-9: Patient Health Questionnaire-9; SI: suicidal ideation; ¹Suicide risk was dichotomized 0 = little or no risk indicated, 1 = risk indicated; *M* = mean; *SD* = standard deviation.

REGRESSION ANALYSES

A series of linear and multivariate logistical regression analyses were conducted to examine the associations between subtypes of depression, suicidal ideation and suicide risk.

Linear Regression Analysis

Subtypes of Depression and Suicidal Ideation. Results of the linear regression analysis utilizing suicidal ideation as the dependent variable (Table 2) indicated the model to be statistically significant $F(2, 118) = 16.10, p < .001$ and explained 21% of the variance in suicidal ideation ($R^2 = 0.21$). Partially consistent with study hypotheses, only affective depression was significantly positively associated with suicidal ideation ($\beta = 0.47, t = 4.60, p < .001$).

Multivariate Logistical Regression Analyses

Subtypes of Depression and Suicide Risk. Inconsistent with study hypotheses, results of the multivariate logistical regression analysis utilizing suicide risk as the dependent variable (Table 3) indicated the overall model to not be statistically significant $\chi^2(1) = 6.00, p = .050$.

Additionally, neither affective ($OR = 1.04, 95\% CI [0.86, 1.26], p = 0.70$) nor somatic ($OR = 1.14, 95\% CI [0.98, 1.32], p = 0.09$) depression symptoms were statistically significantly associated with suicide risk in the current sample. However, it is notable that somatic depression symptoms trended towards statistical significance and yielded marginally higher increase in odds (14%, $OR = 1.14$) compared to affective symptoms (4%, $OR = 1.04$).

Subtypes of Depression, Suicidal Ideation and Suicide Risk. Inconsistent with study hypotheses, results of the multivariate logistical regression analysis utilizing suicide risk as the dependent variable (Table 4) indicated the model to be statistically significant $\chi^2(1) = 13.17, p < .001$. The model explained 10% (Cox & Snell R^2) and 14% (Nagelkerke R^2) of the variance in suicide risk. When accounting for suicidal ideation, somatic depressive symptoms trended towards statistical significance (95% CI [1.00, 1.36], $p = .053$) and indicated a 17% increase in odds of suicide risk ($OR = 1.17$) while affective depressive symptoms was not statistically significant and did not yield an increase in odds ($OR = 0.90, 95\% CI [0.72, 1.12], p = 0.33$).

PREDICTOR	R^2	B	SE B	β	t	p	95% CI [LL, UL]
1. PHQ-9: Affective	0.21**	0.16	.035	0.47	4.60	<.001**	[0.09, 0.23]
2. PHQ-9: Somatic		-.001	0.03	-.004	-0.04	0.97	[-0.05, 0.05]

Table 2 Linear Regression Analysis of the Association Between Subtypes of Depression and Suicidal Ideation.

Note. ** $p < .01$ (two-tailed); PHQ-9: Patient Health Questionnaire-9; B = unstandardized coefficient; SE B = standard error of unstandardized coefficient; β = standardized coefficient; CI = confidence interval; Multicollinearity concerns were not detected as all tolerance values exceeded .20 (minimum tolerance = .56) and VIF was below 5 (maximum VIF = 1.79).

PREDICTOR	B	SE	p	WALD	OR (Exp(B))	95% CI [LL, UL]
PHQ-9: Affective	0.04	0.10	.70	.15	1.04	[0.86, 1.26]
PHQ-9: Somatic	0.13	0.08	.09	2.95	1.14	[0.98, 1.32]

Table 3 Multivariate Logistical Regression Analysis of the Association Between Subtypes of Depression and Suicide Risk.

Note. PHQ-9: Patient Health Questionnaire-9; B = unstandardized coefficient; SE = standard error; OR = odds ratio; CI = confidence interval.

PREDICTOR	B	SE	p	WALD	OR (Exp(B))	95% CI [LL, UL]
PHQ-9: SI	0.82	0.27	.003*	9.08	2.27	[1.33, 3.87]
PHQ-9: Affective	-0.11	0.12	.33	0.94	0.90	[0.72, 1.12]
PHQ-9: Somatic	0.15	0.08	.05	3.75	1.17	[1.00, 1.36]

Table 4 Multivariate Logistical Regression Analysis of the Association Between Subtypes of Depression and Suicidal Ideation with Suicide Risk as the Dependent Variable.

Note. * $p < .01$ (two-tailed); PHQ-9: Patient Health Questionnaire-9; SI: suicidal ideation; B = unstandardized coefficient; SE = standard error; OR = odds ratio; CI = confidence interval.

VARIABLE	1	2	3	4	5	6
1. PHQ-9: Sleep	–	.45**	.43**	.27**	.26**	.01
2. PHQ-9: Fatigue		–	.52**	.46**	.40**	.19*
3. PHQ-9: Appetite			–	.43**	.42**	.23**
4. PHQ-9: Concentration				–	.48**	.12
5. PHQ-9: Psychomotor Disturbance					–	.27**
6. Suicide Risk ¹						–
<i>M</i>	2.39	2.31	1.81	1.93	1.48	–
<i>SD</i>	0.86	0.81	1.01	0.99	1.08	–

Table 5 Bivariate Correlations, Means and Standard Deviations of Specific Somatic Depression Symptoms and Suicide Risk.

Note. * $p < .05$ (two-tailed); ** $p < .01$ (two-tailed); PHQ-9: Patient Health Questionnaire-9; ¹Suicide risk was dichotomized 0 = little or no risk indicated, 1 = risk indicated; *M* = mean; *SD* = standard deviation.

Post-HOC CORRELATION ANALYSIS

Table 5 presents post-hoc bivariate correlations between specific items on the somatic depression subscale on the PHQ-9 (i.e., items 3, 4, 5, 7 and 8) and suicide risk. Fatigue ($r = .21, p < .05$), appetite change ($r = .23, p < .01$) and psychomotor disturbance ($r = .27, p < .01$) were significantly positively associated with suicide risk; sleep disturbance ($r = .01, p = 0.93$) and problems with concentration ($r = .12, p = 0.20$) were not significantly associated with suicide risk.

DISCUSSION

The current study examined differential associations between suicidal ideation, suicide risk (i.e., previous indication of suicidal behaviors, safety plan, or inpatient psychiatric hospitalizations in veteran's electronic medical record) and subtypes of depression (i.e., affective and somatic) among veterans presenting for posttraumatic stress disorder (PTSD) treatment. Prior literature has examined suicidal thoughts and behaviors (STB) as a unified construct (i.e., combining suicidal ideation and behaviors into a single variable; Kuzmina et al., 2023; Rice et al., 2019). Given research suggesting utilization of both self-report and electronic medical record data to effectively predict suicide risk (Nock et al., 2022), results from the current study extends literature by examining differential associations of suicidal ideation, suicide risk (as determined via electronic medical record) and subtypes of depression. Overall, current results support theoretical findings suggesting depression may be best conceptualized as a two-factor (i.e., multidimensional: affective and somatic) model (Elhai et al., 2012; Richardson & Richards, 2008) as opposed to unidimensional and is associated with suicidal ideation (Tegegne et al., 2022). Inconsistent with previous literature (Carr et al., 2013; Kuzmina et al., 2023; Whitworth et al., 2023), the current study found

only somatic depressive symptoms to trend towards statistical significance and to increase the odds of suicide risk. Although not directly examined, current findings are consistent with research indicating PTSD and depression to be comorbid among veterans (Nichter et al., 2019).

Partially consistent with findings from previous studies (Carr et al., 2013; Kuzmina et al., 2023; Whitworth et al., 2023), results from the current study indicated that while adjusting for covariance, only affective (and not somatic) depression to be associated with suicidal ideation among veterans seeking treatment for PTSD. While current results are consistent with research suggesting PTSD symptoms may underlie the elevated rates of reported suicidal ideation, and heightened suicide risk, observed among veterans (Pompili et al., 2013). It is important to note suicidality is complex and may be influenced by a variety of risk factors including psychiatric comorbidity (e.g., depression; Holliday et al., 2020). Current findings are also in-line with extensive literature suggesting symptoms that comprise affective depression (i.e., anhedonia, low mood, maladaptive negative cognitions [i.e., guilt, worthlessness]) to be robustly associated with suicidal ideation (Bonanni et al., 2019; Bryan et al., 2013; Ducasse et al., 2018; Rotenstein et al., 2016). The current study did not parse distinct affective depression symptoms; given evidence suggesting robust comorbidity and symptom overlap between PTSD and depression (Afzali et al., 2017; Athey & Overholser, 2018) and suicidality (Nichter et al., 2021), further research is needed to examine independent contributions of affective depression independent of PTSD symptoms to inform clinical utility for reducing suicidal ideation among veterans.

Current findings did not indicate suicide risk (i.e., variables associated with increased risk of suicide [i.e., previous indication of suicidal behaviors, safety plan, or inpatient psychiatric hospitalizations] in veteran's electronic medical record) to be significantly associated (beyond correlational)

with either affective or somatic depression. However, only somatic symptoms trended towards statistical significance and as such, this statistical limitation indicates findings should be interpreted with caution. Indeed, these findings are contrary to research suggesting affective and somatic depression to be associated with STB among trauma-exposed individuals (Rice et al., 2019; Soumoff et al., 2022; Torres et al., 2021; Whitworth et al., 2023), including veterans (Kuzmina et al., 2023). The current results may be due to employed methodology for measuring and determining suicide risk (i.e., collapsing suicide-related variables [safety plan, or inpatient psychiatric hospitalizations] extracted from veteran's electronic medical record) versus self-report. Along these lines, previous research has utilized the Suicidal Behaviors Questionnaire-Revised (SBQ-R; Osman et al., 2001), a valid and reliable instrument that measures suicide risk by combining past and present suicidal ideation and behaviors via self-report to determine suicide risk (Batterham et al., 2015; Kuzmina et al., 2023; Osman et al., 2001; Rice et al., 2019).

In contrast, following literature on endorsement of past suicidal behaviors to be associated with future death by suicide (Large et al., 2021; Saulnier et al., 2025), the current study deemed elevated suicide risk as electronic medical record indication of past suicidal behaviors (i.e., suicide attempts, contacting veteran crisis line) and clinical markers of suicide risk (i.e., previous inpatient psychiatric hospitalizations, presence of a safety plan). While this is a strength of the current study, leading theories of suicide suggest several cognitive, affective, somatic, behavioral and neurobiological factors (e.g., Interpersonal Psychological Theory of Suicide; Joiner, 2005) may interact to increase suicide risk (Rudd et al., 2006) and also warrant empirical consideration.

Current results indicated somatic depressive symptoms (not affective) to trend towards significance and increased the odds of suicide risk among treatment-seeking veterans while accounting for suicidal ideation. These findings are partially consistent with research conducted by Rice et al. (2019) among trauma-exposed males indicating somatic depressive symptoms to be associated with suicidality. These findings suggest that although veterans report elevated rates of suicidal ideation (Department of Veterans Affairs Office of Mental Health and Suicide Prevention, 2023), somatic depression symptoms may enhance risk for suicide. Moreover, the current sample was largely composed of male veterans (79.7%). Literature suggests cultural norms relating to gender (i.e., social expectations for men to diminish emotionality to bolster masculinity) may play a role in reporting somatic versus affective depressive symptoms (Hudson et al., 2018; Martin et al., 2013; Seidler et al., 2016). As such, evidence suggests men may be more likely to express depression-related symptoms via somatic

complaints (Rice et al., 2019). Along these lines, future studies may benefit from utilizing gender as a covariate in analyses to account for any potential influence between the association of subtypes of depression and suicide risk.

Consistent with previous studies conducted among veterans reporting PTSD symptoms, veterans in the current study reported substantial rates of somatic symptoms (Hoge et al., 2007; Ketcheson et al., 2018; McAndrew et al., 2019; McFarlane & Graham, 2021). Indeed, results from the current study highlight somatic-related symptoms (particularly as it relates to depression) may contribute to suicide risk among treatment seeking veterans, however, it is unclear whether such symptoms are related to PTSD or other chronic health conditions; both of which have been found to be robust associations of suicide risk (Pacella et al., 2013; Sareen et al., 2007; Sullivan & Germaine, 2019).

Post-hoc analyses indicated fatigue, appetite change, and psychomotor disturbance were the only somatic depressive symptoms to be associated with suicide risk within the current study. Indeed, these results are consistent with previous findings suggesting these somatic symptoms may individually be associated with STB (Balázs et al., 2006; Johnson et al., 2022; Orri et al., 2018; Sullivan & Germaine, 2019) and may be clinical targets for suicide prevention. While problems with concentration have been indicated to have relatively weak associations with STB (Chen et al., 2023), the lack of statistical significance between sleep disturbance and suicide risk may be surprising given extensive literature indicating impaired sleep to be a robust predictor of suicide (Pigeon et al., 2016). Along these lines, it is important to underscore that this may be a reflection of limited variability in the data given elevated rates of sleep disturbance in the current sample (on average, participants reported sleep disturbance 'more than half the days').

CLINICAL IMPLICATIONS

Results from the current study indicate affective and somatic depressive symptoms have differential associations between suicidal ideation and suicide risk, highlighting the clinical utility of addressing subtypes of depression in reducing suicide risk among veterans reporting PTSD symptoms. Indeed, evidence-based cognitive-behavioral treatments for PTSD that are considered 'gold standard' (Martin et al., 2021; Mendes et al., 2008) such as Prolonged Exposure (PE) and Cognitive Processing Therapy (CPT) have been shown to reduce depression and PTSD symptoms as well as STB (Brown et al., 2018; Brown et al., 2019; Roberge et al., 2021). In light of current findings, utilizing self-report to examine distinct symptoms of affective and somatic depression may be valuable in determining suicide risk. While focusing on subjective symptoms (i.e., affective) may be valuable to assess suicidal ideation, current findings suggest symptoms considered more objective (such as,

somatic) as well as chart examination for history of somatic symptoms may be particularly useful in determining suicide risk (especially among veterans already reporting suicidal ideation).

LIMITATIONS

Despite several strengths of the current study, some limitations warrant discussion. First, the current sample of archival data has a relatively small sample size ($N = 121$), limiting statistical power across study analyses. Additionally, the current study relied on cross-sectional archival data, therefore causality cannot be inferred and selected analyses may produce biased parameter estimates. As such, trend-level significant results should be interpreted with caution. Moreover, the current sample consisted of mostly white men (and did not examine self-identified gender), limiting generalizability of results to veterans of differential ethnoracial and gender identities (i.e., female, transgender or gender diverse) that are often disproportionately impacted by trauma-related sequelae and elevated rates of suicidality (Carter et al., 2020; Schuman et al., 2019; Tucker, 2019). Further, suicide is a complex phenomenon (Chu et al., 2015), which requires nuanced measures of suicidality: suicidal ideation was measured in frequency via a single-item question (limiting validity; Na et al., 2018) from the Patient Health Questionnaire-9 (PHQ-9; Kroenke et al., 2001), limiting understanding of intensity or intent that may underlie suicidal ideation. Although previous suicidal behaviors have been found to be indicative of future suicide mortality (Saulnier et al., 2025), the latent variable that was utilized to examine suicide risk only included past suicidal behaviors and associated variables (safety plan, or inpatient psychiatric hospitalizations) that largely relied on clinician identification and documentation which may be subject to bias or inaccuracy (Ribeiro et al., 2017) and psychometric properties of this variable have not been established (Albanese et al., 2022). Further, items within the somatic depression subscale on the PHQ-9 contain questions that are difficult to discriminate between symptoms (e.g., poor appetite or overeating). While it is clear that the symptom (e.g., appetite change) may be a symptom associated with suicide risk, future research may benefit from identifying distinct symptoms for targeted clinical intervention. Additionally, variables that are uniquely associated with depression and STB (e.g., gender, sleep disturbance, chronic pain, substance use, PTSD symptom severity) within the veteran population were not utilized as covariates in current analytic models, limiting knowledge on the unique effects of subtypes of depression (Athey & Overholser, 2018; Fang et al., 2018; Ketcheson et al., 2018; Martin et al., 2013; Possemato et al., 2010; Sikharulidze et al., 2017; Torres et al., 2021; Woznica et al., 2015).

CONCLUSION

Among veterans seeking treatment for PTSD, affective depressive symptoms were associated with suicidal ideation but not suicide risk. Moreover, while accounting for affective depressive symptoms and suicidal ideation, somatic depressive symptoms were marginally associated with increased odds of suicide risk. While the association of somatic symptoms and suicide risk has been previously examined this is the first study (to our knowledge) that examined the differential associations of suicide risk (i.e., self-report versus clinician assessed/electronic health record extraction) and subtypes of depression. While current results should be interpreted with caution due to the cross-sectional design of the study, targeting depression symptoms; specifically, somatic (i.e., fatigue, appetite change and psychomotor disturbance) depressive symptoms may be particularly beneficial in suicide prevention for veterans reporting PTSD symptoms. Future research may benefit from examining subtypes of depression and suicide risk among veterans with differential ethnoracial and gender identities as well as accounting for variables relevant to STB (e.g., PTSD symptoms, substance use, chronic pain) to highlight the distinct impact of subtypes of depression.

DATA ACCESSIBILITY STATEMENT

It is not possible to publicly post the dataset due to VA policy. Please contact the corresponding author by email for further information regarding the data and analytic code.

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COMPETING INTERESTS

The authors have no competing interests to declare.

AUTHOR CONTRIBUTIONS

Each author contributed equally to the current manuscript, including conceptualization, methodology, formal data analysis and editing of drafts.

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REFERENCES

- Afzali, M. H., Sunderland, M., Teesson, M., Carragher, N., Mills, K., & Slade, T. (2017). A network approach to the comorbidity between posttraumatic stress disorder and major depressive disorder: The role of overlapping symptoms. *Journal of Affective Disorders*, 208, 490–496. <https://doi.org/10.1016/j.jad.2016.10.037>
- Albanese, B. J., Myers, U. S., Fox, H., & Wangelin, B. C. (2022). Reduced working memory performance in PTSD and suicide among veterans presenting for treatment. *Journal of Psychiatric Research*, 156, 299–307. <https://doi.org/10.1016/j.jpsychires.2022.10.043>
- American Psychiatric Association. (2022). *Diagnostic and statistical manual of mental disorders* (5th ed., text rev.; DSM-5-TR). American Psychiatric Publishing. <https://doi.org/10.1176/appi.books.9780890425787>
- Athey, A., & Overholser, J. (2018). A systematic review of suicide risk in veterans: Depression is a more powerful predictor than comorbid psychiatric disorders. *Military Behavioral Health*, 6(4), 368–377. <https://doi.org/10.1080/21635781.2018.1442757>
- Balázs, J., Benazzi, F., Rihmer, Z., Rihmer, A., Akiskal, K. K., & Akiskal, H. S. (2006). The close link between suicide attempts and mixed (bipolar) depression: Implications for suicide prevention. *Journal of Affective Disorders*, 91(2), 133–138. <https://doi.org/10.1016/j.jad.2005.12.049>
- Batterham, P. J., Ftanou, M., Pirkis, J., Brewer, J. L., Mackinnon, A. J., Beautrais, A., ... & Christensen, H. (2015). A systematic review and evaluation of measures for suicidal ideation and behaviors in population-based research. *Psychological Assessment*, 27(2), 501. <https://doi.org/10.1037/pas0000053>
- Blosnich, J. R., Montgomery, A. E., Dichter, M. E., Gordon, A. J., Kavalieratos, D., Taylor, L., Ketterer, B., & Bossarte, R. M. (2020). Social determinants and military veterans' suicide ideation and attempt: A cross-sectional analysis of electronic health record data. *Journal of General Internal Medicine*, 35(6), 1759–1767. <https://doi.org/10.1007/s11606-019-05447-z>
- Bonanni, L., Gualtieri, F., Lester, D., Falcone, G., Nardella, A., Fiorillo, A., & Pompili, M. (2019). Can anhedonia be considered a suicide risk factor? A review of the literature. *Medicina*, 55(8), 458. <https://doi.org/10.3390/medicina55080458>
- Brown, L. A., Jerud, A., Asnaani, A., Petersen, J., Zang, Y., & Foa, E. B. (2018). Changes in posttraumatic stress disorder (PTSD) and depressive symptoms over the course of prolonged exposure. *Journal of Consulting and Clinical Psychology*, 86(5), 452–463. <https://doi.org/10.1037/ccp0000292>
- Brown, L. A., McLean, C. P., Zang, Y., Zandberg, L., Mintz, J., Yarvis, J. S., Litz, B. T., Peterson, A. L., Bryan, C. J., Fina, B., Petersen, J., Dondanville, K. A., Roache, J. D., Young-McCaughan, S., & Foa, E. B. (2019). Does prolonged exposure increase suicide risk? Results from an active duty military sample. *Behaviour Research and Therapy*, 118, 87–93. <https://doi.org/10.1016/j.brat.2019.04.003>
- Bryan, C. J., Morrow, C. E., Etienne, N., & Ray-Sannerud, B. (2013). Guilt, shame, and suicidal ideation in a military outpatient clinical sample. *Depression and Anxiety*, 30(1), 55–60. <https://doi.org/10.1002/da.22002>
- Bullman, T., Schneiderman, A., & Gradus, J. L. (2019). Relative importance of posttraumatic stress disorder and depression in predicting risk of suicide among a cohort of Vietnam veterans. *Suicide and Life-Threatening Behavior*, 49(3), 838–845. <https://doi.org/10.1111/sltb.12482>
- Carter, S. P., Malte, C. A., Rojas, S. M., Hawkins, E. J., & Reger, M. A. (2020). Examination of potential disparities in suicide risk identification and follow-up care within the Veterans Health Administration. *Suicide and Life-Threatening Behavior*, 50(6), 1127–1139. <https://doi.org/10.1111/sltb.12673>
- Carr, E. R., Woods, A. M., Vahabzadeh, A., Sutton, C., Wittenauer, J., & Kaslow, N. J. (2013). PTSD, depressive symptoms, and suicidal ideation in African American women: A mediated model. *Journal of Clinical Psychology in Medical Settings*, 20(1), 37–45. <https://doi.org/10.1007/s10880-012-9316-1>
- Chen, X., Ren, L., Xue, X., Yu, N., Liu, P., Shen, W., Zhou, H., Wang, B., Zhou, J., Yang, S. & Jiang, Q. (2023). The comorbidity of depression and anxiety symptoms in tinnitus sufferers: a network analysis. *Brain Sciences*, 13(4), 583. <https://doi.org/10.3390/brainsci13040583>
- Chu, C., Klein, K. M., Buchman-Schmitt, J. M., Hom, M. A., Hagan, C. R., & Joiner, T. E. (2015). Routinized assessment of suicide risk in clinical practice: An empirically informed update. *Journal of Clinical Psychology*, 71(12), 1186–1200. <https://doi.org/10.1002/jclp.22210>
- Conner, K. R., Bossarte, R. M., He, H., Arora, J., Lu, N., Tu, X. M., & Katz, I. R. (2014). Posttraumatic stress disorder and suicide in 5.9 million individuals receiving care in the veterans health administration health system. *Journal of Affective Disorders*, 166, 1–5. <https://doi.org/10.1016/j.jad.2014.04.067>
- Ducasse, D., Loas, G., Dassa, D., Gramaglia, C., Zeppegno, P., Guillaume, S., ... & Courtet, P. (2018). Anhedonia is associated with suicidal ideation independently of

- depression: A meta-analysis. *Depression and anxiety*, 35(5), 382–392. <https://doi.org/10.1002/da.22709>
- Elhai, J. D., Contractor, A. A., Tamburrino, M., Fine, T. H., Prescott, M. R., Shirley, E., Chan, P. K., Slembariski, R., Liberzon, I., Galea, S., & Calabrese, J. R.** (2012). The factor structure of major depression symptoms: A test of four competing models using the Patient Health Questionnaire-9. *Psychiatry Research*, 199(3), 169–173. <https://doi.org/10.1016/j.psychres.2012.05.018>
- Fang, X., Zhang, C., Wu, Z., Peng, D., Xia, W., Xu, J., Wang, C., Cui, L., Huang, J., & Fang, Y.** (2018). The association between somatic symptoms and suicidal ideation in Chinese first-episode major depressive disorder. *Journal of Affective Disorders*, 245, 17–21. <https://doi.org/10.1016/j.jad.2018.10.110>
- Franklin, C. L., & Zimmerman, M.** (2001). Posttraumatic stress disorder and major depressive disorder: Investigating the role of overlapping symptoms in diagnostic comorbidity. *The Journal of Nervous and Mental Disease*, 189(8), 548–551. <https://doi.org/10.1097/00005053-200108000-00008>
- Franklin, J. C., Ribeiro, J. D., Fox, K. R., Bentley, K. H., Kleiman, E. M., Huang, X., Musacchio, K. M., Jaroszewski, A. C., Chang, B. P., & Nock, M. K.** (2017). Risk factors for suicidal thoughts and behaviors: A meta-analysis of 50 years of research. *Psychological Bulletin*, 143(2), 187–232. <https://doi.org/10.1037/bul0000084>
- Green, J. D., Kearns, J. C., Rosen, R. C., Keane, T. M., & Marx, B. P.** (2018). Evaluating the effectiveness of safety plans for military veterans: Do safety plans tailored to veteran characteristics decrease suicide risk? *Behavior Therapy*, 49(6), 931–938. <https://doi.org/10.1016/j.beth.2017.11.005>
- Harris, E. C., & Brian, B.** (1997). Suicide as an outcome for mental disorders. *British Journal of Psychiatry*, 170(3), 205–228. <https://doi.org/10.1192/bjp.170.3.205>
- Hoge, C. W., Terhakopian, A., Castro, C. A., Messer, S. C., & Engel, C. C.** (2007). Association of posttraumatic stress disorder with somatic symptoms, health care visits, and absenteeism among Iraq war veterans. *American Journal of Psychiatry*, 164(1), 150–153. <https://doi.org/10.1176/ajp.2007.164.1.150>
- Holliday, R., Borges, L. M., Stearns-Yoder, K. A., Hoffberg, A. S., Brenner, L. A., & Monteith, L. L.** (2020). Posttraumatic stress disorder, suicidal ideation, and suicidal self-directed violence among U.S. military personnel and veterans: A systematic review of the literature from 2010 to 2018. *Frontiers in Psychology*, 11. <https://doi.org/10.3389/fpsyg.2020.01998>
- Hudson, D. L., Eaton, J., Banks, A., Sewell, W., & Neighbors, H.** (2018). “Down in the Sewers”: Perceptions of depression and depression care among African American men. *American journal of men's health*, 12(1), 126–137. <https://doi.org/10.1177/1557988316654864>
- Johnson, M. L., Cotler, J., Terman, J. M., & Jason, L. A.** (2022). Risk factors for suicide in chronic fatigue syndrome. *Death Studies*, 46(3), 738–744. <https://doi.org/10.1080/07481187.2020.1776789>
- Joiner, T.** (2005). *Why People Die by Suicide*. Harvard University Press.
- Ketcheson, F., Cyr, K., King, L., & Richardson, J. D.** (2018). Influence of PTSD and MDD on somatic symptoms in treatment-seeking military members and Veterans. *Journal of Military, Veteran and Family Health*, 4(2), 101–109. <https://doi.org/10.3138/jmvfh.2017-0029>
- Klonsky, E. D., May, A. M., & Saffer, B. Y.** (2016). Suicide, suicide attempts, and suicidal ideation. *Annual Review of Clinical Psychology*, 12, 307–330. <https://doi.org/10.1146/annurev-clinpsy-021815-093204>
- Kroenke, K., Spitzer, R. L., & Williams, J. B. W.** (2001). The PHQ-9. *Journal of General Internal Medicine*, 16(9), 606–613. <https://doi.org/10.1046/j.1525-1497.2001.016009606.x>
- Kuzmina, N., Switzer, J., Ponder, W. N., & Spencer, C. M.** (2023). Affective depression mediates PTSD to suicide in sample of post-9/11 combat veterans. *Journal of Veterans Studies*, 9(3). <https://doi.org/10.21061/jvs.v9i3.452>
- Large, M., Corderoy, A., & McHugh, C.** (2021). Is suicidal behaviour a stronger predictor of later suicide than suicidal ideation? A systematic review and meta-analysis. *Australian & New Zealand Journal of Psychiatry*, 55(3), 254–267. <https://doi.org/10.1177/0004867420931161>
- Martin, A., Naunton, M., Kosari, S., Peterson, G., Thomas, J., & Christenson, J. K.** (2021). Treatment guidelines for PTSD: A systematic review. *Journal of Clinical Medicine*, 10(18). <https://doi.org/10.3390/jcm10184175>
- Martin, L. A., Neighbors, H. W., & Griffith, D. M.** (2013). The experience of symptoms of depression in men vs women: Analysis of the National Comorbidity Survey Replication. *JAMA Psychiatry*, 70(10), 1100–1106. <https://doi.org/10.1001/jamapsychiatry.2013.1985>
- McAndrew, L. M., Lu, S. E., Phillips, L. A., Maestro, K., & Quigley, K. S.** (2019). Mutual maintenance of PTSD and physical symptoms for Veterans returning from deployment. *European Journal of Psychotraumatology*, 10(1), 1608717. <https://doi.org/10.1080/20008198.2019.1608717>
- McFarlane, A. C., & Graham, D. K.** (2021). The ambivalence about accepting the prevalence somatic symptoms in PTSD: Is PTSD a somatic disorder? *Journal of Psychiatric Research*, 143, 388–394. <https://doi.org/10.1016/j.jpsychires.2021.09.030>
- McKinney, J., Hirsch, J., & Britton, P.** (2017). PTSD symptoms and suicide risk in veterans: Serial indirect effects via depression and anger. *ETSU Faculty Works*, 214, 100–107. <https://doi.org/10.1016/j.jad.2017.03.008>
- Mendes, D. D., Mello, M. F., Ventura, P., de Medeiros Passarela, C., & de Jesus Mari, J.** (2008). A systematic review on the effectiveness of cognitive behavioral therapy for posttraumatic stress disorder. *The International Journal of Psychiatry in Medicine*, 38(3), 241–259. <https://doi.org/10.2190/PM.38.3.b>

- Michael Vanderlind, W., Beevers, C. G., Sherman, S. M., Trujillo, L. T., McGeary, J. E., Matthews, M. D., Todd Maddox, W., & Schnyer, D. M.** (2014). Sleep and sadness: Exploring the relation among sleep, cognitive control, and depressive symptoms in young adults. *Sleep Medicine*, 15(1), 144–149. <https://doi.org/10.1016/j.sleep.2013.10.006>
- Na, P. J., Yaramala, S. R., Kim, J. A., Kim, H., Goes, F. S., Zandi, P. P., Vande Voort, J. L., Sutor, B., Croarkin, P. & Bobo, W. V.** (2018). The PHQ-9 Item 9 based screening for suicide risk: a validation study of the Patient Health Questionnaire (PHQ)–9 Item 9 with the Columbia Suicide Severity Rating Scale (C-SSRS). *Journal of Affective Disorders*, 232, 34–40. <https://doi.org/10.1016/j.jad.2018.02.045>
- Nichter, B., Norman, S., Haller, M., & Pietrzak, R. H.** (2019). Psychological burden of PTSD, depression, and their comorbidity in the U.S. veteran population: Suicidality, functioning, and service utilization. *Journal of Affective Disorders*, 256, 633–640. <https://doi.org/10.1016/j.jad.2019.06.072>
- Nichter, B., Stein, M. B., Norman, S. B., Hill, M. L., Straus, E., Haller, M., & Pietrzak, R. H.** (2021). Prevalence, correlates, and treatment of suicidal behavior in US military veterans: results from the 2019–2020 National Health and Resilience in Veterans Study. *Journal of Clinical Psychiatry*, 82(5), e13714. <https://doi.org/10.4088/JCP.20m13714>
- Nock, M. K., Millner, A. J., Ross, E. L., Kennedy, C. J., Al-Suwaidi, M., Barak-Corren, Y., Castro, V. M., Castro-Ramirez, F., Lauricella, T., Murman, N., Petukhova, M., Bird, S. A., Reis, B., Smoller, J. W., & Kessler, R. C.** (2022). Prediction of suicide attempts using clinician assessment, patient self-report, and electronic health records. *JAMA Network Open*, 5(1), e2144373. <https://doi.org/10.1001/jamanetworkopen.2021.44373>
- Nuij, C., Van Ballegooijen, W., De Beurs, D., Juniar, D., Erlangsen, A., Portzky, G., O'Connor, R. C., Smit, J. H., Kerkhof, A., & Riper, H.** (2021). Safety planning-type interventions for suicide prevention: meta-analysis. *The British Journal of Psychiatry*, 219(2), 419–426. <https://doi.org/10.1192/bjp.2021.50>
- O'Brien, R. M.** (2007). A Caution Regarding Rules of Thumb for Variance Inflation Factors. *Quality & Quantity*, 41, 673–690. <https://doi.org/10.1007/s11135-006-9018-6>
- Orri, M., Perret, L. C., Turecki, G., & Geoffroy, M.-C.** (2018). Association between irritability and suicide-related outcomes across the life-course. Systematic review of both community and clinical studies. *Journal of Affective Disorders*, 239, 220–233. <https://doi.org/10.1016/j.jad.2018.07.010>
- Osman, A., Bagge, C. L., Gutierrez, P. M., Konick, L. C., Kopper, B. A., & Barrios, F. X.** (2001). The Suicidal Behaviors Questionnaire-Revised (SBQ-R): Validation with clinical and nonclinical samples. *Assessment*, 8(4), 443–454. <https://doi.org/10.1177/107319110100800409>
- Pacella, M. L., Hruska, B., & Delahanty, D. L.** (2013). The physical health consequences of PTSD and PTSD symptoms: A meta-analytic review. *Journal of Anxiety Disorders*, 27(1), 33–46. <https://doi.org/10.1016/j.janxdis.2012.08.004>
- Panagioti, M., Gooding, P. A., & Tarrier, N.** (2012). A meta-analysis of the association between posttraumatic stress disorder and suicidality: The role of comorbid depression. *Comprehensive Psychiatry*, 53(7), 915–930. <https://doi.org/10.1016/j.comppsy.2012.02.009>
- Possemato, K., Wade, M., Andersen, J., & Ouimette, P.** (2010). The impact of PTSD, depression, and substance use disorders on disease burden and health care utilization among OEF/OIF veterans. *Psychological Trauma: Theory, Research, Practice, and Policy*, 2(3), 218. <https://doi.org/10.1037/a0019236>
- Pfeiffer, P. N., Brandfon, S., Garcia, E., Duffy, S., Ganoczy, D., Kim, H. M., & Valenstein, M.** (2014). Predictors of suicidal ideation among depressed veterans and the interpersonal theory of suicide. *Journal of Affective Disorders*, 152–154(1), 277–281. <https://doi.org/10.1016/j.jad.2013.09.025>
- Pigeon, W. R., Bishop, T. M., & Titus, C. E.** (2016). The relationship between sleep disturbance, suicidal ideation, suicide attempts, and suicide among adults: A systematic review. *Psychiatric Annals*, 46(3), 177–186. <https://doi.org/10.3928/00485713-20160128-01>
- Pompili, M., Sher, L., Serafini, G., Forte, A., Innamorati, M., Dominici, G., ... & Girardi, P.** (2013). Posttraumatic stress disorder and suicide risk among veterans: A literature review. *The Journal of Nervous and Mental Disease*, 201(9), 802–812. <https://doi.org/10.1097/nmd.0b013e3182a21458>
- Ponder, W. N., Walters, K., Simons, J. S., Simons, R. M., Jetelina, K. K., & Carbajal, J.** (2022). Network analysis of distress, suicidality, and resilience in a treatment seeking sample of first responders. *Journal of Affective Disorders*, ePub(ePub). <https://doi.org/10.1016/j.jad.2022.09.097>
- Ribeiro, J. D., Franklin, J. C., Fox, K. R., Bentley, K. H., Kleiman, E. M., Chang, B. P., & Nock, M. K.** (2016). Self-injurious thoughts and behaviors as risk factors for future suicide ideation, attempts, and death: A meta-analysis of longitudinal studies. *Psychological Medicine*, 46(2), 225–236. <https://doi.org/10.1017/S0033291715001804>
- Ribeiro, J. D., Gutierrez, P. M., Joiner, T. E., Kessler, R. C., Petukhova, M. V., Sampson, N. A., Stein, M. B., Ursano, R. J., & Nock, M. K.** (2017). Health care contact and suicide risk documentation prior to suicide death: Results from the Army Study to Assess Risk and Resilience in Servicemembers (Army STARRS). *Journal of Consulting and Clinical Psychology*, 85(4), 403–408. <https://doi.org/10.1037/ccp0000178>
- Ribeiro, J. D., Huang, X., Fox, K. R., & Franklin, J. C.** (2018). Depression and hopelessness as risk factors for suicide ideation, attempts and death: meta-analysis of longitudinal studies. *The British Journal of Psychiatry*, 212(5), 279–286. <https://doi.org/10.1192/bjp.2018.27>
- Rice, S. M., Kealy, D., Oliffe, J. L., Seidler, Z. E., & Ogradniczuk, J. S.** (2019). Affective-somatic symptoms of depression, suicide risk and exposure to childhood maltreatment: Data from emerging adults to older-age males. *International Journal of*

- Mental Health and Addiction*, 17(6), 1301–1311. <https://doi.org/10.1007/s11469-018-0045-z>
- Richardson, E. J., & Richards, J. S.** (2008). Factor structure of the PHQ-9 screen for depression across time since injury among persons with spinal cord injury. *Rehabilitation Psychology*, 53(2), 243–249. <https://doi.org/10.1037/0090-5550.53.2.243>
- Roberge, E. M., Harris, J. A., Weinstein, H. R., & Rozek, D. C.** (2021). Treating veterans at risk for suicide: An examination of the safety, tolerability, and outcomes of cognitive processing therapy. *Journal of Traumatic Stress*, 34(6), 1228–1237. <https://doi.org/10.1002/jts.22662>
- Rotenstein, L. S., Ramos, M. A., Torre, M., Segal, J. B., Peluso, M. J., Guille, C., ... & Mata, D. A.** (2016). Prevalence of depression, depressive symptoms, and suicidal ideation among medical students: a systematic review and meta-analysis. *JAMA*, 316(21), 2214–2236. <https://doi.org/10.1001/jama.2016.17324>
- Rudd, M. D., Berman, A. L., Joiner, T. E., Nock, M. K., Silverman, M. M., Mandrusiak, M., Van Orden, K., & Witte, T.** (2006). Warning Signs for suicide: Theory, research, and clinical applications. *Suicide and Life-Threatening Behavior*, 36(3), 255–262. <https://doi.org/10.1521/suli.2006.36.3.255>
- Rugo, K. F., Tabares, J. V., Crowell, S. E., Baucom, B. R., Rudd, M. D., & Bryan, C. J.** (2020). The role of depression and suicidal cognitions as contributors to suicide risk among active duty soldiers reporting symptoms of posttraumatic stress disorder. *Journal of Affective Disorders*, 265, 333–341. <https://doi.org/10.1016/j.jad.2020.01.095>
- Sanchez-Gistau, V., Baeza, I., Arango, C., Gonzalez-Pinto, A., de la Serna, E., Parellada, M., ... & Castro-Fornieles, J.** (2012). Predictors of suicide attempt in early-onset, first-episode psychoses: a longitudinal 24-month follow-up study. *The Journal of Clinical Psychiatry*, 74(1), 59–66. <https://doi.org/10.4088/jcp.12m07632>
- Sareen, J., Cox, B. J., Stein, M. B., Afifi, T. O., Fleet, C., & Asmundson, G. J. G.** (2007). Physical and mental comorbidity, disability, and suicidal behavior associated with posttraumatic stress disorder in a large community sample. *Psychosomatic Medicine*, 69(3), 242–248. <https://doi.org/10.1097/PSY.0b013e31803146d8>
- Saulnier, K. G., Bagge, C. L., Ganoczy, D., Bahraini, N. H., Jagusch, J., Hosanagar, A., Ilgen, M. A., & Pfeiffer, P. N.** (2025). Suicide risk evaluations and suicide in the Veterans Health Administration. *JAMA Network Open*, 8(2), e2461559. <https://doi.org/10.1001/jamanetworkopen.2024.61559>
- Schafer, K. M., Duffy, M., Kennedy, G., Stentz, L., Leon, J., Herrerias, G., Fulcher, S., & Joiner, T. E.** (2022). Suicidal ideation, suicide attempts, and suicide death among Veterans and service members: A comprehensive meta-analysis of risk factors. *Military Psychology*. <https://www.tandfonline.com/doi/abs/10.1080/08995605.2021.1976544>
- Schmidt, A. F., & Finan, C.** (2018). Linear regression and the normality assumption. *Journal of Clinical Epidemiology*, 98, 146–151. <https://doi.org/10.1016/j.jclinepi.2017.12.006>
- Schuman, D. L., Cerel, J., & Praetorius, R. T.** (2019). Suicide in U.S. women veterans: An Interpersonal Theory perspective on suicide prevention policies. *Social Work in Public Health*, 34(5), 418–429. <https://doi.org/10.1080/19371918.2019.1616028>
- Seidler, Z. E., Dawes, A. J., Rice, S. M., Oliffe, J. L., & Dhillon, H. M.** (2016). The role of masculinity in men's help-seeking for depression: a systematic review. *Clinical Psychology Review*, 49, 106–118. <https://doi.org/10.1016/j.cpr.2016.09.002>
- Senaviratna, N. A. M. R., & Cooray, T. M. J. A.** (2019). Diagnosing Multicollinearity of Logistic Regression Model. *Asian Journal of Probability and Statistics*, 5(2), 1–9. <https://doi.org/10.9734/ajpas/2019/v5i230132>
- Sikharulidze, G., van Geloven, N., Lelashvili, E., Kalandarishvili, G., Gugushvili, N., & Vermetten, E.** (2017). Posttraumatic stress disorder and somatic complaints in a deployed cohort of Georgian military personnel: Mediating effect of depression and anxiety. *Journal of Traumatic Stress*, 30(6), 626–634. <https://doi.org/10.1002/jts.22235>
- Soumoff, A. A., Clark, N. G., Spinks, E. A., Kemezis, P. A., Raiciulescu, S., Driscoll, M. Y., Kim, S. Y., Benedek, D. M., & Choi, K. H.** (2022). Somatic symptom severity, not injury severity, predicts probable posttraumatic stress disorder and major depressive disorder in wounded service members. *Journal of Traumatic Stress*, 35(1), 210–221. <https://doi.org/10.1002/jts.22722>
- Sullivan, S., & Germain, M.-L.** (2019). Psychosocial risks of healthcare professionals and occupational suicide. *Industrial and Commercial Training*, 52(1), 1–14. <https://doi.org/10.1108/ICT-08-2019-0081>
- Sun, Y., Shi, L., Bao, Y., Sun, Y., Shi, J., & Lu, L.** (2018). The bidirectional relationship between sleep duration and depression in community-dwelling middle-aged and elderly individuals: Evidence from a longitudinal study. *Sleep Medicine*, 52, 221–229. <https://doi.org/10.1016/j.sleep.2018.03.011>
- Teegne, K. T., Teegne, E. T., Tessema, M. K., Bagajjo, W. S., Rike, M., Abebe, A. T., & Bifato, B.** (2022). The association between depression and suicidal ideation: a systematic review and meta-analysis. *J Psychol Mental Health Care*, 6(1), 1–6. [https://doi.org/10.47363/PMS/2021\(5\)158](https://doi.org/10.47363/PMS/2021(5)158)
- Theis, J., Hoops, K., Booty, M., Nestadt, P., & Crifasi, C.** (2021). Firearm suicide among veterans of the U.S. military: A systematic review. *Military Medicine*, 186(5–6), e525–e536. <https://doi.org/10.1093/milmed/usaa495>
- Torres, M. E., Löwe, B., Schmitz, S., Pienta, J. N., Van Der Feltz-Cornelis, C., & Fiedorowicz, J. G.** (2021). Suicide and suicidality in somatic symptom and related disorders: A systematic review. *Journal of Psychosomatic Research*, 140, 110290. <https://doi.org/10.1016/j.jpsychores.2020.110290>
- Tucker, R. P.** (2019). Suicide in transgender veterans: Prevalence, prevention, and implications of current policy. *Perspectives*

on *Psychological Science*, 14(3), 452–468. <https://doi.org/10.1177/1745691618812680>

U. S. Department of Veterans Affairs, Office of Mental Health and Suicide Prevention. (2023). *2023 national veteran suicide prevention annual report*. <https://www.mentalhealth.va.gov/docs/data-sheets/2023/2023-National-Veteran-Suicide-Prevention-Annual-Report-FINAL-508.pdf>

Whitworth, J., Galusha, J., Carbajal, J., Ponder, W. N., & Schuman, D. L. (2023). Affective Depression mediates

PTSD to suicide in a sample of treatment-seeking first responders. *Journal of Occupational and Environmental Medicine*, 65(3), 249. <https://doi.org/10.1097/JOM.0000000000002724>

Woznica, A. A., Carney, C. E., Kuo, J. R., & Moss, T. G. (2015). The insomnia and suicide link: Toward an enhanced understanding of this relationship. *Sleep Medicine Reviews*, 22, 37–46. <https://doi.org/10.1016/j.smr.2014.10.004>

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